Progress report on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability

Contents

Abbreviations

AMU	training for the labour market (Denmark)
Cedefop	European Centre for the Development of Vocational Training
ECTS	European credit transfer and accumulation system
ENIC	European Network of Information Centres in the European Region
EQAVET	European Quality Assurance Reference Framework (VET)
EQF	European qualifications framework
ESF+	European Social Fund Plus
ESG	standards and guidelines for quality assurance in the European Higher Education Area
EU	European Union
HCI	human capital initiative (Ireland)
ILA	individual learning accounts
MFHEA	Malta Further and Higher Education Authority
MOOC	massive open online course
NARIC	National Academic Recognition Information Centres in the European Union
NQF	national qualifications framework
OECD	Organisation for Economic Co-operation and Development
PCDP	personal competence development plan (Finland)
PES	public employment services
RRF	Recovery and Resilience Facility
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	vocational education and training

Respondent codes

AT	Austria
BE-FL	Flemish Community of Belgium ([1])
BE-FR	French Community of Belgium ([2])
BG	Bulgaria
CY	Cyprus
CZ	Czechia
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IS	Iceland
IT	Italy
LI	Liechtenstein
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia

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[1]   Represents the Flemish Region, with responses from the Flemish Ministry of Education and Training and the Department of Work and Social Economy of VDAB (the Flemish PES).
[2]   Represents the Walloon Region, with responses from the Wallonia-Brussels Federation and Le Forem (the Walloon PES).

Glossary

Assessment. The process or method used to evaluate, measure and eventually describe the learning outcomes acquired by individuals through formal, non-formal or informal settings. Assessment is performed by the provider or other recognised assessment providers.

Bologna Follow-Up Group. This executive structure has supported the Bologna Process between ministerial conferences since 1999. It is entrusted with preparing the ministerial conferences and policy forums and overseeing the Bologna Process between these, among other things, through several working structures that ensure the implementation of the *communiqués*. In particular, the group's three thematic peer groups, on qualifications framework, quality assurance and recognition, follow up on different aspects of micro-credentials.

Education and training systems. Structures of formal and non-formal education and training institutions, and their policies, processes and stakeholders, encompassing higher education, vocational education and training, and labour market education and training services.

European approach to micro-credentials. Introduced by the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, this approach fosters flexibility, lifelong learning and employability by promoting the quality assurance, recognition and transparency of micro-credentials, and stakeholder collaboration. It aims to create an ecosystem in which high-quality micro-credentials are easily accessible and transferable across the EU, empowering individuals with valuable skills and enhancing their career prospects while supporting the evolving needs of the labour market.

Formal learning. Learning that takes place in an organised and structured environment specifically dedicated to learning. It typically leads to the awarding of a qualification, usually in the form of a certificate or a diploma; it includes systems of general education; initial, continuing and tertiary vocational education and training; and higher education [3].

Individual learning accounts. The Council Recommendation of 16 June 2022 on individual learning accounts [4] suggests that EU Member States set up an individual learning account for every person of working age, including the employed, the self-employed, those in atypical forms of work, unemployed people and people outside the labour force. When implementing these virtual accounts, national authorities should ensure adequate annual provision of individual training entitlements to them, with higher amounts for people most in need of training. People should be able to accumulate these entitlements and use them throughout their careers. This would allow them to undergo longer or more costly training programmes, or to train to update or complete their skill sets in response to emerging skills needs in the labour market.

Informal learning. Learning resulting from daily activities and experiences that are not organised or structured in terms of objectives, time or learning support; it may be unintentional from the learner's perspective [5]. This kind of learning does not

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[3] Definition based on Council Recommendation of 20 December 2012 on the validation of non-formal and informal learning (OJ C 398, 22.12.2012, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012H1222%2801%29.

[4] Council Recommendation of 16 June 2022 on individual learning accounts (OJ C 243, 27.6.2022, p. 26), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(03).

[5] Definition taken from Regulation (EU) 2021/817 of the European Parliament and of the Council of 20 May 2021 establishing Erasmus+: the Union Programme for education and training, youth and sport and repealing Regulation (EU) No 1288/2013 (OJ L 189, 28.05.2021, p. 1), https://eur-lex.europa.eu/eli/reg/2021/817/oj/eng.

automatically lead to the learner obtaining a micro-credential but can be considered part of validation processes carried out to identify, document, assess and/or certify an individual's achievement of learning outcomes.

Learning settings. The diverse, physical, online, blended (⁶) virtual and digital locations, contexts and cultures in which people learn, encompassing all settings in which formal, non-formal and informal learning can occur.

Micro-credentials. Record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity

National qualification framework. Instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which aims to integrate and coordinate national qualifications subsystems, and improve access to qualifications and their transparency, progression and quality, in relation to the labour market and civil society.

Non-formal learning. Learning that takes place outside formal education and training through planned activities in terms of learning objectives and learning time, and where some form of learning support is present (⁷).

Portability. The ability for a credential-holder to store their micro-credentials in a system of their choice, to share the credential with a party of their choice (whether national or transnational) and for all parties in the exchange to be able to understand the content and verify the authenticity of the credentials. This enables portability between and within education and training sectors, the labour market, and across countries.

Providers of micro-credentials. Education and training institutions and organisations, social partners (i.e. organisations representing workers and employers), employers and industry, civil-society organisations, public employment services and regional and national authorities, and other types of actors designing, delivering and issuing micro-credentials for formal, non-formal and informal learning. This is without prejudice to regional and national legislation and circumstances.

Public employment services (PESs). PESs are government-funded agencies and institutions that aim to facilitate the functioning of the labour market by connecting jobseekers with employers. They provide a range of services, including job matching, career guidance, vocational training and unemployment benefits administration. PESs play a crucial role in implementing labour market policies, supporting workforce mobility and addressing skills mismatches. They also collaborate with various stakeholders, such as educational institutions and private sector partners, to enhance employability and promote inclusive labour markets. Through these efforts, PESs contribute to reducing unemployment and fostering economic growth.

Qualification. A formal outcome of an assessment and validation process by a competent body determining that an individual has achieved learning outcomes to given standards. It

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(⁶)   'Blended learning' in the context of formal education and training is a term used to describe when a school, educator or student takes more than one approach to the learning process.
(⁷)   Definition taken from Regulation (EU) 2021/817 of the European Parliament and of the Council of 20 May 2021 establishing Erasmus+: the Union Programme for education and training, youth and sport and repealing Regulation (EU) No 1288/2013 (OJ L 189, 28.05.2021, p. 1), https://eur-lex.europa.eu/eli/reg/2021/817/oj/eng.

comes from a database or register of national qualifications reflecting the national qualifications framework, based on the European qualifications framework. Europass offers the most up-to-date and rich repository of high-quality data on qualifications, national qualifications frameworks and learning opportunities in Europe.

Recognition. Formal acknowledgement by a competent authority of the validity of a micro-credential to enable access to further education and training or employment. It involves ensuring that the skills and knowledge represented by a micro-credential are accurately assessed and verified. Recognition mechanisms help to increase trust in micro-credentials, promote their acceptance by employers and educational institutions, and facilitate their use for lifelong learning and career advancement. By establishing clear standards and procedures for recognition, countries can ensure that micro-credentials are valuable assets in the labour market.

Recovery and Resilience Facility. A key instrument of the EU's NextGenerationEU initiative, which aims to create a more resilient, sustainable and inclusive Union. It was established to help Member States recover from the economic and social impacts of the COVID-19 pandemic.

Stackability. The possibility, where relevant, of combining different micro-credentials and building logically upon each other. Decisions to 'stack' or combine credentials lie with the receiving organisation (for example, education and training institutions, employers, etc.) in line with their practices. They should support the goals and needs of the learner. Stacking does not create an automatic entitlement to a qualification or a degree. Regional and national authorities or institutions make such decisions in line with their awarding processes.

Summary

This report explores progress on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability in EU Member States and associated countries. It provides an in-depth examination of the situation in higher education, vocational education and training, and employment systems.

The study draws upon data obtained through a comprehensive survey addressed to representatives of ministries of education or higher education authorities, members of the tripartite Advisory Committee on Vocational Training and representatives of public employment services. Data were collected in the second semester of 2024, offering a snapshot of developments in education and training systems. It is important to note that, due to the rapid changes in this area, further advancements may have taken place since the data were collected. The data combine a quantitative perspective that provides a basis for comparisons among education and training systems with qualitative insights that detail steps and measures taken to implement the Council Recommendation.

This study analyses the adoption of an official definition, principles and standard elements of micro-credentials, focusing on how these are being implemented across the education and training systems surveyed. It then explores the development of an ecosystem for micro-credentials, including the implementation of provisions for quality assurance and recognition, funding mechanisms and information systems. The study also reviews how micro-credentials are used and promoted across various learning settings. Lastly, it addresses the policy embeddedness of micro-credentials, covering implementation, initiatives, the use of EU instruments, coordination and the challenges faced in developing an ecosystem for micro-credentials.

The report concludes with a thorough assessment of the overall progress on the implementation of the Council Recommendation within education and training systems. It highlights significant advancements, despite the recent adoption of the recommendation. Additionally, the report reveals disparities in the uptake of various elements proposed by the Council Recommendation, highlighting areas where there appear to be implementation gaps between different systems.

1. Introduction

1.1. Aim of this study

This study aims to take stock of the development and use of micro-credentials in EU Member States and associated countries, focusing on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability ([8]), adopted on 16 June 2022. The findings are based on a survey of representatives of education and training systems in 27 Member States and three associated countries: Iceland, Liechtenstein and Norway. It examines how European countries are adopting the European approach to micro-credentials in higher education, vocational education and training (VET) and employment systems. The key objectives of this study are:

— mapping how European countries are adopting measures to introduce definitions, standard elements, principles, quality assurance, recognition, funding and micro-credentials;

— understanding how European countries are embedding micro-credentials in their national policies to enhance access to education and training and support the skills demands of the labour market;

— exploring the adoption of the European approach to micro-credentials in higher education, VET and employment systems.

Evidence on adopting the Council Recommendation is essential to understand whether and how micro-credentials reshape education, training and employment systems; support lifelong learning and employability; and meet labour market demands.

1.2. A European approach to micro-credentials

In 2020, the European skills agenda ([9]) proposed developing a European approach to micro-credentials as one of its 12 flagship actions. Action 10 of the agenda stated that 'the Commission will propose a new initiative to support the quality, transparency and take-up of micro-credentials across the EU' ([10]). This proposal was based on, among other things, the results of the evaluation of the 2012 Council Recommendation on the validation of non-formal and informal learning ([11]). In addition, the recommendation suggested involving all relevant stakeholders, including public and private education and training providers, social partners, chambers of commerce and employers; exploring the inclusion of micro-

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([8]) Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (OJ C 243, 27.6.2022, p. 10), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02).

([9]) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – European skills agenda for sustainable competitiveness, social fairness and resilience, COM(2020) 274 final of 1 July 2020, p. 17, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0274.

([10]) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – European skills agenda for sustainable competitiveness, social fairness and resilience, COM(2020) 274 final of 1 July 2020, p. 11, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0274.

([11]) 3s Unternehmensberatung GmbH, European Commission: Directorate-General for Employment, Social Affairs and Inclusion and ICF, *Study supporting the evaluation of the Council recommendation of 20 December 2012 on the validation of non-formal and informal learning – Final report*, Publications Office of the European Union (Publications Office), Luxembourg, 2020, https://data.europa.eu/doi/10.2767/55823.

credentials in national qualifications frameworks (NQFs); and making it easier for individuals to store acquired micro-credentials and showcase them to employers.

The European Pillar of Social Rights action plan identified micro-credentials as an innovative instrument that 'can facilitate flexible learning pathways and support workers on their job or during professional transitions' ([12]). As such, micro-credentials may contribute to achieving the three EU targets for 2030 set out in the plan: to have at least 78 % of individuals aged 20 to 64 employed, to ensure a minimum of 60 % of all adults participate in training every year, and to decrease the number of people at risk of poverty or social exclusion by at least 15 million ([13]). Consequently, the action plan supports the creation of a 'European approach to micro-credentials to facilitate flexible learning pathways and labour market transitions' ([14]).

The Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021–2030) emphasises the key role of micro-credentials in lifelong learning. It states that 'exploring the concept and use of micro-credentials can help widen learning opportunities and could strengthen the role of higher education and VET in lifelong learning by providing more flexible and modular learning opportunities and offering more inclusive learning paths' ([15]). Furthermore, the European Commission's political guidelines for 2024–2029 – set out by Ursula von der Leyen – introduced the 'Union of skills', with the aim of tackling the skills and labour market gaps. The Union of skills will focus 'on investment, adult and lifelong learning, skill retention and the recognition of different types of training to enable people to work across our Union' ([16]).

The Council Recommendation on a European approach to micro-credentials for lifelong learning and employability ([17]) was adopted in 2022. The objectives of this Council Recommendation are (i) enabling individuals to acquire, update and improve the knowledge, skills and competencies they need to thrive in an evolving labour market and society; (ii) supporting the preparedness of providers of micro-credentials to enhance the quality, transparency, accessibility and flexibility of the learning offer; and (iii) fostering inclusiveness, access and equal opportunities, and contributing to the achievement of resilience, social fairness and prosperity for all.

The Council Recommendation on a European approach to micro-credentials:

— introduces a common EU definition and standard elements of micro-credentials and key principles for designing and issuing micro-credentials;

— proposes ways to develop an ecosystem for micro-credentials;

([12]) Available at: The European Pillar of Social Rights Action Plan.
([13]) European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 'European Pillar of Social Rights action plan', European Commission website, accessed 6 May 2025, https://employment-social-affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union/european-pillar-social-rights-action-plan_en.
([14]) Available at: The European Pillar of Social Rights Action Plan..
([15]) Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021–2030) (OJ C 66, 26.2.2021, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021G0226(01).
([16]) von der Leyen, U., *Europe's Choice – Political guidelines for the next European Commission: 2024–2029*, Strasbourg, 2024, p. 12, https://commission.europa.eu/document/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en.
([17]) Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (OJ C 243, 27.6.2022, p. 10), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02).

— builds on the potential of micro-credentials to support lifelong learning and employability.

The Council Recommendation contributes to implementing the European Pillar of Social Rights ([18]). It supports Principle 1 by widening learning opportunities for all and enabling more flexible learning pathways throughout life. Additionally, the recommendation contributes to Principle 4 by promoting the right to timely and tailor-made assistance to improve employment or self-employment prospects, including the right to receive support for training and requalification.

Micro-credentials serve as an instrument to facilitate upskilling and reskilling within education, training, lifelong learning and the labour market. The Council Recommendation does not suggest that micro-credentials replace existing qualifications, or substitute national mechanisms for organising education and training, employment or labour markets, or any other support mechanism for vulnerable groups. Furthermore, it does not introduce new administrative procedures, obligations or governance mechanisms. Instead, it encourages the adaptation, where relevant, of existing provisions (e.g. quality assurance and recognition processes) at the national level and enhancement of the complementarity of traditional qualifications.

The Council Recommendation on a European approach to micro-credentials proposes a shared basis for Member States, stakeholders and the Commission to develop and use micro-credentials consistently and coherently. It builds on micro-credentials' potential to support lifelong learning and employability, respecting the different contexts and systems in which they operate. A European approach to micro-credentials will facilitate improvements in the areas of quality, transparency, recognition, relevance, assessment, stackability, portability, the role of learners, authenticity and information and guidance within the European Education Area and labour markets. It will thus contribute to a culture of lifelong learning and enhance the employability of individuals.

1.3. Context of micro-credentials

Micro-credentials have gained significant momentum due to the increasing demand and offer of flexible and small-volume learning options. While comprehensive data on micro-credentials are lacking, the expansion of offerings through major learning platforms can be observed. As noted by the Organisation for Economic Co-operation and Development (OECD), 'it is possible to track the growth of micro-credentials offered through major learning platforms, such as Coursera and FutureLearn, and this reveals a swift expansion of micro-credential offerings. According to Class Central, an aggregator of online courses, the number of micro-credentials offered on five major learning platforms increased from around 600 in 2018 to 1 900 in 2022' ([19]).

Micro-credentials respond to the increasing need to enhance and update individuals' skills. The report *Future of Jobs Report 2025* predicts that 59 % of the world's workforce will need upskilling and reskilling by 2030, since skill gaps are the most significant barrier to business transformation (as identified by 63 % of employers) ([20]). In this scenario, micro-credentials would offer a flexible learning pathway that could help to address skills gaps.

([18]) Available at: The European Pillar of Social Rights Action Plan.
([19]) OECD, 'Micro-credentials for lifelong learning and employability: Uses and possibilities', *OECD Education Policy Perspectives*, No 66, 2023, OECD Publishing, Paris, p. 2, https://doi.org/10.1787/9c4b7b68-en.
([20]) World Economic Forum, *The Future of Jobs Report 2025*, Geneva, 2025, p. 6, https://www.weforum.org/publications/the-future-of-jobs-report-2025/.

The staff working document accompanying the proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability ([21]) outlined four drivers of the demand for micro-credentials.

— **Lifelong learning and personal development.** The rapid pace of societal change requires individuals to undergo continuous personal development to help them cope with transitions, make informed decisions, set meaningful goals and achieve their ambitions. Beyond the relevance of lifelong learning to careers, it fosters personal interests such as hobbies, volunteering and community engagement. Micro-credentials facilitate this process by providing flexible, modular and portable learning pathways.

— **The right skills for better employability in the EU labour market.** Rapid technological advancements and evolving labour market needs have created an urgent demand for reskilling and upskilling across the EU. Employees increasingly require 'just-in-time' skills development that aligns with the latest industry standards and practices to remain competitive and adaptable. This ongoing transformation of the labour market has revealed a misalignment between the supply of qualifications and the demand for specific skills. Micro-credentials can assist in bridging this gap by offering targeted, modular learning opportunities that employers can understand and recognise.

— **The green transition.** The shift to a low-carbon economy is driving the demand for micro-credentials, as it is expected to generate over 1 million new jobs in the EU by 2030 in sectors such as construction, renewable energy, sustainable transport and waste management. The transition will also cause job losses in fossil fuel industries, necessitating reskilling ([22]). Additionally, the green transition is transforming skill requirements across industries, with a rising demand for professionals skilled in green technologies, sustainable business models and innovative nature-based solutions.

— **The digital transition.** The rapid digital transition is creating an urgent need for new skills. In the EU, 'six in 10 adults need to develop further their knowledge and skills to do their job better, and more than half need to improve their digital skills' ([23]). Despite digitalisation driving job creation, substantial skill gaps persist. Micro-credentials address this challenge by offering flexible, targeted learning pathways to upskill individuals quickly, enabling them to meet evolving workforce demands.

A key challenge in establishing micro-credentials as a reliable skills system has been the absence of national and international definitions and taxonomies ([24]). Providing a general classification, the findings of the Microbol project ([25]) suggest that micro-credentials exist in several formats, including complementary components of degree programmes, stand-alone units of learning and sequences of courses that can be accumulated into larger

([21]) Commission staff working document accompanying the document proposal for a Council recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.

([22]) European Commission: Directorate-General for Employment, Social Affairs and Inclusion, *Employment and Social Developments in Europe 2019 – Sustainable growth for all: Choices for the future of social Europe*, Publications Office, Luxembourg, 2019, https://data.europa.eu/doi/10.2767/305832.

([23]) European Centre for the Development of Vocational Training (Cedefop), *Setting Europe on Course for a Human Digital Transition – New evidence from Cedefop's second European Skills and Jobs Survey*, Publications Office, Luxembourg, 2022, p. 13, http://data.europa.eu/doi/10.2801/253954.

([24]) United Nations Educational, Scientific and Cultural Organization (UNESCO), *Towards a Common Definition of Micro-credentials,* Paris, 2022, https://unesdoc.unesco.org/ark:/48223/pf0000381668.

([25]) Micro-credentials linked to the Bologna key commitments (Microbol), *Micro-credentials linked to the Bologna key commitments – Desk research report,* 2020, https://www.eua.eu/downloads/publications/microbol%20desk%20research%20report.pdf.

credentials. The most common types of micro-credentials include certificates (academic and professional/industrial), micro-certifications, short courses (including massive open online courses (MOOCs), small private online courses and on-site courses), modules, boot camps, digital badges, open badges, partial qualifications, nano-degrees and micro-master's degrees.

Higher education institutions, VET institutions and private providers provide micro-credentials through online, on-site and hybrid channels. Nevertheless, 'technological developments and cross-sector collaboration between providers are blurring the distinctions between different programme and provider types' ([26]).

European higher education institutions have increasingly expressed interest in micro-credentials to enhance the visibility, flexibility and relevance of education. The OECD states: 'Higher education institutions tend to develop short learning programmes for advanced, postgraduate and professional education, and short learning programmes provide them with a source of revenue that is less regulated by governments' ([27]).

Within VET, micro-credentials provide flexible and targeted learning opportunities that align with labour market demands. Cedefop states: 'Microcredentials are offered by formal VET providers mainly in the areas of ICT, manufacturing, engineering, services, health and education' ([28]). The most common users of micro-credentials in VET are learners in the following age groups: 20 to 35 years (64 %), 36 to 54 years (54 %) and 16 to 19 years (24 %). As Cedefop notes, 'This suggests that micro-credentials may not be restricted to adults but may play a wider role in IVET' ([29]). Hence, beyond upskilling and reskilling adults, micro-credentials support the initial phase of education and training and individuals' transition into the labour market.

Private micro-credential providers are 'private companies, including companies whose main business is not education and training'. This type of provider can be observed particularly in the technology sector: 'While technology companies have a long tradition of offering certified training for users and technicians of their own technologies, many of these companies are now offering a wider range of training on topics beyond their own products' ([30]).

1.4. Research on micro-credentials

Over the past five years, there has been a notable increase in studies conducted by international organisations focusing on micro-credentials. Prominent global and European entities, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the OECD and the European Centre for the Development of Vocational Training

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([26]) OECD, 'Micro-credential innovations in higher education: Who, what and why?', *OECD Education Policy Perspectives*, No 39, 2021, OECD Publishing, Paris, p. 6, https://doi.org/10.1787/f14ef041-en.

([27]) OECD, 'Micro-credential innovations in higher education: Who, what and why?', *OECD Education Policy Perspectives*, No 39, 2021, OECD Publishing, Paris, p. 1, https://doi.org/10.1787/f14ef041-en.

([28]) Cedefop, *Microcredentials for Labour Market Education and Training – First look at mapping microcredentials in European labour-market-related education, training and learning: Take-up, characteristics and functions*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2022, p. 78, http://data.europa.eu/doi/10.2801/351271.

([29]) Cedefop, *Microcredentials for Labour Market Education and Training – First look at mapping microcredentials in European labour-market-related education, training and learning: Take-up, characteristics and functions*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2022, p. 90, http://data.europa.eu/doi/10.2801/351271.

([30]) OECD, 'Micro-credential innovations in higher education: Who, what and why?', *OECD Policy Perspectives*, No 39, 2021, OECD Publishing, Paris, p. 24, https://doi.org/10.1787/f14ef041-en.

(Cedefop), have been at the forefront of micro-credentials research. These organisations primarily contribute to the field by publishing research reports and policy documents.

UNESCO has been proactively involved in developing a transnational definition of micro-credentials. To compile the report *Towards a Common Definition of Micro-credentials* ([31]), UNESCO brought together a global panel of experts to build consensus on defining micro-credentials. This action promoted the alignment of micro-credentials with sustainable development goal 4, ensuring inclusive and equitable high-quality education and promoting lifelong learning opportunities for all.

Furthermore, UNESCO outlined global challenges and corresponding actions for the successful roll-out of micro-credentials ([32]). These include fostering dialogue and peer learning about quality assurance, integrating micro-credentials into NQFs, formulating clear assessment and certification standards, encouraging collaboration with employers to guarantee labour market alignment, establishing multi-player ecosystems and providing financial support.

The OECD has made significant efforts to advance the understanding and implementation of micro-credentials. One of its major initiatives is its EU-funded micro-credential implementation project, conducted from 2022 to 2023. The project aimed to strengthen the evidence base to support OECD countries in crafting national micro-credential strategies.

The OECD developed the self-assessment tool for micro-credential policy implementation as part of the micro-credential implementation project ([33]). It identified four policy instruments that could be adopted to build a robust micro-credential ecosystem: (i) regulations and guidelines for providers, (ii) public funding mechanisms, (iii) quality assurance protocols and (iv) information systems to facilitate transparency and accessibility. This approach is enhanced by policy papers exploring the uses and possibilities of micro-credentials ([34]), examining the potential and limitations of micro-credentials with regard to enhancing learners' labour market participation and outcomes, widening pathways from upper secondary to higher education and promoting the social inclusion of disadvantaged learners.

Previously, the OECD developed a two-part education policy perspectives series, focused on the quality and value of micro-credentials in higher education. Part A characterised the provision of micro-credentials by higher education institutions ([35]). Part B presented 'evidence on the extent to which higher education policy and practice environments are prepared to provide high-quality micro-credentials' ([36]).

([31]) UNESCO, *Towards a Common Definition of Micro-credentials*, Paris, 2022, https://unesdoc.unesco.org/ark:/48223/pf0000381668.

([32]) Martin, M. and van der Hijden, P., *Short Courses, Micro-credentials, and Flexible Learning Pathways: A blueprint for policy development and action*, UNESCO: International Institute for Educational Planning, Paris, 2023, https://unesdoc.unesco.org/ark:/48223/pf0000384326.

([33]) OECD, 'Public policies for effective micro-credential learning', *OECD Education Policy Perspectives*, No 85, 2023, OECD Publishing, Paris, https://doi.org/10.1787/a41f148b-en.

([34]) OECD, 'Micro-credentials for lifelong learning and employability: Uses and possibilities', *OECD Education Policy Perspectives*, No 66, 2023, OECD Publishing, Paris, https://doi.org/10.1787/9c4b7b68-en.

([35]) OECD, 'Micro-credential innovations in higher education: Who, what and why?', *OECD Education Policy Perspectives*, No 39, 2021, OECD Publishing, Paris, https://doi.org/10.1787/f14ef041-en.

([36]) OECD, 'Quality and value of micro-credentials in higher education: Preparing for the future', *OECD Education Policy Perspectives*, No 40, 2021, OECD Publishing, Paris, https://doi.org/10.1787/9c4ad26d-en.

In 2022, Cedefop initiated the project 'Microcredentials for labour market education and training' ([37]), which aims to provide insights into the potential of micro-credentials to enhance the skills and employability of individuals within the evolving labour market. A key research output is the paper *Microcredentials for Labour Market Education and Training – First look at mapping micro-credentials in European labour-market-related education, training and learning: Take-up, characteristics and functions* ([38]). The paper examines the role of micro-credentials in supporting labour-market-related education, training and learning. It maps micro-credentials in labour-market-oriented VET and characterises micro-credentials that are integrated in formal qualifications and credentials systems.

Furthermore, the paper *Microcredentials for Labour Market Education and Training – Micro-credentials and evolving qualifications systems* ([39]) provides a background analysis of the current position of micro-credentials in relation to the evolution of qualifications systems based on the perspectives of European VET providers, national authorities, and employees' and employers' organisations. Finally, a study on the added value for end users ([40]) and the briefing note *Micro-credentials – Striving to combine credibility and agility* ([41]) analyse how micro-credentials are trusted by those acquiring them to become building blocks for lifelong learning.

1.5. Structure of the report

This report provides an overview of the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability in European education and training systems. The report is structured as follows.

— **Section 2** describes the methodology for collecting data and the data collected to prepare this report.

— **Section 3** presents the progress made on implementing an official definition of micro-credentials, and principles on and standard elements of describing, designing and issuing micro-credentials.

— **Section 4** explores the advancements in establishing micro-credential ecosystems with regard to quality assurance, recognition, funding, integration in national qualification frameworks, intersectoral dialogues and micro-credential promotion.

— **Section 5** reviews how micro-credentials are used to improve learners' access to and support in education and training.

— **Section 6** discusses the integration of micro-credentials into policies and the related challenges.

([37]) Cedefop, 'Microcredentials for labour market education and training', Cedefop website, accessed 6 May 2025, https://www.cedefop.europa.eu/en/projects/microcredentials-labour-market-education-and-training.

([38]) Cedefop, *Microcredentials for Labour Market Education and Training – First look at mapping microcredentials in European labour-market-related education, training and learning: Take-up, characteristics and functions*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2022, http://data.europa.eu/doi/10.2801/351271.

([39]) Cedefop, *Microcredentials for Labour Market Education and Training – Microcredentials and evolving qualifications systems*, Cedefop Research Paper No 89, Publications Office, Luxembourg, 2023, http://data.europa.eu/doi/10.2801/566352.

([40]) Cedefop, *Microcredentials for Labour Market Education and Training – The added value for end users*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2023, https://data.europa.eu/doi/10.2801/141643.

([41]) Cedefop, *Microcredentials – Striving to combine credibility and agility*, Publications Office, Luxembourg, 2024, https://data.europa.eu/doi/10.2801/966682.

— **Section 7** provides conclusions and recommendations on the adoption of the Council Recommendation on a European approach to micro-credentials.

This report is accompanied by five annexes, containing the European standard elements used to describe micro-credentials, the European principles for designing and issuing micro-credentials, aggregate indicators of micro-credential uptake, respondents to the survey questionnaire and the questionnaire used for data collection.

2. Methodology

The data obtained for the purpose of this study were self-reported by representatives of relevant national authorities. This presents a methodological constraint in the sense that the respondents across the education and training systems surveyed may have interpreted the survey questions differently or have had varying levels of knowledge and expertise. Nevertheless, since the respondents were carefully selected, the collection of first-hand information from official sources was deemed a very valuable exercise in assessing the progress made on implementing the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability.

More may be happening around micro-credentials promoted by private organisations and projects, but this report focuses on the actions taken by official authorities to implement the Council Recommendation.

Respondents comprehensively interpreted micro-credentials, spanning from newly created or existing small-volume non-formal learning activities to modules within longer formal programmes. They took stock of existing provisions and new developments aligned with the Council Recommendation, offering a comprehensive overview of current characteristics of the ecosystems in which micro-credentials are developed.

This study surveyed education and training systems in the 27 Member States, Iceland, Liechtenstein and Norway. A tailored questionnaire was developed and pre-filled with relevant information before disseminating it to pre-selected respondents. These steps are detailed in the following subsections.

2.1. Questionnaire design

The questionnaire was designed in alignment with the Council Recommendation on a European approach to micro-credentials. The questions were organised into five sections.

— The '**Definition and standards**' section explored the adoption of a definition of micro-credentials, standard elements to describe these credentials, and principles for designing and issuing them. Questions aimed to determine how the standard elements and principles are applied, their level of alignment with the Council Recommendation, specific characteristics of micro-credentials and recent developments related to micro-credentials.

— The '**Ecosystem**' section focused on the development of conditions and infrastructure required for micro-credentials. It covered various elements, including intersectoral collaboration mechanisms, quality assurance arrangements, funding, integration into NQFs and promotion strategies.

— The '**Potential**' section explored the strategic use of micro-credentials to address labour market needs, skills gaps and individual learning paths. It aimed to understand how micro-credentials help improve access to and success in education and training for all learners, including disadvantaged and vulnerable groups.

— The '**Policy embeddedness**' section focused on how micro-credentials are embedded in national policies. It aimed to explore existing policy initiatives, policy purposes, mechanisms for promoting collaborative work and related challenges.

— The **closing section** included open questions on good practices, any other initiatives not covered by the survey and the outlook for the future.

The questionnaire comprised 41 questions. It was an online form that allowed multiple respondents to complete it simultaneously and collaboratively. The respondents were

encouraged to share the questionnaire with anyone who may have more relevant knowledge of the topics in question.

The questionnaire featured a combination of closed- and open-ended questions. Closed-ended questions offered a nominal four-item scale of possible responses:

— 'yes',

— 'under development',

— 'no',

— 'other'.

The respondents were asked to provide a qualitative explanation detailing each answer they selected. None of the questions were compulsory, so respondents could choose not to answer if they were unable to or deemed the question irrelevant to their national context. Questions that remained unanswered and those marked as 'not applicable' were categorised as 'no answer'.

This design allowed for the collection of quantitative metrics and qualitative details for each question, capturing the diversity of national approaches to micro-credentials.

2.2. Pre-filling

In the second stage, the study team partially pre-filled the questionnaires with data already available to the European Commission, for example based on recent reports featuring case studies on micro-credentials. This was done to reduce the burden of filling out the survey on respondents. They could update the pre-filled information according to the latest developments in the field. Reports consulted for pre-filling included:

— the 2023 OECD paper 'Micro-credential policy implementation in Finland, the Slovak Republic, Slovenia and Spain' ([42]);

— the 2023 Cedefop publication *Micro-credentials for Labour Market Education and Training – The added value for end users* ([43]);

— the 2023 Cedefop case studies for Finland, France, Germany, Ireland, the Netherlands, Poland, Slovenia and Spain, conducted as part of a study on micro-credentials in labour market education and training ([44]);

— the 2023 Cedefop publication *Microcredentials for Labour Market Education and Training – Microcredentials and evolving qualifications systems* ([45]).

([42]) OECD, 'Micro-credential policy implementation in Finland, the Slovak Republic, Slovenia and Spain', *OECD Education Policy Perspectives*, No 86, 2023, OECD Publishing, Paris, https://www.oecd.org/publications/micro-credential-policy-implementation-in-finland-the-slovak-republic-slovenia-and-spain-c3daa488-en.htm.

([43]) Cedefop, *Microcredentials for Labour Market Education and Training – The added value for end users*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2023, http://data.europa.eu/doi/10.2801/141643.

([44]) Cedefop, *Microcredentials for Labour Market Education and Training – First look at mapping microcredentials in European labour-market-related education, training and learning: Take-up, characteristics and functions*, Cedefop Research Paper No 87, Publications Office, Luxembourg, 2022, http://data.europa.eu/doi/10.2801/351271.

([45]) Cedefop, *Microcredentials for Labour Market Education and Training – Microcredentials and evolving qualifications systems*, Cedefop Research Paper No 89, Publications Office, Luxembourg, 2023, http://data.europa.eu/doi/10.2801/566352.

The study team also conducted an online search for relevant studies, legal documents, and information on various projects and initiatives at the national and regional (for federal states) levels for all respondents.

2.3. Survey dissemination and data collection

The study aimed to survey stakeholders involved in consolidating ecosystems for micro-credentials. Respondents were invited to complete the questionnaire through emails, which included guidance on filling in the form. The three categories of respondents are:

— **Higher education.** Respondents from this field included representatives of ministries of education or higher education authorities. They were expected to provide insights into integrating micro-credentials in higher education systems and institutions.

— **VET.** Respondents from this field included members of the tripartite Advisory Committee on Vocational Training ([46]), consisting of national representatives of ministries in charge of VET, trade unions and employer associations. They were expected to provide their views on developments in the area of micro-credentials within VET.

— **Employment systems.** Respondents from this field included representatives of public employment services (PESs). In some countries (Bulgaria, Finland, Malta, Poland), various ministries or public entities related to employment provided answers instead of PESs. They were expected to provide their views on micro-credential providers in the business sector and on how micro-credentials are integrated into the employment and labour market. Respondents in this group were primarily responsible for the implementation of policies related to micro-credentials. Concerning the 23 PESs surveyed, the following must be noted.

— The missions of each PES could vary from one country to another. Although employed people can be registered with a PES if they are looking for another job, PESs mainly deal with unemployed workers.

— Their capacity to implement micro-credentials depends on several factors: the public policies in place in the country, the proactivity of decision-makers on the subject, the resources allocated to the PES, the missions of the service and the existence of a network of providers in the country capable of deploying micro-credentials.

Annex IV provides a detailed overview of the respondents in each category.

The survey was conducted over three months, from the end of June to mid-October 2024. Representatives of the three fields worked simultaneously on the same form. The respondents were encouraged to share the survey with other relevant authorities or people within or outside their institutions. For example, some sections completed by employment systems were filled out in collaboration with ministries of economy, employment or social affairs.

The study covered 31 European education and training systems, reaching out to 93 stakeholders in the fields of higher education, VET and employment systems. A total of 89 responses were received: 31 from higher education, 31 from VET and 27 from employment

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([46]) Since 1963, the advisory committee has supported the Commission in developing and implementing the EU policy framework for VET and, in recent years, for the broader domain of skills and qualifications (European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 'Advisory Committee on Vocational Training turns 60', European Union website, 9 June 2023, accessed 6 May 2025, https://year-of-skills.europa.eu/news/advisory-committee-vocational-training-turns-60-2023-06-09_en).

systems (no responses were received from Italy, Hungary, Austria or Romania). These employment systems were marked as having given 'no answer' in the survey data.

Several representatives of employment systems highlighted that the lack of detail or answers they provided was due to their dependence on developments in the fields of higher education and VET.

Figure 1 maps the education and training systems participating in the survey.

Figure 1. Education and training systems taking part in the survey

NB: Two surveys were completed for Belgium, since the Flemish and French communities have different education and training systems. Liechtenstein and Malta (higher education, VET and employment systems) are not visible on the map because of their size.

2.4. Data analysis

The data were analysed using a combination of quantitative and qualitative approaches. The quantitative analysis provides a statistical overview of the general trends across countries. The qualitative analysis offers deeper and more nuanced insights reported by the respondents, including a thematic analysis categorising the qualitative data.

Some answers to closed-ended questions with fixed response options were reclassified based on the qualitative information provided. Respondents sometimes indicated no developments in specific fields, but the qualitative answers described ongoing pilot projects or discussions, or similar. Hence, some answers were changed from 'no' to 'under development' to unify the different interpretations of the survey questions by the respondents to the greatest extent possible.

The diversity in the division of responsibilities among national authorities posed a further challenge. In addition, it was challenging to reach the competent authorities in some cases. In some Member States and associated countries, areas of responsibility overlap between authorities, with some countries having authorities that cover both higher education and

VET fields; in others, different authorities cover different fields, or multiple authorities cover one field.

Education and training systems were at different and often early stages of implementing micro-credentials. Hence, it was challenging for some respondents to provide specific details on ongoing pilot projects or initiatives under discussion. Consequently, some responses reflected plans rather than established practices.

The terminology used to refer to small-volume learning activities in each education and training system posed a linguistic challenge. Translating a term from a national language to English may have implications related to the profile, characteristics and functions of what is described as a micro-credential in a given national context.

To further validate the results, a preliminary draft of the report was shared with survey respondents to enable them to verify the information and provide additional details if relevant. Their feedback, provided in January 2025, was integrated into the report. This resulted in some modifications due to more recent developments in the implementation of the Council Recommendation on micro-credentials. The most significant change was the enactment of Act No 292/2024 on adult education in Slovakia ([47]), which came into effect on 1 January 2025. This legislation introduced an official definition of micro-credentials and several provisions for their uptake.

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[47] Act No 292/2024 Coll. on adult education and on amendments to certain laws, as adopted by the National Council of the Slovak Republic on 30 October 2024, https://www.slov-lex.sk/ezbierky/pravne-predpisy/SK/ZZ/2024/292/vyhlasene_znenie.

3. Definition, principles and standard elements of micro-credentials

3.1. Implementing a definition

The staff working document accompanying the proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, presenting the outcomes of stakeholder consultations conducted while developing the Council Recommendation, highlighted that 'the lack of a shared definition is currently perceived as the most substantial barrier to further development and uptake of micro-credentials' ([48]). Consequently, a key contribution of the Council Recommendation was its introduction of a carefully worded definition following several rounds of negotiations with stakeholders and Member States. Member States are advised to adopt the definition as presented in the Council Recommendation. The introduction of varying definitions of micro-credentials in different Member States would hinder transnational cooperation, complicating the establishment of joint micro-credentials and their international comparison.

The Council Recommendation introduced the following definition ([49]):

> *'Micro-credential' means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity.*

This definition encompasses key aspects of micro-credentials, including quality assurance, and measures to ensure transparency, portability and stackability.

The progress made towards implementing the definition of micro-credentials varies across European education and training systems. Figure 2 presents a detailed analysis of the implementation of an official definition of micro-credentials. 42 % (13) of the systems have adopted a definition of micro-credentials aligned with the Council Recommendation in at least one of the three fields of education and training. However, most systems do not yet use the definition systematically across fields. In most cases, a definition is adopted in higher education, with restricted use in VET and employment systems due to varying expectations and needs in these fields.

Another 42 % of education and training systems (13) are working on adopting a definition of micro-credentials. These systems show different levels of progress, for example conducting discussions, implementing pilot projects or waiting for the approval of already drafted documents (this is the case in Estonia, Iceland and Slovenia).

([48]) Commission staff working document accompanying the document proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, p. 37, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.
([49]) OJ C 243, 27.6.2022, p. 10.

Figure 2. Education and training systems in which an official definition of micro-credentials is implemented in at least one of the three fields (higher education, VET or employment systems)

Source: Survey data (*N* = 31).

On the other hand, 16 % of the education and training systems (5) do not have an official definition of micro-credentials. Nevertheless, two of them unofficially use the one proposed by the Council Recommendation in their working documents and discussions. Denmark expressed concern that introducing a definition into its national legislation may be counterproductive, since it could limit the development and recognition of existing small-volume learning activities. However, it has not conducted an official analysis from this perspective.

Some remarks from respondents about implementing a definition of micro-credentials include the following.

— Czechia, Hungary, Austria and Finland noted that their definitions are not used systematically across fields of education and training.

— Denmark does not have an official definition of micro-credentials. However, it has a well-established system for small-volume learning activities (the 'training for the labour market' (AMU) system) enabling the continuous upskilling of skilled and unskilled workers for the service society, digitisation and now the green transition, meeting the Council Recommendation's requirements. Small-volume learning activities end with a formal test and result in a diploma, and can be stacked to form larger qualifications.

— Sweden already had a definition for small-volume learning activities that fit the Council Recommendation. This is because it has a course-based (modularised) education and training system. Small-volume learning activities in higher education and VET are recognised and stackable towards a qualification. Principles and standard elements were already in place. However, courses and small-volume learning activities offered on demand (tailored to the client's needs) usually lead to a certificate, not to a formal qualification.

Some education and training systems introduced European Credit Transfer and Accumulation System (ECTS) limits for micro-credentials. The Council Recommendation recommends describing the workload needed to achieve learning outcomes in ECTS credits wherever possible ([50]). It also suggests that any small-volume learning activity that is equivalent to fewer credits than a full degree can be a micro-credential. However, the recommendation does not suggest a minimum or maximum number of ECTS credits for a micro-credential.

The ECTS limits for micro-credentials vary significantly across education and training systems. The minimum ranges from 1 to 5 ECTS credits, and the maximum varies from 15 to 59 ECTS credits. Table 1 provides details of ECTS limits for micro-credentials that some education and training systems have introduced.

Table 1. Have any lower or upper ECTS credit limits been introduced for micro-credentials?

Respondent	Higher education	VET	Employment systems
Austria	3 to 15 ECTS credits	Not defined	No data
Croatia	Not defined	2 to 9 CSVET credits ([1])	2 to 9 CSVET credits
Estonia	5 to 30 ECTS credits	5 to 30 ECTS credits	Not defined
Iceland	1 to 59 ECTS credits	Not defined	No data
Ireland	1 to 30 ECTS credits	5 FET credits ([2])	No data
Malta	4 to 25 ECTS credits	Dependent on NQF level	Dependent on NQF level
Portugal	Not defined	2.25 to 31.5 credit points ([3])	Not defined
Spain	1 to 15 ECTS credits	Higher VET grades typically equate to 2 000 hours (equivalent to 12 ECTS credits)	Not defined
Sweden	No data	50 to 200 upper secondary credits (for modular courses) ([4])	No data

([1]) Croatian Credit System for Vocational Education and Training – CSVET (1 CSVET = 15 to 25 hours).

([2]) Irish Further Education and Training credit – FET credit (1 FET credit = 10 hours). Further Education and Training (FET) refers to vocational education and training in Ireland.

([3]) Portuguese credit points (2.25 credit points = 25 hours).

([4]) Swedish upper secondary credits (1 upper secondary credit = 1 hour).

NB: VET and employment systems use national approaches to determine workloads, as explained in the corresponding notes

Source: Survey data.

([50]) OJ C 243, 27.6.2022, p. 10, standard element VII.

Furthermore, other education and training systems working on implementing national definitions of micro-credentials are discussing potential ECTS limits.

— Denmark considers limits to be up to institutions. It currently does not mandate using ECTS credits for micro-credentials but requires transparent information on workload to be provided, which can be expressed in ECTS credits, study hours, months or years.

— Latvia is exploring a 30- to 60-ECTS-credit range in NQF level 5 (continuing vocational education programmes) [51].

— Lithuania is exploring a fixed number of 5 ECTS credits in higher education and a 1- to 20-learning-credit [52] range for VET.

— Slovenia is exploring a 1- to 9-ECTS-credit range for higher education.

Introducing varying national ECTS credit limits for micro-credentials could pose a barrier to European cooperation. A micro-credential of a specific number of ECTS credits from one education or training system would not be accepted as a micro-credential internationally. Consequently, establishing joint micro-credential offerings and recognition among institutions in different education and training systems would become difficult.

The term micro-credential can cover various small-volume learning activities that already exist in European education and training systems. These small-volume learning activities vary by field of education and training, depending on how each system structures education and training activities. Table 2 shows the terms respondents use to mean micro-credentials in higher education, VET and employment systems. In 19 education and training systems, the term 'micro-credential' is already used in at least one of the three fields of education and training, either officially or unofficially.

Table 2. What do you call micro-credentials in your education and training system?

Respondent	Higher education	VET	Employment systems
Austria	Micro-credentials, certificate courses, university courses.	(Partial) certificates of competence, licences, courses.	No data.
Belgium – Flemish Community	Micro-credentials, micro-degrees, lifelong learning programmes, continuous development courses.	Partial qualifications, module certificates.	Partial qualifications, proof of competences.
Belgium- French Community	Micro-credentials, short courses, lifelong learning courses.	Units of learning outcomes, federal aptitude certificates, certificates of skills acquired in training.	Micro-credentials, proof/certificates of learning outcomes, federal aptitude certificates, certificates of skills acquired in training, small learning activities.
Bulgaria	Short-term training.	No data.	Short-term training.
Croatia	Lifelong learning programmes, micro-qualifications.	Micro-qualifications.	Micro-qualifications.
Cyprus	Micro-credentials.	No specific terms.	No data.
Czechia	Micro-credentials, lifelong learning courses.	Professional qualifications.	No data.

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[51] 60 ECTS credits are equivalent to one year of full-time study.
[52] 1 learning credit is equivalent to 27 academic hours.

Respondent	Higher education	VET	Employment systems
Denmark	Micro-credentials.	'Training for the labour market' courses.	'Training for the labour market' courses
Estonia	Micro-credentials, micro-degrees, micro-qualifications, continuing education.	Partial qualifications, micro-qualifications, micro-degrees.	Micro-qualifications.
Finland	Micro-credentials, degree modules, continuing education, digital badges.	Micro-credentials, modules, permits, licences, part of qualification, qualifications, units of qualification.	Permits, licences, qualifications, digital badges.
France	MOOCs, corporate online open courses, small private online courses.	Blocks of competences.	Open badges, digital badges, certificates of professional qualifications, certificates of competences, sectoral certificates.
Germany	Further and continuing education programmes.	Micro-credentials, partial qualifications.	Non-degree-oriented further training.
Greece	Short training programmes, short-cycle programmes.	Micro-credentials (*).	No specific terms.
Hungary	Micro-credentials.	Micro-certificates.	No specific terms.
Iceland	Micro-learning.	Micro-learning, micro-certification.	Certification.
Ireland	Micro-credentials.	Micro-qualifications, minor/special-purpose/supplemental awards.	Micro-qualifications, minor/special-purpose/supplemental awards.
Italy	Micro-credentials, update courses, scientific improvement courses, training courses.	Micro-qualifications.	No data.
Latvia	Extension courses, digital badges, mini-degrees, nano-degrees.	Vocational education modules.	Certificates, licences, non-formal educational programmes, upskilling courses.
Liechtenstein	Micro-credentials.	Micro-credentials.	Micro-credentials.
Lithuania	Micro-certifications, badges, partial/supplementary qualifications or micro-qualifications, module certificates.	Module certificates, certificates of non-formal VET programmes.	Module certificates.
Luxembourg	Certificates.	Partial certification.	No specific terms.
Malta	Micro-credentials, awards, short courses.	Units of competency, skill sets, accredited short courses, modules.	Awards, short courses.
Netherlands	No specific terms.	VET certificates.	Certificates.
Norway	Mini-qualifications, micro-topics, micro-courses, modules.	Mini-qualifications, micro-topics.	No specific terms.
Poland	Micro-credentials.	Micro-credentials.	Micro-credentials.
Portugal	Micro-credentials, micro-diplomas.	Micro-credentials, short-term training units, competence units, short- and medium-duration pathways.	No data.
Romania	Partial qualifications.	Units of learning outcomes.	No data.
Slovakia	Micro-credentials, micro-certificates.	Micro-credentials, micro-certificates.	Micro-credentials, micro-certificates.

Respondent	Higher education	VET	Employment systems
Slovenia	Micro-credentials.	Short-term education and training.	Supplementary qualifications.
Spain	Micro-credentials, micro-modules, short-duration programmes.	'A' programmes, micro-accreditations.	Micro-credentials.
Sweden	Courses.	Courses.	Courses.

(*) The concept of micro-credentials within VET is relatively new in Greece. There is a clear reference to micro-credentials in Article 11 of Law 5082/2024 (*Government Gazette*, Vol. A', No 9, 19 January 2024), which states: 'It is possible to issue digital certificates and micro-credentials from each competent body in which S.A.E.K. (IVET Institutes) operate via the Single Digital Gateway (gov.gr), utilising the capabilities provided by international good practices. Digital certificates indicate the identification of the holder, the title of the micro-credential, [the] date of issue, [the] learning outcomes achieved, the method of evaluation, the awarding body and the level of [the] National Qualifications Framework the micro-credential corresponds to. The competent issuing body shall display the total digital certificates and micro-credentials also in the Individual Skills Accounts according to the article 35 of the Law 4921/2022 (A' 75).'

NB: The survey addressed its respondents using the term 'country' or 'region'. Throughout this report, we use the term 'respondent' or 'education and training system' to acknowledge the different characteristics of each context investigated and ensure that the terminology accurately reflects the survey respondents.

Source: Survey data.

In summary, respondents mentioned that they apply the term 'micro-credentials' to two categories:

— credentials – records of the learning outcomes that a learner has acquired following a small volume of learning, including awards, badges, certificates, licences and micro-degrees;

— courses leading to micro-credentials – small-volume learning activities designed to provide learners with specific knowledge, skills and competences, including modules, programmes and units.

This suggests that the term 'micro-credential' may be an umbrella term covering a diversity of credentials and small-volume learning activities across higher education, VET and employment systems.

Some respondents reported focusing on enabling cross-border comparability and the recognition of micro-credentials. This would facilitate the recruitment of international talent and improve the international competitiveness of national citizens. **Some representatives of employment systems expressed concerns about how a broad or no definition of micro-credentials could create barriers to cross-border recognition and portability, hindering international job market integration and mobility.**

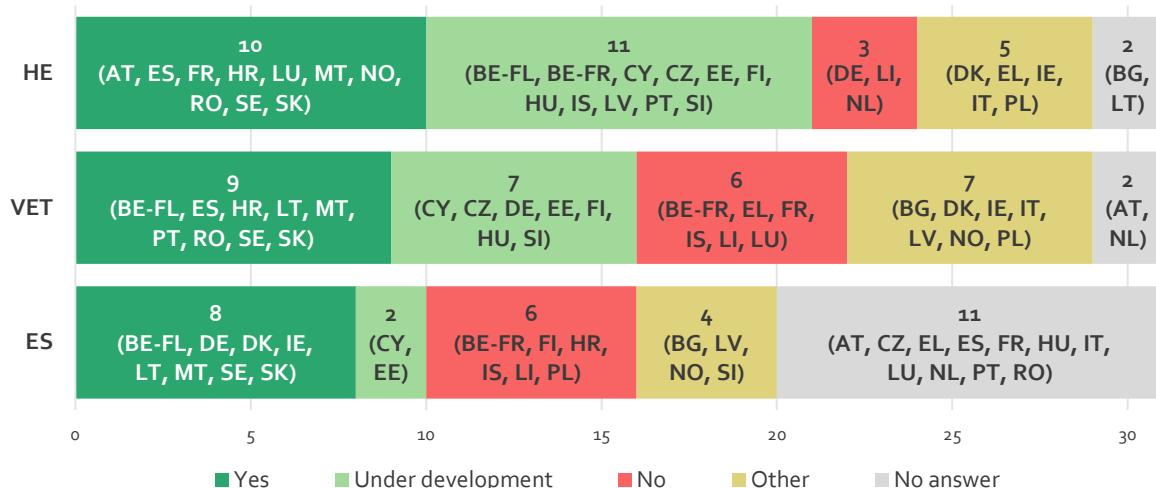## 3.2. Principles of designing and issuing micro-credentials

The Council Recommendation on a European approach to micro-credentials introduced a set of 10 principles for designing and issuing micro-credentials. These principles aim to 'specify the nature of micro-credentials and offer guidance to Member States, public authorities and providers on the design and issuance of micro-credentials and systems for

micro-credentials' ([53]). The principles should build trust among employers, learners, and education and training institutions, and help them understand the value of micro-credentials. The principles are quality, transparency, relevance, valid assessment, learning pathways, recognition, portability, learner-centredness, authenticity, and information and guidance (see Annex II for a detailed description).

Education and training systems are advancing at different paces with regard to the implementation of principles for designing and issuing micro-credentials, as shown in Figure 3. In higher education, 32 % (10) have implemented principles to some extent, and 35 % (11) are in the process of implementing them. In VET, 29 % (9) have already implemented the principles and 23 % (7) are in the process of implementing them. In employment systems, 26 % (8) have already implemented the principles, and 6 % (2) are in the process of implementing them. It is important to acknowledge that the implementation of the 10 principles may take several years. For instance, adopting principles such as recognition could take considerable time.

Figure 3. Do your education and training systems apply principles for designing and issuing micro-credentials?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Key remarks among the education and training systems that have already implemented principles for designing and issuing micro-credentials include the following.

— In the field of higher education, Luxemburg, Malta and Norway apply the principles to all education and training offered in their countries, including micro-credentials.

— In the field of VET, Lithuania ([54]), Portugal and Romania ([55]) have embedded the principles into recently developed legal frameworks.

([53]) Commission staff working document accompanying the document proposal for a Council recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, p. 67, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.

([54]) Lithuania: Ministry of Education and Science, *Approval of procedure for development and registration of vocational training programs*, 2024, https://e-seimas.lrs.lt/portal/legalActEditions/lt/TAD/f32c88c2ee9511e89d4ad92e8434e309?faces-redirect=true.

([55]) Government Decision No 772/2022 on the approval of the methodology for granting transferable credits for adult vocational training, as well as for the repeal of Government Decision No 844/2002 on the approval of the nomenclatures of professional qualifications for which training is provided through pre-university education, as well as the duration of schooling, https://legislatie.just.ro/Public/DetaliiDocumentAfis/256465.

— In France (higher education) and Germany (employment systems), similar principles that small-volume learning activities must comply with are in place.

Education and training systems implementing principles for designing and issuing micro-credentials (i.e. those responding 'under development') are at different stages of implementation.

— One group of systems are drafting policy documents. This includes the Flemish Community of Belgium (higher education), Hungary (higher education and VET), Portugal (higher education) and Finland (higher education and VET).

— A second group of systems is developing pilot projects, and includes Czechia (higher education and VET), Latvia (higher education), Luxembourg (higher education) and Slovenia (higher education and VET).

— A third group is holding discussions at the national or regional level, and includes the French Community of Belgium (higher education) and Germany (VET).

Respondents have also indicated other approaches ('other' in Figure 3). Denmark (higher education and VET), Ireland (higher education and VET) and Italy (higher education and VET) are working towards embedding the principles of designing and issuing micro-credentials into their national qualification frameworks. Bulgaria (VET and employment systems) is developing a model for micro-credentials that will include the principles. Latvia (VET and employment systems) is developing guidelines for competence-based approaches that will include the principles. In Poland (VET), the principles are covered in the act on the integrated qualifications system.

Great variation is observed in the implementation of the 10 European principles for designing and issuing micro-credentials. Table 3 shows the extent to which different countries/regions have introduced the 10 principles for designing and issuing micro-credentials. The systems included in the table fall into two categories:

1. systems that recently introduced principles in line with the Council Recommendation;

2. systems in which similar principles were already in place for small-volume learning activities, in line with the Council Recommendation.

Table 3. Are the principles for designing and issuing micro-credentials aligned with Annex II of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability?

European principles for designing and issuing micro-credentials	Higher education			VET			Employment systems		
	Mandatory	Optional	Not applied	Mandatory	Optional	Not applied	Mandatory	Optional	Not applied
Quality	AT, BE-FL, BE-FR, CZ, DK, EE, EL, ES, FI, FR, HR, IE, IS, IT, LU, MT, NO, PL, RO, SE, SI, SK	PT		BE-FL, DK, EE, FI, FR, HR, IE, IT, LV, MT, NO, PT, RO, SE, SK		AT, DE, PL	BE-FL, DE, DK, EE, HR, LT, MT, NO, SI, SK	LU, SE	PL
Transparency	AT, BE-FL, BE-FR, CZ, DK, EE, EL, ES, FI, FR, HR, IE, IS, IT, LU, MT, NO, PL, RO, SE, SI, SK	PT		BE-FL, DK, EE, FI, HR, IE, IT, LT, LV, MT, NO, PT, RO, SE, SK	FR	AT, DE, PL	BE-FL, DE, DK, EE, HR, LT, MT, SI	LU, SE	PL
Relevance	AT, BE-FL, BE-FR, CZ, DK, EL, ES, FR, HR, IE, IT, LU, NO, PL, RO, SE, SI, SK	EE, IS, PT		BE-FL, DK, HR, IE, IT, LT, LV, NO, PT, RO, SE, SK	EE, FR	AT, DE, PL	BE-FL, DE, DK, HR, LT, MT, NO, SI, SK	EE, LU, SE	PL
Valid assessment	AT, BE-FL, BE-FR, CZ, DK, EE, EL, ES, FI, HR, IE, IS, IT, LU, MT, NO, RO, SE, SI, SK	PT		BE-FL, DK, EE, FI, HR, IE, IT, LT, LV, MT, NO, PT, RO, SE, SK	FR	AT, DE, PL	BE-FL, DE, DK, EE, HR, LT, MT, NO, SI, SK	LU, SE	PL
Learning pathways	AT, BE-FL, BE-FR, CZ, ES, FI, HR, IE, IS, IT, LU, NO, RO, SE, SK	EE, MT, PT, SI	DK	DK, FI, HR, IE, IT, LT, LV, PT, RO, SE, SK	BE-FL, EE, FR, MT	AT, DE, NO, PL	BE-FL, DK, HR, LT, SK	DE, EE, LU, MT, SE, SI	PL
Recognition	AT, BE-FL, BE-FR, CZ, DK, EE, ES, FR, HR, IE, IS, IT, LU, RO, SE, SI	NO, PT		DK, EE, HR, IE, IT, LT, LV, MT, RO, SE, SK	BE-FL, FR	AT, DE, NO, PL, PT	BE-FL, DE, DK, LT, MT, NO	LU, SE	EE, HR, PL, SI
Portability	AT, BE-FL, BE-FR, CZ, ES, HR, IS, IT, LU, NO, RO, SE, SK	PT	DK, EE, SI	BE-FL, DK, FR, IE, IT, LT, LV, MT, NO, PT, RO, SE, SK		AT, DE, EE, HR, PL	BE-FL, DK, LT	DE, LU, MT, SE, SK	EE, HR, PL, SI
Learner-centredness	AT, BE-FL, BE-FR, DK, EL, ES, FI, FR, HR, IE, IT, LU, NO, RO, SE, SI, SK	IS, PT		DK, EE, FI, IE, IT, LV, MT, NO, PT, RO, SE, SK	BE-FL, FR, LT	AT, DE, PL	DE, DK, MT, NO, SI, SK	BE-FL, LT, LU, SE	PL
Authenticity	AT, BE-FL, BE-FR, CZ, DK, EE, EL, ES, FI, FR, HR, IS, IT, LU, NO, RO, SE, SI, SK	PT		BE-FL, DK, EE, FI, FR, HR, IE, IT, LT, LV, NO, PT, RO, SE, SK		AT, DE, PL	BE-FL, DE, DK, EE, HR, LT, NO, SI, SK	LU, MT, SE	PL
Information and guidance	DK, EL, ES, HR, IE, IT, LU, RO, SE, SK	BE-FL, BE-FR, EE, NO, PT	IS	DK, HR, LV, PT, RO, SE, SK	BE-FL, EE, FR, IT, LI, LT, MT, NO	AT, DE, PL	DE, DK, HR, SK	BE-FL, EE, LT, LU, MT, SE	PL

Source: Survey data.

Some respondents noted that the lack of adoption of an official definition of micro-credentials at the national/regional level hinders further developments, such as developing principles or guidelines. Education and training systems cannot develop guidance, principles or standards for something that does not exist in their national/regional contexts. Furthermore, some employment systems declared that the implementation of a definition and principles is the responsibility of higher education and/or VET, so they depend on developments in those fields.
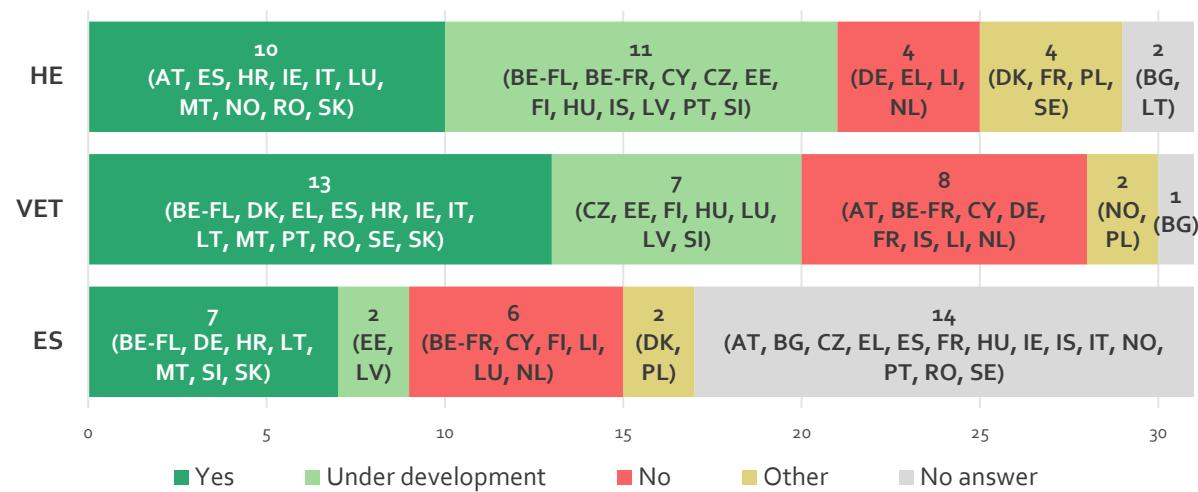
3.3. Standard elements of micro-credentials

The Council Recommendation on a European approach to micro-credentials recommended using a set of 11 mandatory standard elements to describe micro-credentials and five optional elements (see the complete list in Annex I). The standard elements are critical information that must be provided for any micro-credential to ensure transparency. The staff working document accompanying the proposal for the Council Recommendation states: 'The variability of information makes it difficult for learners, employers, education and training institutions, [and] quality assurance agencies … to understand the value and content of micro-credentials and to compare them. The result is a lack of trust and recognition of micro-credentials, whether for further learning purposes or in a labour market context' ([56]). Standard elements encompass details on the learning outcomes attained, information regarding the certificates issued upon completion (which clearly distinguish micro-credentials from full degrees), and explanations of the assessment methods and quality assurance processes employed.

Education and training systems are progressively implementing standard elements to describe micro-credentials (in line with the Council Recommendation), as illustrated in Figure 4. In higher education, 32 % (10) have implemented standard elements, and 35 % (11) are in the process of implementing them. In VET, 42 % (13) have implemented standard elements, and 23 % (7) are in the process of doing so. In employment systems, 23 % (7) have implemented standard elements, and 6 % (2) are in the process of implementing them.

([56]) Commission staff working document accompanying the document proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, p. 65, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.

Figure 4. Do your education and training systems apply standard elements to describe micro-credentials?

	Yes	Under development	No	Other	No answer
HE	10 (AT, ES, HR, IE, IT, LU, MT, NO, RO, SK)	11 (BE-FL, BE-FR, CY, CZ, EE, FI, HU, IS, LV, PT, SI)	4 (DE, EL, LI, NL)	4 (DK, FR, PL, SE)	2 (BG, LT)
VET	13 (BE-FL, DK, EL, ES, HR, IE, IT, LT, MT, PT, RO, SE, SK)	7 (CZ, EE, FI, HU, LU, LV, SI)	8 (AT, BE-FR, CY, DE, FR, IS, LI, NL)	2 (NO, PL)	1 (BG)
ES	7 (BE-FL, DE, HR, LT, MT, SI, SK)	2 (EE, LV)	6 (BE-FR, CY, FI, LI, LU, NL)	2 (DK, PL)	14 (AT, BG, CZ, EL, ES, FR, HU, IE, IS, IT, NO, PT, RO, SE)

■ Yes   ■ Under development   ■ No   ■ Other   ■ No answer

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Education and training systems take various approaches to adopting standard elements to describe micro-credentials. Systems providing qualitative details in higher education have embedded standard elements into official templates (Austria), descriptions in NQFs (Ireland), guidelines (Italy) and laws (Romania). In VET, systems have embedded the standard elements in templates (Denmark), laws (Greece), decrees (Italy), further education and training models (Ireland), minister's orders (Lithuania) and government decisions (Romania). Respondents from employment systems noted that they depend on developments in the fields of higher education and/or VET.

According to the qualitative details provided by respondents, among higher education systems that are working on implementing standard elements to describe micro-credentials (i.e. for which implementation is under development), Estonia, Finland, Hungary, Iceland, Latvia and Slovenia are working on draft documents to implement standard elements. Czechia is developing a pilot project. The Flemish and French communities of Belgium are discussing the implementation of standard elements.

Respondents indicating that they are not implementing standard elements (responding 'no' to the relevant survey question) noted the need to implement an official definition of micro-credentials in their systems as an initial step. For some systems, the lack of an official definition of micro-credentials is blocking the possibility of working to develop standard elements, as such standard elements cannot be developed for something that legally does not exist. Other systems already use similar standard elements to describe small-volume learning activities. However, they also need to introduce an official definition of micro-credentials to claim that those standard elements apply to micro-credentials.

Several education and training systems are making the use of the 11 standard elements to describe micro-credentials mandatory, as suggested by the Council recommendation. Table 4 shows how education and training systems have implemented the mandatory standard elements. It includes systems that are in the process of implementing them (the Flemish Community of Belgium and Portugal in higher education, and Estonia in the three fields of education and training), or that already have similar standard elements in place for small-volume learning activities (Denmark in higher education and VET, and Germany in employment systems).

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Table 4. Do the standard elements to describe micro-credentials include the following mandatory elements?

European standard elements to describe a micro-credential	Higher education			VET			Employment systems		
	Mandatory	Optional	Not applied	Mandatory	Optional	Not applied	Mandatory	Optional	Not applied
Identification of the learner	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, NO, PT, RO, SE, SK	DK		BE-FL, DK, EE, EL, FI, FR, IE, IT, LT, LU, NO, PT, RO, SE, SK			BE-FL, DE, EE, LT, LV, SI, SK		
Title of the micro-credential	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, PT, RO, SE, SK	DK		BE-FL, DK, EE, EL, FI, FR, HR, IE, IT, LT, LU, LV, MT, NO, PT, RO, SE, SK			BE-FL, DE, EE, LT, LV, MT, SI, SK		
Country/countries or region(s) of the issuer	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, RO, SE, SK	PT	DK	BE-FL, DK, EE, FI, FR, HR, IE, IT, LT, LU, LV, MT, NO, PT, RO, SK			BE-FL, EE, LT, LV, MT, SI, SK	DE	
Awarding body/bodies	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, PT, RO, SE, SK	DK		BE-FL, DK, EE, EL, FI, FR, HR, IE, IT, LT, LU, LV, MT, NO, PT, RO, SE, SK			BE-FL, DE, EE, LT, LV, MT, SI, SK		
Date of issuing	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, PT, RO, SE, SK	DK		BE-FL, DK, EE, EL, FI, FR, HR, IE, IT, LT, LU, LV, MT, NO, PT, RO, SE, SK			BE-FL, DE, EE, LT, LV, MT, SI, SK		
Learning outcomes	AT, BE-FL, CZ, EE, ES, FI, HR, IE, IS, IT, LU, NO, RO, SE, SK	DK, PT		DK, EE, EL, FI, FR, HR, IE, IT, LT, LU, LV, PT, RO, SE, SK			BE-FL, DE, EE, LT, MT, SI, SK	LV	
Notional workload needed to achieve the learning outcomes (in ECTS credits, where possible)	AT, BE-FL, CZ, EE, FI, HR, IE, IS, IT, LU, MT, NO, RO, SE, SK	BE-FR, DK, PT		BE-FL, EE, FI, FR, HR, IE, LT, MT, PT, RO, SE, SK	IT		EE, LT, MT, SI, SK	BE-FL, LV	DE
Level (and cycle, if applicable) of the learning experience leading to the attainment of the micro-credential (European Qualifications Framework, Qualifications Frameworks in the European Higher Education Area), if applicable	BE-FL, BE-FR, CZ, EE, ES, HR, IE, IS, IT, LU, MT, RO, SE, SK	DK, FI, NO, PT		EE, FR, HR, IE, IT, LT, LV, MT, NO, RO, SK	FI		BE-FL, LT, MT, SI, SK	LV	DE, EE
Type of assessment	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, RO, SE, SK	PT	DK	DK, EE, EL, FI, FR, HR, IE, LU, MT, RO, SK	IT		BE-FL, EE, MT, SI, SK	DE	LV
Form of participation in the learning activity	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IE, IS, IT, LU, MT, NO, RO, SE, SK	PT	DK	DK, EE, FI, FR, HR, IE, LU, MT, RO, SK			BE-FL, EE, MT, SI, SK	DE	LV
Type of quality assurance underpinning the micro-credential	AT, BE-FL, BE-FR, CZ, EE, ES, FI, HR, IS, LU, MT, NO, RO, SE, SK	PT		EE, FI, FR, HR, MT, NO, SK	IT		BE-FL, DE, EE, SI, SK		LV

Source: Survey data.

Along with the mandatory standard elements describing micro-credentials, the Council recommendation proposed five optional ones. Optional standard elements correspond to additional information that may be needed in specific contexts or certain fields of education and training. Table 5 shows the extent to which education and training systems are implementing these optional standard elements. It can be noted that while higher education systems include the most optional standard elements as mandatory, VET has the highest number of systems not applying them. In employment systems, optional standard elements are rarely applied. However, it must be noted that some respondents in Table 5 are in the process of implementing standard elements (Estonia in the three fields, Latvia in VET, and Finland in higher education and VET) or already have standard elements that apply to their small-volume learning activities in place (Denmark in higher education and VET, Germany in employment systems and France in VET).

Table 5. Do the standard elements to describe micro-credentials include the following optional elements?

Optional European standard elements to describe a micro-credential	Higher education			VET			Employment systems		
	Mandatory	Optional	NA	Mandatory	Optional	NA	Mandatory	Optional	NA
Prerequisites for enrolling in the learning activity	AT, BE-FL, CZ, FI, HR, IE, IS, IT, LU, MT, NO, SE	DK, EE, PT, RO		DE, FI, FR, HR, IE, IT, LT, LU, LV, MT, NO, PT	EE	AT, BE-FL, ES, SE	BE-FL, LT, LV, MT, SI	EE	DE
Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or on-site with identity verification).	BE-FL, CZ, DK, FI, IS, IT, LU, MT, NO, RO, SE	ES, PT	EE, EL	DE, DK, IE, IT, LU, MT, NO, RO	FR, HR	AT, BE-FL, EE, LT, PT, SE	BE-FL, LV	DE	EE, LT, SI
Grade achieved	AT, BE-FL, FI, HR, IE, IS, IT, MT, NO, RO, SE	DK, EE, ES, PT	EL	DE, DK, IE, MT, NO, RO, SE	EE, FR, IT, PT	AT, BE-FL, HR, LT	BE-FL	DE, EE, LV	LT, SI
Integration/stackability options (stand-alone, independent micro-credential; or integrated micro-credential, stackable with another credential).	AT, BE-FL, CZ, EE, FI, HR, IE, IS, IT, LU, MT, NO, SE	DK, ES, PT, RO	EL	BE-FL, DE, DK, EE, IE, IT, LU, MT	FR, NO, PT	AT, HR, LT, SE		BE-FL, DE	EE, LT, LV, SI
Further information	FI, IT, SE	BE-FL, DK, RO	EL	DE, IE, LV	FR, HR	AT	MT	DE	LV

NB: NA – not applied

Source: Survey data.

Beyond the mandatory and optional standard elements and principles proposed by the Council recommendation, some education and training systems introduced additional principles / standard elements, as presented in Table 6. In total, seven respondents reported that they had introduced additional aspects of designing, issuing and describing micro-credentials. Respondents highlighted that they consider additional principles / standard elements to add value at the national level, since they are expected to improve the link between micro-credentials and the needs and characteristics of national education and training systems.

Table 6. Do your education and training systems apply additional/different principles/standard elements beyond the ones suggested by the Council recommendation?

Respondent	Higher education	VET	Employment systems
Denmark	Sustainability of the qualification.	— Personal social security number. — Course content.	No additional items.
Ireland	No additional items.	— Value. — Agility. — Relevance. — Collaboration. — Flexibility of delivery. — Assurance of relevance.	No additional items.
Croatia	— Sector according to the Croatian Qualifications Framework Register. — Conditions for the completion of the programme. — Expected date of programme revision.	No additional items.	No additional items.
Italy	— Knowledge, skills and ability tags describing learning objectives in a filterable online format. — QR code for verification. — If applicable, expiry date.	No additional items.	No additional items.
Malta	No additional items.	— Industry partnerships. — Stakeholder engagement in the design and delivery of micro-credentials. — Practical, hands-on learning experiences. — Work-based learning opportunities.	— Employer feedback in the development and continuous improvement of micro-credentials. — Digital verification. — Portability. — Profiles of the educators/trainers.
Slovakia	Identification of statutory body.	Identification of statutory body.	Identification of statutory body.
Finland	Competence level: novice, advanced beginner, competent, proficient, expert (**in testing phase**).	No additional items.	No additional items.

Source: Survey data.

Respondents specified that their systems introduced additional principles / standard elements as a result of pilot projects suggesting a need for them. However, some respondents in the process of implementing principles / standard elements expressed their intention to avoid adding aspects, since they consider that they could create an unnecessary burden within their systems. Other respondents in the process of implementation consider that additional items should be introduced at the discretion of their institutions.

4. Development of an ecosystem for micro-credentials

Developing an ecosystem for micro-credentials involves establishing a comprehensive and interconnected approach that supports the recognition, validation and integration of micro-credentials in evolving education and training systems, labour markets and society. This ecosystem involves various stakeholders, including educational and training institutions, social partners, employers, civil-society organisations, local authorities, professional associations, research and innovation organisations, and certification bodies. They work together to ensure that micro-credentials are a trusted skills currency ([57]). The development of an ecosystem for micro-credentials addresses the fact that the 'global micro-credential landscape is currently disconnected across national and sectoral boundaries' ([58]).

This section explores the advancements in establishing micro-credential ecosystems through promotion, quality assurance, recognition, funding, integration in national qualifications frameworks, and intersectoral dialogues.

4.1. Promotion of micro-credentials in various learning settings

The Council recommendation proposes to support and facilitate the ongoing and emerging development of micro-credentials within formal, non-formal and informal learning settings ([59]). Member States are encouraged to integrate micro-credentials into lifelong learning, upskilling and reskilling initiatives developed by higher education institutions, VET providers and other providers (including companies, social partners, civil-society organisations, local authorities, community centres, professional associations, research and innovation organisations, and private providers). Developments should include fostering inclusive, learner-centred opportunities; exploring innovative roles for micro-credentials; and potentially providing public funding to support their implementation.
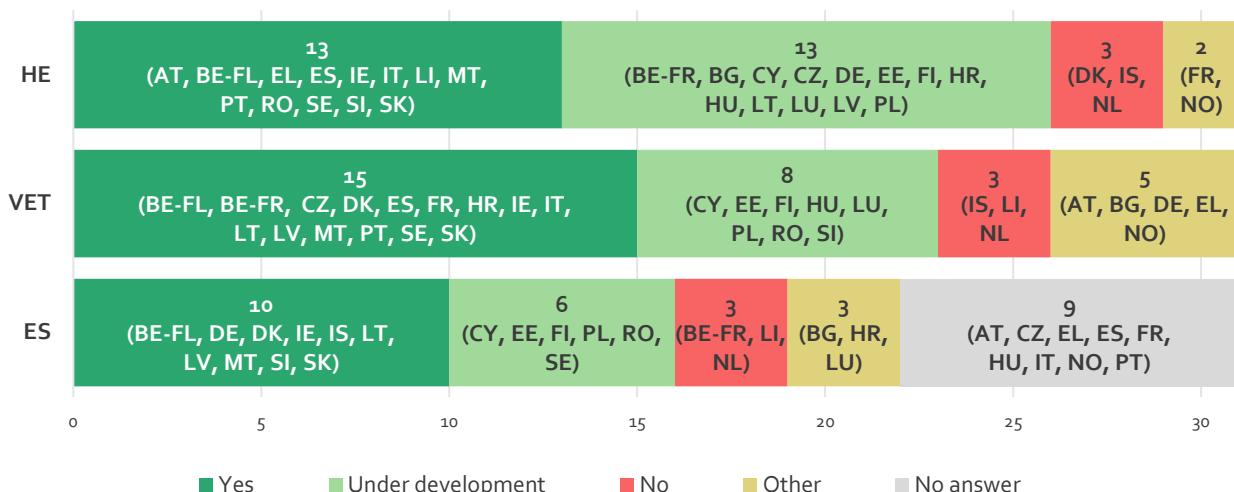
Most of the education and training systems surveyed are either promoting or developing measures to promote micro-credentials within formal, non-formal and informal learning settings, as displayed in Figure 5. In higher education, 42 % of systems (13) are promoting micro-credentials within formal, non-formal and informal learning settings, and 42 % (13) are developing measures. In VET, 48 % of systems (15) are promoting micro-credentials in these settings and 26 % (8) are developing measures. Among employment systems, 32 % (10) are promoting micro-credentials in these settings, while 19 % (6) are developing measures.

([57]) Micro-credentials are often referred to as a 'currency' because they can be universally recognised, portable, stackable and exchangeable. Additionally, they have specific value, acknowledging and validating specific skills and competencies (Nic Giolla Mhichíl, M., Brown, M., Beirne, E. and Mac Lochlainn, C., *A Micro-credential Roadmap: Currency, cohesion and consistency*, Dublin City University, 2020, https://www.skillnetireland.ie/publication/a-micro-credential-roadmap-currency-cohesion-and-consistency/).

([58]) Commission staff working document accompanying the document proposal for a Council recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, p. 61, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.

([59]) OJ C 243, 27.6.2022, p. 10, Articles 7 and 8.

Figure 5. Do your education and training systems promote the development of micro-credentials within formal and non-formal learning settings?

NB: The term 'non-formal learning' in this question was used in line with the Council recommendation, referring to any learning outside formal education and training. However, it is worth noting that some education and training systems may have interpreted it differently. They may have interpreted it as 'non-formal VET', which refers to a specific type of VET whose qualifications are not recognised by state authorities but are acknowledged by professional associations within specific sectors. *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

The following examples provide details of the education and training systems promoting micro-credentials within formal, non-formal and informal learning settings. They feature respondents who provided qualitative information in the survey.

— Belgium (Flemish Community) introduced the term 'micro-credential' in a policy note on lifelong learning in higher education. This policy note builds on work of the Higher Education Advancement Fund. It introduces a draft agreement to be used to develop agreements on the offering of micro-credentials, which is under discussion.

— Ireland is funding the creation of higher education micro-credentials using NextGenerationEU funds through the Human Capital Initiative (HCI), which supports the MicroCreds project under Pillar 3 ([60]). It has implemented a comprehensive communication strategy and a branding approach to establish micro-credentials as a learning offer recognised and trusted by higher education institutions and enterprises participating in the project.

— Greece formally introduced the term 'micro-credential' into Greek legislation. Micro-credentials are managed by lifelong learning centres. Institutions participating in European Universities alliances may offer short-cycle courses contributing to the total number of ECTS credits required for undergraduate programmes.

— Malta incorporated micro-credentials into the NQF for higher education and VET, ensuring recognition within the formal education system.

— Austria developed a national recommendation on micro-credentials and promotes their use in strategic documents and performance agreements between the government and public higher education institutions.

([60]) https://microcreds.ie/.

— Romania introduced the Law for Higher Education (Law No 199/2023), including provisions that enable higher education institutions to offer micro-credentials at the VET level. Specific articles of the law outline how learners can obtain micro-credentials through exams, postgraduate programmes and adult professional training programmes.

— Slovenia is implementing pilot projects in multiple public higher education institutions to create experimental micro-credential programmes. These pilots, part of the project 'Reforming higher education for a green and resilient transition to society 5.0', are financed through the EU's Recovery and Resilience Facility (RRF) and include promotional activities.

— In Slovakia, micro-credentials are part of the lifelong learning strategy and the strategy for the informatisation of education. Micro-credentials were also formally introduced into the legal framework in January 2025. Institutions collaborate closely with higher education institutions in other Member States and participate in European Universities alliances developing micro-credentials.

Examples of VET respondents who provided qualitative information on their actions to promote micro-credentials within formal, non-formal and informal learning settings are as follows.

— Belgium (Flemish Community) organises its adult education based on modules and professional qualifications based on partial qualifications, equivalent to micro-credentials. Furthermore, learners receive financial incentives to achieve full qualifications within this modular/partial qualification system.

— In Ireland, the Further Education and Training Authority actively promotes the Further Education and Training Micro-Qualifications Model ([61]) when designing new micro-training programmes. It aims to provide an agile response to upskilling needs of employees and enterprises through new micro-learning programmes. Micro-qualifications are developed in collaboration with enterprises and sectoral bodies to ensure their relevance to labour market needs.

— In Greece, micro-credentials are not officially recognised within the VET system. However, actions have been taken to support their integration. A research and mapping project informing stakeholder consultations and policy recommendations regarding the endorsement of micro-credentials within VET.

— Spain integrated micro-credentials into its national training strategy for VET (Royal Decree 659/2023). It aligns micro-credentials with the EQF and the European skills agenda. Micro-credentials are developed within modular training programmes, allowing learners to accumulate learning units towards completing a full VET programme. Collaboration with industry and employers supports the design of micro-credentials that meet specific labour market needs.

— In Italy, micro-qualifications are a component of the national skills certification system offered within the VET sector. This is emphasised through the reforms and investments set out by the national recovery and resilience plan (guaranteed employability of workers programme and dual system).

— In Malta, micro-credential development is strongly industry driven, with a wide variety of credentials available across formal and non-formal settings. Micro-

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([61]) Further Education and Training Authority, 'Micro-qualifications in further education & training', QQI 10th Anniversary Conference, Croke Park, 19 October 2022, https://www.qqi.ie/sites/default/files/2022-10/12.20-12.45%2019%20Oct%20-%20Mary%20Lyons%20-%20Microcredentials%20and%20Microqualifications.pdf.

credentials are integrated into formal VET programmes to meet the specific needs of learners and employers.

— In Romania, the Law for Higher Education (Law No 199/2023) supports micro-credential provision at the VET level, in line with the European Qualifications Framework (EQF). This support is reinforced by Government Decision No 772/2022 of 8 June 2022, which mandates authorised training providers and assessment centres to issue competence certificates with corresponding credits.

— In Sweden, formal VET is modularised, and the upper secondary initial VET diploma consists of courses that could be defined as micro-credentials. In non-formal VET, there are opportunities to transform small-volume learning modules or micro-credentials into qualifications aligned with the Swedish NQF. The Swedish NQF is open to qualifications outside the formal system, allowing sectors and providers to apply to the National Agency for Higher Vocational Education for non-formal qualifications aligned with the NQF based on national quality criteria.

Examples of respondents from employment systems who provided qualitative information on their actions to promote micro-credentials within formal, non-formal and informal learning settings include the following.

— In Belgium (Flemish Community), the Department of Work and Social Economy actively promotes vocational qualification pathways, including those based on partial qualifications. This promotion involves holding dialogues with intermediaries, disseminating information to potential providers and collaborating with employer and sectoral organisations to promote these pathways.

— Denmark supports the development and recognition of micro-credentials through the AMU system ([62]) in VET and employment systems. The AMU system provides a broad portfolio of labour-market-oriented training programmes to upskill and reskill workers, aligning their competences with market demands. AMU courses typically last one to five days; longer courses can comprise several AMU courses.

— In Ireland, the national agency dedicated to workforce development (Skillnet Ireland ([63])) collaborates with higher education institutions and industries to promote micro-credential development in the climate change and construction sectors.

— Croatia has implemented a voucher system ([64]) to enable citizens to acquire micro-credentials, supporting lifelong learning and enhancing their competitiveness in the job market. The focus is on aligning micro-credentials with the European approach to micro-credentials, integrating them into formal and non-formal learning settings, and recognition of prior learning.

— The Malta Further and Higher Education Authority (MFHEA) promotes the use of micro-credentials in non-formal settings, including through initiatives encouraging lifelong learning and continuous professional development that enable the upskilling and reskilling of learners throughout their careers. Licensed training providers can offer micro-credentials, for which the MFHEA sets the standards. Employers can determine the type of education or training they expect, and learners can choose what type of education or training suits their needs.

Education and training systems selecting they have selected 'other', 6 % (2) in higher education, 16 % (5) in VET and 10 % (3) in employment systems have not unified their

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([62]) AMU, 'About AMU Denmark', AMU Denmark website, accessed 6 May 2025, https://www.amudanmark.dk/om-amu-danmark/.
([63]) https://www.skillnetireland.ie/.
([64]) Croatian Employment Services, 'Voucher for learning Croatian language', Croatian Employment Services website, accessed 6 May 2025, https://vauceri.hzz.hr/.

approach to micro-credentials. In this case, some systems emphasise institutional autonomy or existing structures that, while not explicitly termed 'micro-credentials', may fulfil the role of micro-credentials. Other systems express a commitment to lifelong learning and recognise the added value of micro-credentials but are still determining the specific mechanisms for their implementation and recognition. The variance in responses suggests that the 'other' category encompasses a spectrum of approaches, ranging from active development to an exploratory phase.
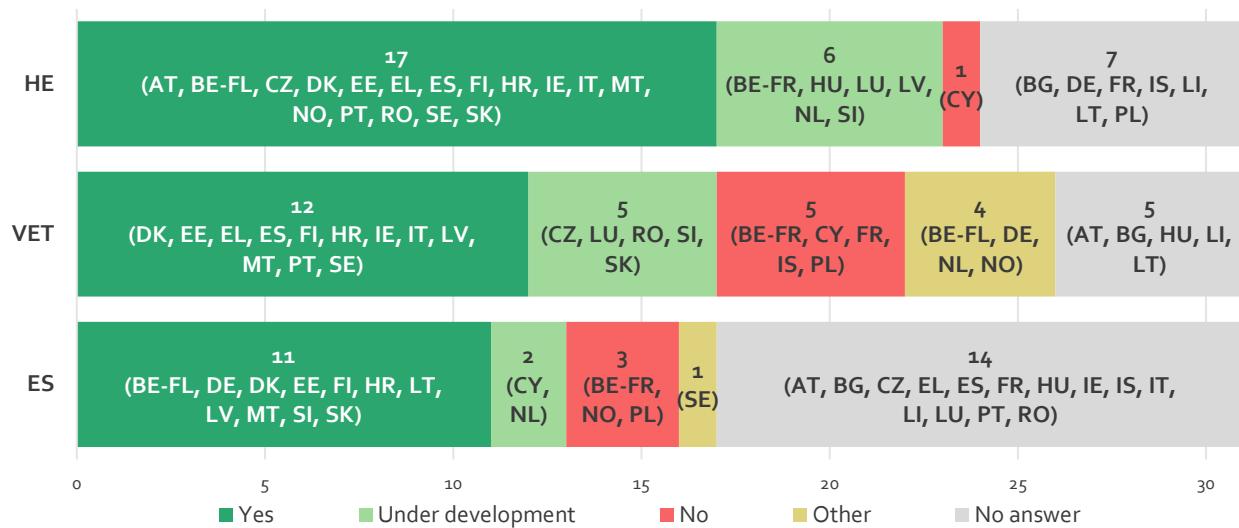
4.2. Internal and external quality assurance

The quality of micro-credentials is key to establishing trust in micro-credentials among the learners earning micro-credentials, employers, education and training institutions, and others who may seek to understand and recognise micro-credentials. Pursuant to the Council recommendation on a European approach to micro-credentials for lifelong learning and employability, Member States are encouraged to apply, adapt and develop quality assurance mechanisms for micro-credentials issued by different types of providers, making use of existing mechanisms wherever possible [65]. Such an approach to quality 'does not seek to harmonise quality assurance or establish one single quality assurance [process] for micro-credentials. This would not be feasible or appropriate; micro-credentials can potentially be used across all sectors of society and while quality assurance is essential, the type of quality mechanisms used must be fit-for-purpose and meet the needs, contexts and expectations of learners and stakeholders in each context' [66].

Internal quality assurance is conducted by the providers and encompasses measuring the quality of the micro-credential and course quality, if applicable, and obtaining feedback from learners and peers. The higher education field is at the forefront of implementing measures to encourage micro-credential providers to implement internal quality assurance processes, as shown in Figure 6. In higher education, 55 % of respondents (17) have established the necessary provisions, and 19 % (6) are in the process of doing so. The field of VET follows suit, with 39 % (12) implementing these provisions and 16 % (5) developing them. 35 % (11) of the employment systems surveyed have such provisions, and 6 % (2) are working towards their implementation.

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[65] OJ C 243, 27.6.2022, p. 10, Article 9(a).
[66] Commission staff working document accompanying the proposal for a Council recommendation on a European approach to micro-credentials for lifelong learning and employability, SWD(2021) 367 final of 10 December 2021, p. 68, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52021SC0367.

Figure 6. Do your education and training systems encourage micro-credential providers to conduct internal quality assurance?

HE	17 (AT, BE-FL, CZ, DK, EE, EL, ES, FI, HR, IE, IT, MT, NO, PT, RO, SE, SK)	6 (BE-FR, HU, LU, LV, NL, SI)	1 (CY)	7 (BG, DE, FR, IS, LI, LT, PL)	
VET	12 (DK, EE, EL, ES, FI, HR, IE, IT, LV, MT, PT, SE)	5 (CZ, LU, RO, SI, SK)	5 (BE-FR, CY, FR, IS, PL)	4 (BE-FL, DE, NL, NO)	5 (AT, BG, HU, LI, LT)
ES	11 (BE-FL, DE, DK, EE, FI, HR, LT, LV, MT, SI, SK)	2 (CY, NL)	3 (BE-FR, NO, PL)	1 (SE)	14 (AT, BG, CZ, EL, ES, FR, HU, IE, IS, IT, LI, LU, PT, RO)

0   5   10   15   20   25   30

■ Yes   ■ Under development   ■ No   ■ Other   ■ No answer

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Higher education and VET providers are usually required by their education and training systems to have internal procedures in place for ensuring the quality of their educational offers. In most cases, this should cover all educational offers, including small-volume learning activities. This aligns with Part 1 of the standards and guidelines for quality assurance in the European Higher Education Area (ESG)([67]).

Most survey respondents answering 'yes' noted that there is no separate internal quality assurance system for micro-credentials. Processes for ensuring the quality of micro-credentials are usually embedded in the general quality assurance mechanisms of institutions. However, Denmark stressed that internal quality assurance applies only when a small-volume learning activity is put forward for inclusion in their NQF. This approach is also similar to that of most providers of micro-credentials in the field of employment systems. Providers must have an internal quality assurance process if they wish to issue officially approved micro-credentials. In Slovakia, the process of ensuring the quality of micro-credentials in higher education is included in internal quality assurance systems; there are no related regulations for VET; and specific standards and further procedures apply, such as getting approval from higher education institutions, for other providers.

The VET providers and employment systems that did not have internal quality assurance for micro-credentials noted their lack of official status. Since micro-credentials are not an official element of their systems, they are not considered activities subject to quality assurance procedures. In this regard, France noted that providers of small-volume learning activities are encouraged to implement internal quality assurance procedures to register their learning offers officially. Among other approaches, the Norwegian Labour and Welfare Administration developed national quality guidelines to facilitate the procurement of high-quality small-volume learning activities in the labour market.
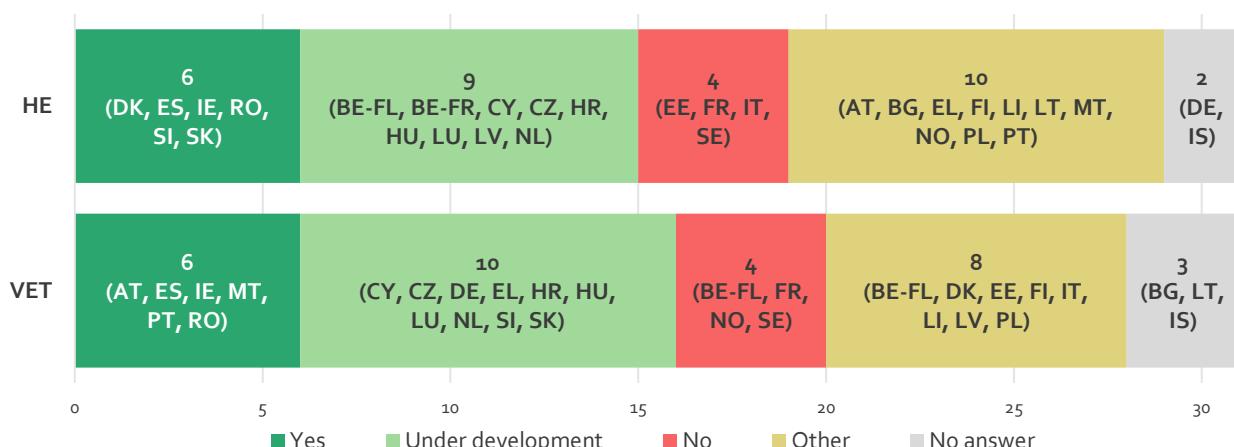
Education and training systems stating that internal quality assurance procedures are 'under development' are implementing pilot projects, collecting good practices and formulating recommendations to introduce these procedures.

([67]) European Higher Education Area, *Standards and guidelines for quality assurance in the European Higher Education Area (ESG)*, 2015 https://ehea.info/page-standards-and-guidelines-for-quality-assurance.

External quality assurance processes evaluate providers and the effectiveness of their internal quality assurance procedures. External quality assurance should be aligned with established standards such as the ESG ([68]), the EQAVET ([69]) and Annex IV to the Council Recommendation on the EQF ([70]). These standards, alongside other quality assurance instruments such as registries and labels, aim to foster public trust in micro-credentials through independent quality verification.

Education and training systems are encouraging quality assurance agencies to adapt and develop quality assurance mechanisms for micro-credentials issued by different types of providers, as depicted in Figure 7. Within higher education, 19 % (6) have already implemented such mechanisms, and 29 % (9) are in the process of developing them. In VET, 19 % (6) have mechanisms in place, and 32 % (10) are currently working on their implementation.

Figure 7. Do your education and training systems encourage quality assurance agencies to adapt and develop quality assurance mechanisms for micro-credentials issued by different types of providers?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Respondents noted that a common approach to implementing external quality assurance processes is enhancing external quality assurance frameworks and standards to accommodate micro-credentials. Some quality assurance agencies undertook studies to develop models and align their practices with the ESG and the EQAVET. For example, the Spanish National Agency for Quality Assessment and Accreditation published a study ([71]) aiming to establish a framework for ensuring the quality of micro-credentials in Spain, aligning with EU recommendations. It addresses micro-credentials' potential to promote

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([68]) European Higher Education Area, *Standards and guidelines for quality assurance in the European Higher Education Area (ESG)*, 2015 https://ehea.info/page-standards-and-guidelines-for-quality-assurance.

([69]) European Commission: Directorate-General for Employment, Social Affairs and Inclusion, 'EQAVET – European quality assurance in vocational education and training', European Commission website, accessed 7 May 2025, https://employment-social-affairs.ec.europa.eu/policies-and-activities/skills-and-qualifications/working-together/eqavet-european-quality-assurance-vocational-education-and-training_en.

([70]) Council Recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning and repealing the recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning (OJ C 189, 15.6.2017, p. 15), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017H0615(01).

([71]) National Agency for Quality Assessment and Accreditation, *Microcredentials – Inclusive training in all formats and for all ages*, Madrid, 2022, https://www.aneca.es/documents/20123/49576/MICROCREDENCIALES_Informe_V3.pdf/db424827-b464-d41d-ae09-717eb95e5742?t=1660907214565.

lifelong learning, employability and inclusivity while proposing standards and strategies for building trust and ensuring transparency among stakeholders.

Education and training systems implementing 'other' approaches typically extend the quality assurance requirements used for full qualifications to small-volume learning activities. Another issue is that existing quality assurance provisions may apply to specific fields of education and training, such as small-volume learning activities offered by certain categories of institutions. For example, in Greece, the only micro-credentials evaluated are those awarded by the lifelong learning centres of Greek higher education institutions. Survey respondents acknowledged that existing approaches may pose challenges for validating the learning outcomes of small-volume learning experiences nationally and across borders.

Respondents in higher education and VET systems highlighted that one major challenge in external quality assurance approaches for micro-credentials is covering qualifications issued by providers other than education and training institutions. Overcoming this challenge requires developing suitable approaches to quality assurance and possibly including them in NQFs. A related approach is the Integrated Qualifications System ([72]) in Poland. This system describes and registers market qualifications with a focus on quality assurance. It faces challenges related to the amount of resources needed to add market qualifications and the small size of some credentials.
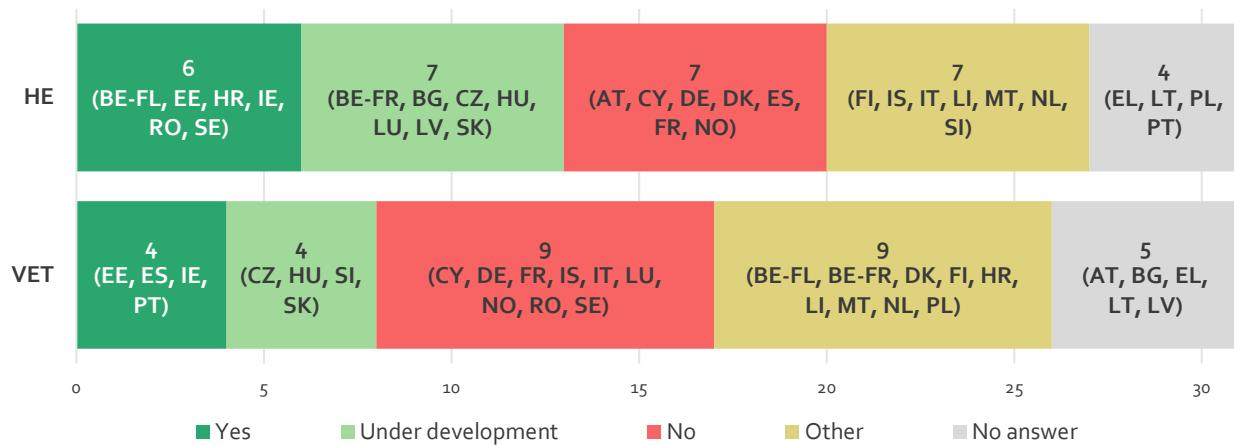
4.3. Recognition mechanisms

The Council recommendation on a European approach to micro-credentials for lifelong learning and employability encourages Member States 'to develop, where relevant, transparent recognition procedures for micro-credentials issued by different types of providers. This should be done in cooperation with the relevant stakeholders mentioned in paragraph 10, including through exploring the possible feasibility of automatic recognition of micro-credentials' ([73]). Recognition involves formally acknowledging the validity and reliability of micro-credentials, ensuring trust in holders' skills and knowledge.

Some education and training systems are progressing towards the implementation of measures to promote the development of process for the automatic recognition of micro-credentials, as presented in Figure 8. Within higher education, 19 % (6) have implemented measures to promote automatic recognition, and another 23 % (7) are developing those measures. In VET, 13 % (4) are implementing the measures, and another 13 % (4) are in the process of developing them.

([72]) Integrated Qualifications System (IQS), 'Integrated Qualifications System', IQS website, accessed 6 May 2025, https://kwalifikacje.gov.pl/en/about-iqs/integrated-qualifications-system-iqs.
([73]) OJ C 243, 27.6.2022, p. 10, Article 5(b). Relevant stakeholders are defined in paragraph 10 of the recommendation as education and training institutions; social partners; employers and industry; research and innovation organisations; civil-society organisations; employment and social inclusion services; and local, regional and national authorities.

Figure 8. Do your education and training systems promote the development of automatic recognition for micro-credentials?

	Yes	Under development	No	Other	No answer
HE	6 (BE-FL, EE, HR, IE, RO, SE)	7 (BE-FR, BG, CZ, HU, LU, LV, SK)	7 (AT, CY, DE, DK, ES, FR, NO)	7 (FI, IS, IT, LI, MT, NL, SI)	4 (EL, LT, PL, PT)
VET	4 (EE, ES, IE, PT)	4 (CZ, HU, SI, SK)	9 (CY, DE, FR, IS, IT, LU, NO, RO, SE)	9 (BE-FL, BE-FR, DK, FI, HR, LI, MT, NL, PL)	5 (AT, BG, EL, LT, LV)

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

The adoption of automatic recognition of micro-credentials is in the early stages. Automatic recognition usually operates in systems with embedded partial qualifications or modular education and training, such as in the Flemish Community of Belgium and Sweden. It also applies to systems in which approaches to micro-credentials have recently been integrated, for example in Estonia, Ireland and Spain. Institutions in Croatia, Italy, Portugal, Romania and Finland can recognise credentials resulting from small-volume learning activities. However, in most cases, automatic recognition mechanisms usually apply only within a specific system – either higher education (Croatia, Italy and Romania) or VET (Spain, Portugal and Finland). In a few systems, automatic recognition measures cover both higher education and VET (Estonia and Ireland).

Respondents indicating that they had adopted 'other' approaches to automatic recognition highlighted the autonomy of the institutions in recognising micro-credentials. In higher education, learners can usually accumulate the credits they obtain by undertaking stand-alone small-volume learning activities as part of relevant programmes, leading to recognition. The cross-border recognition of micro-credentials is typically dependent on the providers issuing the micro-credentials being accredited by official authorities. **Survey respondents highlighted the need for aligning quality assurance approaches to micro-credentials at the EU level to facilitate automatic recognition among transnational systems**.

The Council Recommendation also encouraged Member States to consider 'adapting procedures for the recognition of prior learning and the validation of non-formal and informal learning to allow for the awarding of micro-credential' ([74]). Recognition of prior learning is 'a method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning' ([75]).
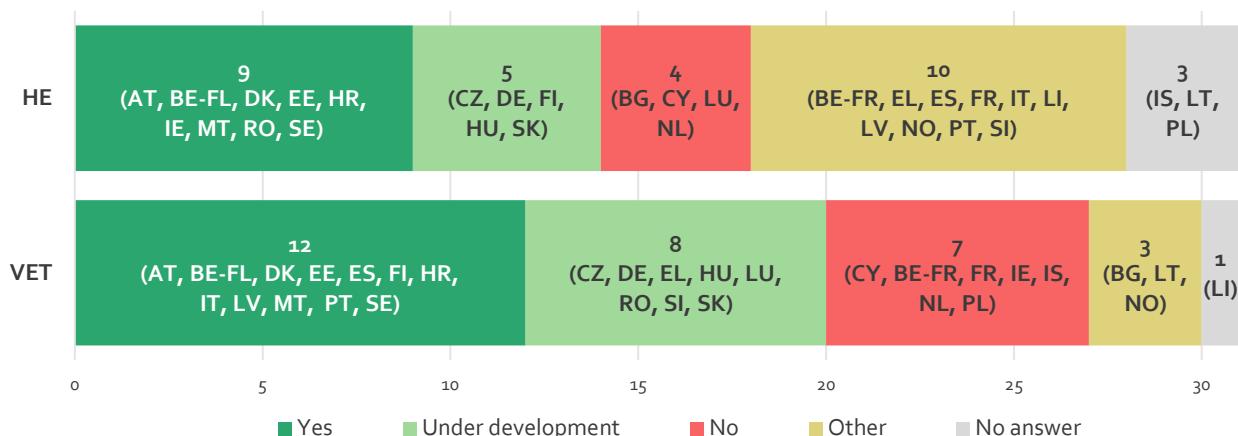
Many education and training systems indicated that they have already adopted or are in the process of adopting procedures for recognising prior learning and validating non-formal and informal learning to allow the awarding of micro-credentials, as shown in Figure 9. Within higher education, 29 % of respondents (9) have adopted such procedures, and

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([74]) OJ C 243, 27.6.2022, p.10, Article 8(c).
([75]) ENIC-NARIC Networks, 'Glossary', ENIC-NARIC.net website, accessed 7 May 2025, https://ear.enic-naric.net/emanual/glossary/glossary.aspx.

16 % (5) are developing them. In VET, 39 % (12) have adopted the procedures, and 26 % (8) are in the process of developing them.

Figure 9. Do your education and training systems have procedures for the recognition of prior learning and validation of non-formal and informal learning to allow the awarding of micro-credentials or equivalent qualifications?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

A number of education and training systems have adopted frameworks and guidelines for recognising prior learning and validating non-formal and informal learning. As a result, they can issue micro-credentials, certificates and/or proofs of competences based on the assessment of prior learning. Some examples provided by the respondents include the following.

— In the Flemish Community of Belgium, 'recognition of acquired competences' can be initiated upon submission of proof of experience, a document that shows that the individual has demonstrated a certain competency (or specific competencies), as indicated by a test centre recognised by the Flemish government. Through this process, it is possible to obtain a partial qualification, which is considered an official qualification.

— In Denmark, a legal framework for the recognition of prior learning has been in place since 2007, allowing most qualifications in the Danish NQF to be obtained through this recognition.

— In Ireland, some procedures are in place for recognising prior learning. The HCI has funded a national project ([76]) to embed and expand the recognition of previous learning across higher education institutions.

— In Croatia, guidelines for the recognition of prior learning in the higher education system were adopted in 2023. These guidelines support the effective implementation of the practice of recognising competencies in informal and non-formal learning settings.

— In Malta, MFHEA established guidelines allowing educational institutions to certify that learning outcomes achieved in various settings, such as unfinished studies or work experience, meet specific requirements of programmes or qualifications.

([76]) Recognition of Prior Learning, 'About', Recognition of Prior Learning website, accessed 7 May 2025, https://www.priorlearning.ie/about.

— In Austria, higher education institutions are responsible for the procedures for recognising prior learning. With the amendment of the Austrian Higher Education Quality Assurance Act in 2021, the Agency for Quality Assurance and Accreditation Austria began assisting in the process.

— In Portugal, the recognition of prior learning is part of the comprehensive national system for the recognition, validation and certification of competencies, introduced in 2001.

— In Romania, according to Law No 199/2023 on higher education, learners can obtain micro-credentials through exams conducted by authorised/accredited evaluation and certification centres to certify professional skills.

— Finland has well-established arrangements for validating non-formal and informal learning across all sectors of education. Individuals are required to develop a personal competence development plan (PCDP). The PCDP aims to validate and recognise what learners already know, regardless of where they have acquired the skills, and ensure they learn what they need to (the use of PCDPs is optional in higher education, whereas their use is a legal requirement in VET).

— In Sweden, several validation activities and initiatives have been introduced since the 1990s. Partial qualifications can be recognised and combined. In municipal adult education, learners have a right to have their knowledge and skills validated.

In some systems indicating the use of 'other' procedures, the decision to recognise previous learning, non-formal and informal education as contributing to the attainment of micro-credentials or equivalent qualifications lies with institutions. However, legislation does not provide for the validation of non-formal or informal learning in Greece, Lichtenstein or Slovenia.

In contrast, France has a robust system for validating and certifying previous, non-formal and informal learning. However, it cannot award micro-credentials, since these are not part of the formal education system. Through the French validation system, people with more than three years of previous work experience can apply for the corresponding qualification, certificate or diploma [77]. Similarly, Norwegian VET has a robust system for validating prior learning [78]. Learners can start a modularised path based on the recognition of prior learning and stack modules to achieve formal qualifications according to the curriculum. However, this system does not allow the awarding of micro-credentials.

The Council Recommendation also advises Member States to 'encourage and support the European Network of National Information Centres and the National Academic Recognition Information Centres (ENIC–NARIC networks) or adequate bodies to develop, where relevant, transparent recognition procedures for micro-credentials issued by different types of providers' [79]. The European Network of Information Centres in the European Region (ENIC) and the National Academic Recognition Information Centres in the European Union (NARIC) facilitate academic mobility and the recognition of qualifications across Europe by providing advice and guidance on recognising foreign qualifications and navigating complex procedures.

About one third of survey respondents in higher education and VET are involving ENIC–NARIC networks in developing transparent recognition procedures for micro-credentials, as displayed in Figure 10. Within higher education, 32 % of respondents (10) have involved
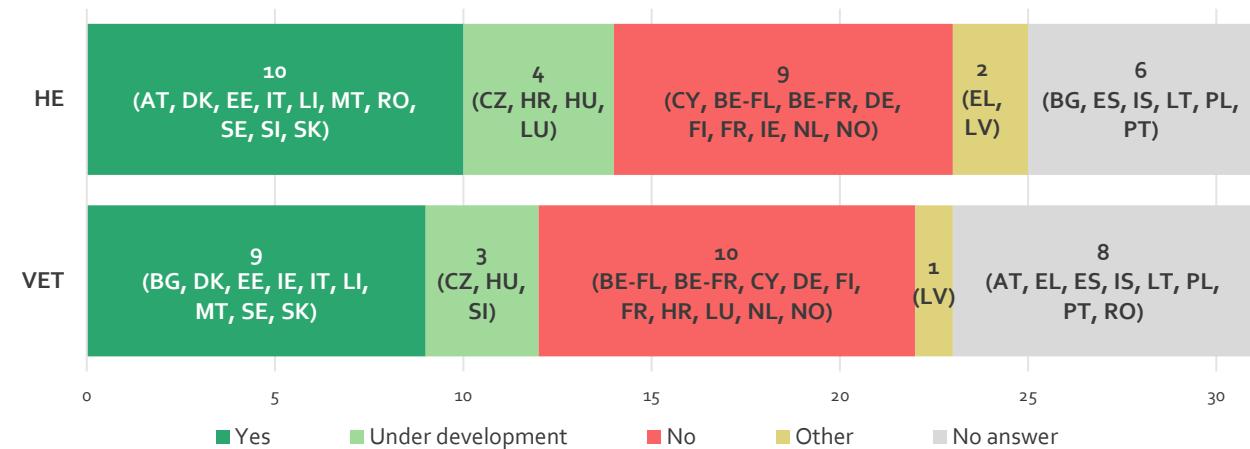
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[77] Federation for European Education (FEDE), 'VAE – Validation of acquired experience', FEDE website, accessed 7 May 2025, https://www.fede.education/en/vae/.

[78] Directorate for Higher Education and Skills, *Admission to higher vocational education on the basis of real competence*, Kompetanse Norge, Oslo, 2020, https://hkdir.no/dokumenter/opptak-til-hoyere-yrkesfaglig-utdanning-pa-grunnlag-av-realkompetanse.

[79] OJ C 243, 27.6.2022, p. 10, Article 13.

ENIC-NARIC networks, and 13 % (4) are in the process of involving them. In VET, 29 % (9) have involved ENIC-NARIC networks, and 10 % (3) are in the process of doing so.

Figure 10. Are ENIC–NARIC networks involved in developing transparent procedures for recognising micro-credentials?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Survey respondents in higher education reported that ENIC–NARIC networks participate in the development of mechanisms for recognising micro-credentials in the following ways:

— participating in the Erasmus+ project 'Automatic recognition in the European Education Area 2025' ([80]) and being involved in the development of transparent recognition procedures for micro-credentials in Austria;

— supporting the Danish Ministry of Education and Children and the Danish Accreditation Agency to include micro-credentials in the NQF;

— being involved in discussions and the development of regulations related to micro-credentials in Estonia;

— participating in consultations for the development of national education policies in Romania;

— being involved in the development of all procedures related to micro-credentials in Liechtenstein;

— supporting the drafting of new higher education legislation in Slovenia.

Additionally, in the field of VET, ENIC-NARIC networks participate in:

— providing comparability statements for qualifications from Quality and Qualifications Ireland at levels 4, 5 and 6 relevant to VET in Ireland.

— developing transparent recognition procedures for micro-credentials in the field of VET in Malta.

— participating in the 'Competence pass' project, which explores transparent procedures for recognising micro-credentials in Sweden.

Survey respondents indicating that procedures were 'under development' noted that the involvement of ENIC-NARIC networks in micro-credential recognition is in the early stages,

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([80]) Nuffic, 'AR25 (2023–2025)', Nuffic website, accessed 7 May 2025, https://www.nuffic.nl/en/subjects/recognition-projects/ar25-2023-2025.

and that further development and clarification are needed. In higher education, Czechia, Croatia, Luxemburg and Hungary noted that ENIC-NARIC networks currently support the recognition of periods of study undertaken abroad and will be involved in reviewing draft legislation on micro-credentials. In the field of VET, Czechia, Hungary and Slovenia plan to involve the networks in developing frameworks and mechanisms for micro-credential recognition.

The non-involvement of the ENIC-NARIC networks in certain education and training systems is due to the early stage of development of micro-credentials and the absence of established national recognition frameworks. Several respondents, including the French Community of Belgium, France and Finland, noted that the lack of such frameworks poses challenges for engaging ENIC-NARIC networks to implement recognition procedures. Norway indicated that the responsibility for recognising micro-credentials lies with individual higher education institutions rather than the ENIC-NARIC networks, suggesting a decentralised approach. Moreover, some ENIC-NARIC centres, such as those in Ireland and Norway, primarily concentrate on providing advice regarding comparability and promoting good recognition procedures.

4.4. Funding mechanisms

The Council Recommendation encourages Member States to consider 'providing public funding, according to national circumstances, for the development and provision of small education and training activities leading to micro-credentials at all levels of education and training, while taking into account institutional autonomy to allow for diversity and creativity' [81]. The Council Recommendation also emphasises the importance of promoting the use of a diversity of funding sources [82], particularly for micro-credentials developed in non-formal and informal learning settings. This suggests a balanced approach that encourages public investment while promoting the involvement of various stakeholders, including employers, social partners and civil-society organisations, in funding micro-credential initiatives.

Survey respondents describe various strategies for funding the development of an ecosystem for micro-credentials. National public funding for micro-credentials is used to enhance existing funding instruments, establish performance agreements with institutions and implement targeted funding programmes.

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[81] OJ C 243, 27.6.2022, p. 10, Article 7(c).
[82] OJ C 243, 27.6.2022, p. 10, Article 8(a).

Table 7 presents the education and training systems providing funding to establish an ecosystem for micro-credentials. Beyond public funding, micro-credentials can also be funded through employer contributions; learners' fees; EU funds such as the European Social Fund Plus (ESF+); and individual learning accounts (ILAs), which may include public funds and individual contributions.

Table 7. Funding mechanisms used in education and training systems to support the development of an ecosystem for micro-credentials

Respondent	Higher education	VET	Employment systems
Austria	Public institutions can secure funding for micro-credential development by including it in their performance agreements.	Partial/supplementary qualifications that meet the definition of micro-credentials in VET receive public funding.	
Belgium – Flemish Community	— Fee exemptions, training vouchers and training credits for module qualifications as part of formal public education. — The Higher Education Advancement Fund finances projects, including the development of micro-credentials.	Fee exemptions, training vouchers and training credits for module qualifications as part of formal public education.	— A paid training leave programme is funded by Vlaams opleidingsverlof. — The PES of the Flemish Region (VDAB) funds free training pathways for unemployed citizens. — A subsidy can be provided through the European Social Fund+ if projects meet certain criteria, as is currently the case for the 'Learning jobs' project of VDAB.
Croatia	Higher education and VET receive funding for micro-credential development through the 2021–2026 national recovery and resilience plan. — A voucher system is in place for educational programmes funded through the ESF+.	— A voucher system will have funded the training of 40 000 citizens by 2026, as set out in the 2021–2026 national recovery and resilience plan. — National, regional and local funding incentives are provided for the implementation of micro-credentials.	— A voucher system will have funded the training of 40 000 citizens by 2026, as set out in the 2021–2026 national recovery and resilience plan. — Funding is available through the ESF+.
Cyprus	Courses leading to micro-credentials are funded by higher education institutions, which receive public funding from the Ministry of Education, Sport and Youth. Currently, short courses offered by higher education institutions are self-funded.		
Czechia	A project on the development of standards for micro-credentials is funded through the national recovery and resilience plan.	A micro-credentials project supported by the Technical Support Instrument is still in progress.	
Denmark	The provision of micro-credentials is financed by the provider based on fees, regardless of whether the provider is a recognised higher education institution or a recognised private (non-state) provider.	The adult vocational training (AMU) system is publicly funded.	Unemployed citizens can obtain micro-credentials from their municipalities, with co-funding from the state.
Estonia	Targeted incentives (funds) are provided in accordance with national priorities.		
Finland	Open higher education programmes, which include micro-credentials, are funded as part of the higher education system.	Module qualifications, which can be considered micro-credentials, receive funding through the VET system.	— The Service Centre for Continuous Learning and Employment provides funding for experimental micro-credentials and training services.

Respondent	Higher education	VET	Employment systems
			— Public funding is also allocated for labour market training provided by employment services.
France	Higher education institutions have autonomy in funding short-term learning activities, including micro-credentials.	ILAs (*Comptes personnels de formation*) fund professional qualifications registered in the National Directory of Vocational Qualifications or the Specific Directory of Qualifications.	— ILAs fund employees through the Operator of Skills for Local Businesses, the Fund for Individual Training Rights, and the Occupational and Professional Action Fund for Individual Training Rights. — Jobseekers can also access funding through France Travail or regional governments.
Germany		— The Federal Ministry of Education and Research funds 'partial qualifications' (*Teilqualifikationen*), which are similar to micro-credentials. — Subsidies for vocational training are provided by the Federal Employment Agency.	— Subsidies for vocational training are funded by the Federal Employment Agency. — Insurance contributions and tax revenue in the form of benefits are provided under Book III of the German Social Code. — Grants are provided under the Upgrading Training Assistance Act (*Aufstiegs-BAföG*). Further training grants are also available.
Greece		The proposal 'Continuing vocational training link to micro-credentials', implemented by the National Organisation for the Certification of Qualifications and Vocational Guidance, is co-financed by Erasmus+ (the action scheme for the mobility of university students) and EQAVET.	
Hungary	— The pilot project on micro-credentials is utilising public (primarily EU) funds (*). — Institutions can use their funding to develop short-term courses, which may include micro-credentials.	— A pilot project on micro-credentials is being implemented using public funding. — Public funding supports VET for learners.	
Ireland	Pillar 3 of the HCI provides funding (EUR 300 million) to enhance higher education capacity, including by creating over 700 new micro-credentials and implementing a national framework for quality-assured micro-credentials.	The National Training Fund, established by the National Training Fund Act (2000), provides funding enabling employees and jobseekers to gain micro-credentials.	The National Training Fund, established by the National Training Fund Act (2000), provides funding enabling employees and jobseekers to gain micro-credentials. The skills to advance initiative, funded through the National Training Fund, supports the upskilling and reskilling of employees. It

Respondent	Higher education	VET	Employment systems
			focuses on emerging skills areas, like green and digital skills.
Italy	— Higher education institutions can allocate their existing funding to developing micro-credentials. — Higher education institutions, training institutes and private companies collaborate to create micro-credential courses.	— Scholarships, financial benefits and micro-credits from the National Microcredit Agency encourage participation in micro-qualification courses. — A monthly allowance is provided to VET students through the training and job support measure (as provided for by Law Decree 48/2023). — Higher education institutions, training institutes and private institutions collaborate to create micro-credential courses.	
Lithuania	A pilot project focusing on developing digital micro-credentials received funding from the Research Council of Lithuania and co-funding from the European Regional Development Fund.	ILAs support short-term learning activities, which may include micro-credentials.	ILAs are utilised to fund micro-credentials. The Employment Service funds training modules using both national and EU funds.
Luxembourg	— Public higher education institutions have autonomy in developing short-term training courses, including micro-credentials, and are funded through performance contracts. — A pilot project is exploring funding mechanisms for micro-credentials supported by public funding.	The Ministry of Education, Children and Youth funds activities of the Vocational Training Service (VET Department) related to short-term learning.	Individual training leave (*Congé de formation individuel*), funded by the Vocational Training Service, allows individuals to attend training courses, including those leading to micro-credentials.
Malta	— The 'get qualified' scheme offers tax credits to individuals who complete accredited training programmes, including micro-credentials. — The ESF+ supports the development of micro-credentials.	— The 'get qualified' scheme offers tax credits to individuals who complete accredited training programmes, including micro-credentials. — Learners can use grants and subsidies such as the 'training pays' scheme to cover the costs of micro-credentials, funded through the ESF+.	— The 'get qualified' scheme offers tax credits to individuals who complete accredited training programmes, including micro-credentials. — Grants and subsidies – like the 'training pays' scheme, funded by the ESF+ – can cover the costs of obtaining micro-credentials. — The national employment agency (Jobplus) funds short-term courses, which may include micro-credentials. — Partnerships between educational institutions and industry stakeholders contribute to co-funded

Respondent	Higher education	VET	Employment systems
			micro-credential initiatives.
Netherlands	The national progress and learning system is funded through the National Growth Fund and supports the development of an ecosystem for micro-credentials across all fields.	— The national progress and learning system is funded through the National Growth Fund and supports the development of an ecosystem for micro-credentials across all fields. — Public funding is provided for people's participation in modules leading to VET certificates that are part of 'development paths' in branches of industry with staff shortages.	The national progress and learning system is funded through the National Growth Fund and supports the development of an ecosystem for micro-credentials across all fields.
Norway	Institutions have the autonomy to allocate their state framework funding to developing micro-credentials.	— Public funding is available for the development of modularised curricula. — The Norwegian State Educational Loan Fund (*Lånekassen*) (**under development**) will offer a funding scheme for those who want to take short and flexible courses while working.	— The Norwegian Labour and Welfare Administration can fund short-term courses that address labour market needs. — Funding is provided to companies approved by county authorities to enable them to offer apprenticeships and modularised training, which align with micro-credentials at EQF level 4.
Poland	The project 'Micro-credentials – Piloting a new solution to support lifelong learning' is funded by the European Funds for Social Development.		Polish employers and companies finance further education and training using their own resources.
Portugal	The youth impulse STEAM (science, technology, engineering, arts and mathematics) and adults impulse education and training programmes, funded through Portugal's recovery and resilience plan, may include micro-credentials.	Public vocational training includes qualifications (short-term training units / competence units) and short- and medium-term pathways set out in the National Catalogue of Qualifications.	The youth impulse STEAM and adults impulse education and training programmes, funded through Portugal's recovery and resilience plan, may include micro-credentials.
Romania	The Law for Higher Education (Law No 199/2023, Article 120) provides financial incentives for developing and implementing programmes leading to micro-credentials.	Training programmes with transferable credits receive funding from public sources, the ESF+, employers and learners.	— The Law for Higher Education supports the development and recognition of micro-credentials in collaboration with the private sector. — Tax breaks are available for economic players taking part in education and training activities (2014 Law for Higher Education, Article 119k).
Slovakia	Institutions can independently finance the development of micro-credentials. Two calls for the utilisation of funds from the European Structural and Investment Funds are currently being prepared. The funding plan comprises two tiers – one for providers of higher education and another for VET providers and other providers.		

Respondent	Higher education	VET	Employment systems
Slovenia	The project 'Reforming higher education for a green and resilient transition to society 5.0' is scheduled until 2025.		— The procedure for adopting 'supplementary qualifications' into the Slovenian Qualifications Framework Register is paid for by the awarding body. — The work of the Slovenian qualifications framework on 'supplementary qualifications' is funded by the Ministry of Labour, Family, Social Affairs and Equal Opportunities.
Spain	The RRF grant package allocates EUR 50 million to support the development of micro-credentials by public institutions.	The accreditation of professional competences, reskilling and upskilling are funded through the Spanish recovery, transformation and resilience plan.	
Sweden	Institutions can autonomously use their funding to develop micro-credentials.	— Municipalities and state grants for municipalities fund upper secondary education. — Higher VET programmes are co-funded by the state and employers. — The student finance scheme for transition and retraining funds the upskilling and reskilling of citizens.	— The Swedish Public Employment Service (*Arbetsförmedlingen*) funds short vocational training courses (*Arbetsmarknadsutbildning*). — The student finance scheme for transition and retraining funds the upskilling and reskilling of citizens.

(*)   The funds were not specified.

NB: The French Community of Belgium, Estonia and Latvia do not have specific funding for micro-credentials. Bulgaria, Iceland and Liechtenstein did not provide answers. Greece provided information on VET.

Source: Survey data.

The use of public funding to develop an ecosystem for micro-credentials underscores the commitment of national education and training systems to ensuring the quality, accessibility and integration of micro-credentials. Public funding is used to develop infrastructure such as a voucher system (Croatia), a national progress and learning system (Netherlands), a national training programme (Portugal) and various pilot projects exploring the adoption of micro-credentials at the national level. Furthermore, some education and training systems implement strategies to support learners pursuing micro-credentials such as fee exemptions, grants, loans, tax benefits and training vouchers (Flemish Community of Belgium, Denmark, Germany, Ireland, Croatia, Italy, Malta, Romania). In most cases, institutions are autonomous in allocating their funds to developing micro-credentials.

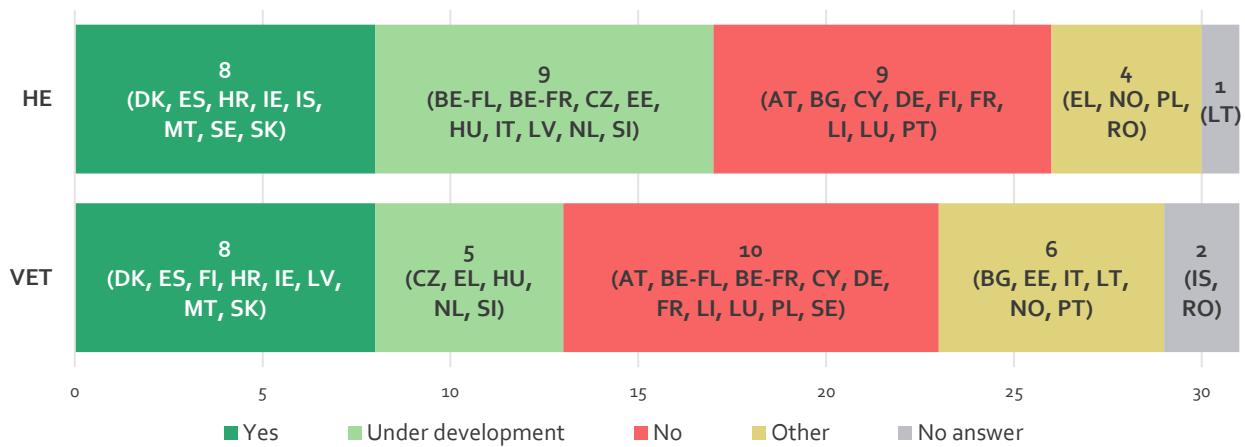## 4.5. Integration into national qualifications frameworks

The Council Recommendation emphasises that integrating micro-credentials into NQFs is crucial for enhancing transparency, recognition and value within European education and employment systems. The EQF, a standard reference framework for comparing qualification systems and levels across Europe, is 'open to micro-credentials if and where they are first included in national qualifications frameworks' [83]. Integrating micro-

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[83]   OJ C 243, 27.6.2022, p. 10.

credentials into NQFs can help individuals and the labour market understand their value and relevance, increasing trust and broader acceptance.

The practice of integrating micro-credentials into NQFs is not yet widely adopted across education and training systems. Given that the Council Recommendation on a European approach to micro-credentials was only adopted in 2022, the figures indicate that education and training systems are starting to consider how to align micro-credentials with their NQFs. Figure 11 displays the details of education and training systems integrating micro-credentials into their NQFs. In higher education, 26 % of systems (8) have integrated micro-credentials into their NQFs, and 29 % (9) are in the process of doing so. In VET, 26 % (8) have integrated micro-credentials, and 16 % (5) are working towards doing so.

Figure 11. Have your education and training systems integrated micro-credentials in national/regional qualifications frameworks?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Further details on education and training systems that have integrated micro-credentials into their NQFs are as follows.

— Croatia integrated micro-credentials into its NQF through an act on higher education and scientific activity (2022), regulating lifelong learning programmes provided by higher education and VET institutions.

— In Denmark, despite not having a national definition of micro-credentials, small-volume learning activities equivalent to micro-credentials are integrated in the NQF. Formal labour market qualifications (*arbejdsmarkedsuddannelser*), which can take less than a week to complete, are formally included in the NQF by the Ministry of Children and Education. Non-formal qualifications can be included in the NQF following an assessment based on the same principles and procedures as the Council Recommendation. There is no lower limit for the duration of non-formal qualifications that can be included in the NQF.

— Introduced in 2003, the Irish NFQ incorporated small-volume learning units known as minor, special-purpose and supplemental awards. Awards are individual modules that can be completed and certified separately, often contributing to a major award while also standing as achievements on their own. Quality and Qualifications Ireland notes: 'The NFQ is flexible enough to accommodate micro-credentials and the

minor, special purpose, supplemental and professional award type descriptors can be used to develop micro-credentials included in the NFQ' ([84]).

— Iceland (higher education) integrated micro-credentials into its NQF and mechanisms for recognising prior learning through amendments to the framework.

— Malta integrated micro-credentials into its NQF, ensuring alignment with national standards and assigning micro-credentials to specific levels for easy comparison with other qualifications.

— Spain integrated micro-credentials into its frameworks for higher education) ([85]) and lifelong learning ([86]). Micro-credentials can be provided by various entities, such as education and training institutions, research and innovation institutions, public bodies and institutions, companies and employers, employment services, sectoral associations and social partners.

— The Swedish NQF is open to qualifications awarded outside formal education. Formal qualifications within higher education and VET are course-based and therefore consist of small-volume learning activities such as micro-credentials.

Table 8 shows how education and training systems integrate micro-credentials into their NQFs. Several systems integrate micro-credentials at multiple levels. In higher education, micro-credentials are mainly integrated at levels 6 and 7 of the NQFs. In the field of VET, micro-credentials are mainly introduced for levels 2 to 5. Furthermore, Table 8 includes systems that have integrated qualifications resulting from small-volume learning activities that are not officially considered micro-credentials. This is the case in the Flemish Community of Belgium, Czechia, Denmark, Italy, Lithuania, the Netherlands, Norway, Romania and Sweden.

Table 8. NQF levels applied to micro-credentials

Qualifications framework level	Higher education	VET
1	MT	IE, MT, RO, SE
2	MT	DK, HR, IE, LT, LV, MT, NL, RO, SE
3	MT	CZ, ES, HR, IE, LT, LV, MT, NL, RO, SE, SI
4	MT	CZ, ES, FI, HR, IE, LT, LV, MT, NL, RO, SE, SI
5	BE-FL, DK, ES, HR, IS, MT, NL, RO	CZ, ES, DK, FI, HR, IE, LV, MT, NO (5.1, 5.2), SE, SI, SK
6	BE-FL, CZ, DK, ES, HR, IE, IS, IT, MT, NL, RO, SE, SK	IE, MT, SE, SI, SK
7	BE-FL, CZ, DK, ES, HR, IE, IS, IT, MT, NL, RO, SE, SK	MT, SE, SK
8	CZ, ES, HR, IE, IT, SE, SK	SE, SK
9	IE	
10		

NB: Most systems employ a scale of 1 to 8 for NQF levels; only Ireland uses a scale of 1 to 10.

([84]) Quality and Qualifications Ireland, *A brief guide to the Irish national framework of qualifications*, 2024, p. 5, https://www.qqi.ie/sites/default/files/2024-08/a-brief-guide-to-the-irish-national-framework-of-qualifications-nfq.pdf.

([85]) Royal Decree 1027/2011, of 15 July, establishing the Spanish framework for qualifications for higher education, https://www.boe.es/diario_boe/txt.php?id=BOE-A-2011-13317.

([86]) Royal Decree 272/2022, of 12 April, establishing the Spanish qualifications framework for lifelong learning, https://www.boe.es/eli/es/rd/2022/04/12/272/con.

Education and training systems in the process of integrating micro-credentials into their NQFs that stated that integration was 'under development' include:

— systems developing pilot projects to integrate micro-credentials into their NQFs – The Flemish Community of Belgium (higher education), Czechia, Latvia (higher education) and the Netherlands;

— systems engaged in ongoing consultations – French Community of Belgium (higher education) and Greece;

— systems developing guidelines that will contribute to the integration of micro-credentials into their NQFs – Italy and Slovenia.

Education and training systems that have not integrated micro-credentials into their NQFs cite various reasons. In some cases, the lack of a formal definition or legal basis for introducing micro-credentials hinders further developments, although certain existing practices may exhibit features of micro-credential integration. In other cases, evaluations of existing frameworks and pilot projects will be implemented to explore the inclusion of micro-credentials in NQFs.

According to Cedefop's 2023 study on micro-credentials, 'Since many of the stakeholders consulted consider microcredentials to be equivalent to modules or partial qualifications due to their shared characteristics, the overview of national contexts and mapping exercise shows that microcredentials can be included into qualification systems and frameworks as modules or partial qualifications …; in some countries they can be qualifications awarded outside the regulated system' [87]. Consequently, including micro-credentials in NQFs is closely linked to expanding NQFs to qualifications beyond formal education and training. This indicates potential for advancement, particularly in light of the recent adoption of the Council Recommendation on a European approach to micro-credentials.

4.6. Intersectoral dialogue and skills intelligence systems

The Council Recommendation encourages Member States to promote 'the development of micro-credentials designed and agreed by employers' and workers' representatives through social dialogue, where appropriate' [88]. Furthermore, it encourages states to promote and support effective experimentation, cooperation, governance and partnerships between (i) education and training institutions, (ii) social partners, (iii) employers and industry, (iv) research and innovation organisations, (v) civil-society organisations, (vi) employment and social inclusion services, and (vii) local, regional and national authorities [89].
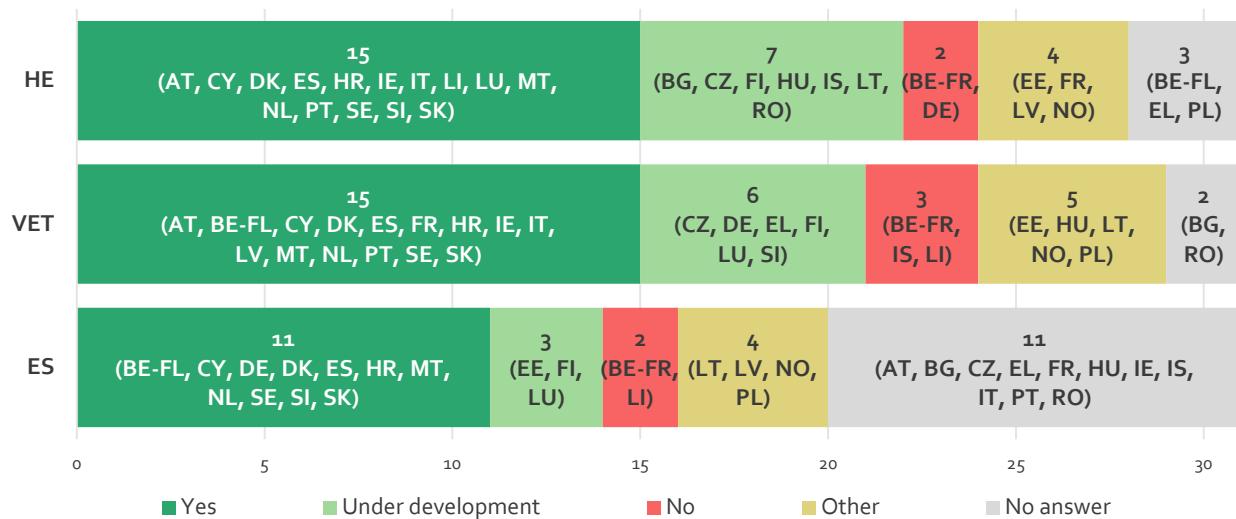
The implementation of measures to promote sectoral and cross-industry social dialogue for the development of micro-credentials has a high level of uptake, as shown in Figure 12. Within higher education, 48 % of systems (15) have already implemented such measures, while 23 % (7) are in the process of doing so. VET shows similar progress, with 48 % (15) having established these measures and 19 % (6) currently working on their implementation. In the employment systems, 35 % (11) have implemented those measures, and 10 % (3) are working towards doing so.

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[87] Cedefop, *Microcredentials for Labour Market Education and Training – Microcredentials and evolving qualifications systems*, Cedefop Research Paper No 89, Publications Office, Luxembourg, 2023, p. 95, http://data.europa.eu/doi/10.2801/566352.

[88] OJ C 243, 27.6.2022, p. 10, Article 8(c).

[89] OJ C 243, 27.6.2022, p. 10, Article 10.

Figure 12. Do your education and training systems promote sectoral and cross-industry social dialogue for the development of micro-credentials?

HE	**15** (AT, CY, DK, ES, HR, IE, IT, LI, LU, MT, NL, PT, SE, SI, SK)	**7** (BG, CZ, FI, HU, IS, LT, RO)	**2** (BE-FR, DE)	**4** (EE, FR, LV, NO)	**3** (BE-FL, EL, PL)
VET	**15** (AT, BE-FL, CY, DK, ES, FR, HR, IE, IT, LV, MT, NL, PT, SE, SK)	**6** (CZ, DE, EL, FI, LU, SI)	**3** (BE-FR, IS, LI)	**5** (EE, HU, LT, NO, PL)	**2** (BG, RO)
ES	**11** (BE-FL, CY, DE, DK, ES, HR, MT, NL, SE, SI, SK)	**3** (EE, FI, LU)	**2** (BE-FR, LI)	**4** (LT, LV, NO, PL)	**11** (AT, BG, CZ, EL, FR, HU, IE, IS, IT, PT, RO)

Legend: ■ Yes   ■ Under development   ■ No   ■ Other   ■ No answer

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Examples of higher education systems promoting sectoral and cross-industry social dialogue for the development of micro-credentials include the following.

— In Ireland, all innovative higher education projects that are part of HCI Pillar 3 are required to collaborate with enterprises, and over 700 new micro-credential courses have been established since 2020.

— Spain provides designated funding for higher education institutions for intermediation work with productive sectors and workers' organisations to develop micro-credentials.

— The Croatian NQF encourages and facilitates cooperation between higher education institutions and industry, further supporting the process by providing mechanisms to integrate feedback from employers and professional organisations to ensure the relevance of micro-credentials offered in the education system.

— The Austrian national recommendation on micro-credentials has been adopted by the national Bologna Follow-Up Group, whose members include the Austrian Economic Chambers, the Federation of Austrian Industries and the Chamber of Labour.

— In Romania, the Law for Higher Education (Law No 199/2023) promotes intersectoral dialogue for the development of micro-credentials.

— In Slovenia, stakeholders developed micro-credentials as part of the project 'Reforming higher education for a green and resilient transition to society 5.0', which was financed through the EU's RRF.

— Slovakia encourages higher education institutions to collaborate with industry in developing and delivering micro-credential programmes, and extending this collaboration to civil society. It has mechanisms for collecting feedback from employers and professional organisations, ensuring that micro-credentials remain relevant and responsive to contemporary needs.

— Denmark, Germany, Estonia and France noted that they promote sectoral and cross-industry social dialogue in curricula development for qualifications similar to micro-credentials.

— The Flemish Community of Belgium, Bulgaria, Czechia, Finland, Hungary, Iceland, Latvia, Lithuania and the Netherlands indicated that debates were ongoing, draft frameworks were being prepared or pilot projects had been planned to promote cross-industry social dialogue for the development of micro-credentials.

In the field of VET, examples of systems promoting sectoral and cross-industry social dialogue for the development of micro-credentials include the following.

— In France, employers, the private sector, the state and non-governmental organisations actively engage within the validation of acquired experience framework. Employers contribute to deciding on the skills required and developing methods to demonstrate them. Skill certification requirements are determined through agreements with trade unions, and retraining under validation of acquired experience framework is financially supported by the state and employers.

— In Ireland, micro-qualifications are developed collaboratively with the Further Education and Training Authority ([90]), education and training boards, industry, enterprise agencies, regional skills forums and sectoral bodies.

— In Italy, social dialogue regarding micro-credentials is promoted by strengthening joint funds for workers' continuous training and bilateral bodies.

— In Norway, social dialogue is integrated into developing modularised curricula for adults in VET at EQF levels 4 and 5. National training councils for specific trades advise on relevant programmes, and the National Council for Higher Vocational Education involves social partners in discussions about higher vocational education (EQF level 5).

— In Portugal, sectoral councils for qualifications play a crucial role in social dialogue regarding micro-credentials, ensuring that no micro-credentials are integrated into the National Catalogue of Qualifications without discussion with council members.

— In Greece, Croatia, Cyprus and Malta, social dialogue regarding micro-credential development involves education and training institutions, employees, employers, and relevant government and non-government bodies. This dialogue focuses on developing policies for employment, labour relations and vocational education, including micro-credentials.

In employment systems, examples of respondents promoting sectoral and cross-industry social dialogue for the development of micro-credentials include the following.
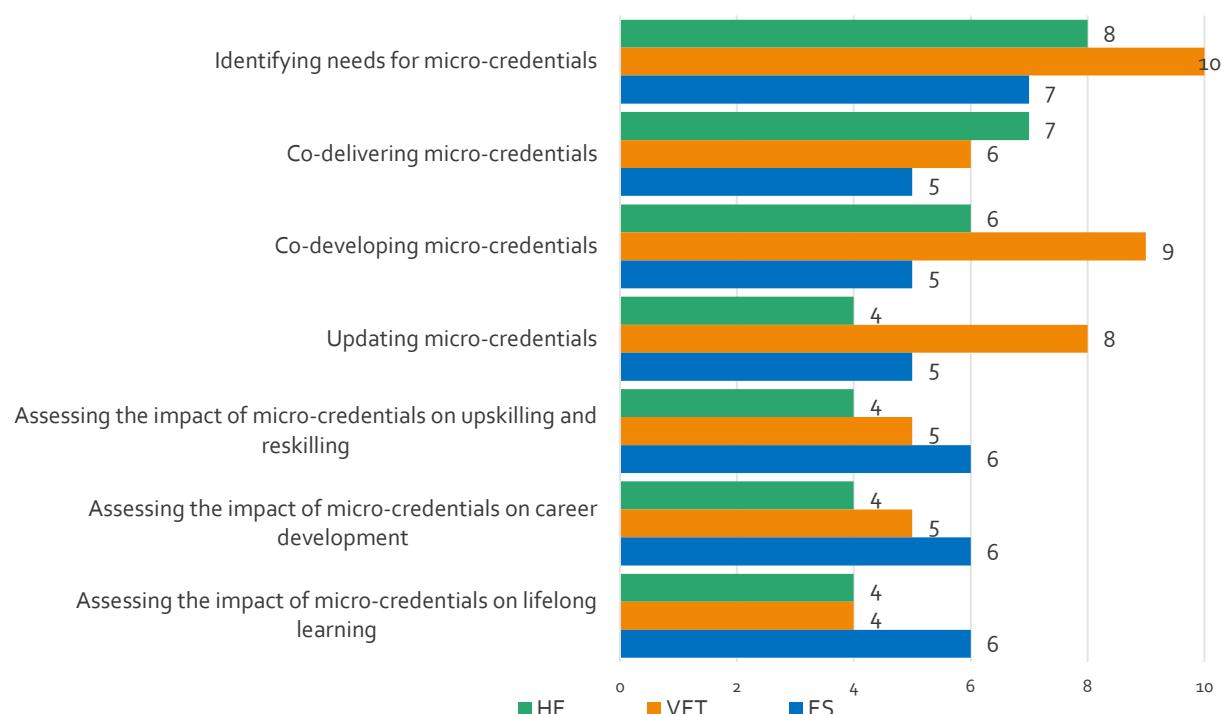
— The Flemish Community of Belgium is implementing a task force of intersectoral advisors, focusing on the employment and labour market aspects of micro-credentials in the Flemish Community.

— In Greece, the Hellenic Confederation of Commerce and Entrepreneurship advocates for quality and transparency standards, allowing flexibility and boosting the success of the national micro-credential system.

— Spain is strengthening professional guidance with detailed labour market knowledge, focusing on new in-demand competences. This guidance will be provided through various channels, including career guidance units in higher education institutions, public and private employment services, social services, and employment, career, education, training and counselling services.

([90]) https://www.solas.ie/.

— In Malta, the national employment agency, with its board composed of employer and trade union representatives, promotes the dialogue between small and medium-sized enterprises and professional associations to provide insights into required skills and competencies to address skills gaps. The agency offers training at employers' premises and tailored courses free of charge.

Sectoral and cross-industry social dialogues mainly identify needs for and co-develop micro-credentials, as shown in **Error! Reference source not found.**. However, some respondents[91] also reported a focus on assessing micro-credentials' impact on upskilling and reskilling, career development and lifelong learning, especially in higher education and VET. This observation may indicate a need to implement assessment frameworks that demonstrate the efficacy of micro-credentials.

Figure 13. What is the purpose of the sectoral and cross-industry social dialogue regarding micro-credentials?

NB: n = 31 per field (higher education (HE), VET or employment systems); N = 93.

Source: Survey data.

The Council Recommendation emphasised the importance of 'supporting the use of "skills-intelligence" systems for analyses of labour market needs and demographic changes so they can identify any need to develop or update micro-credentials' ([92]).
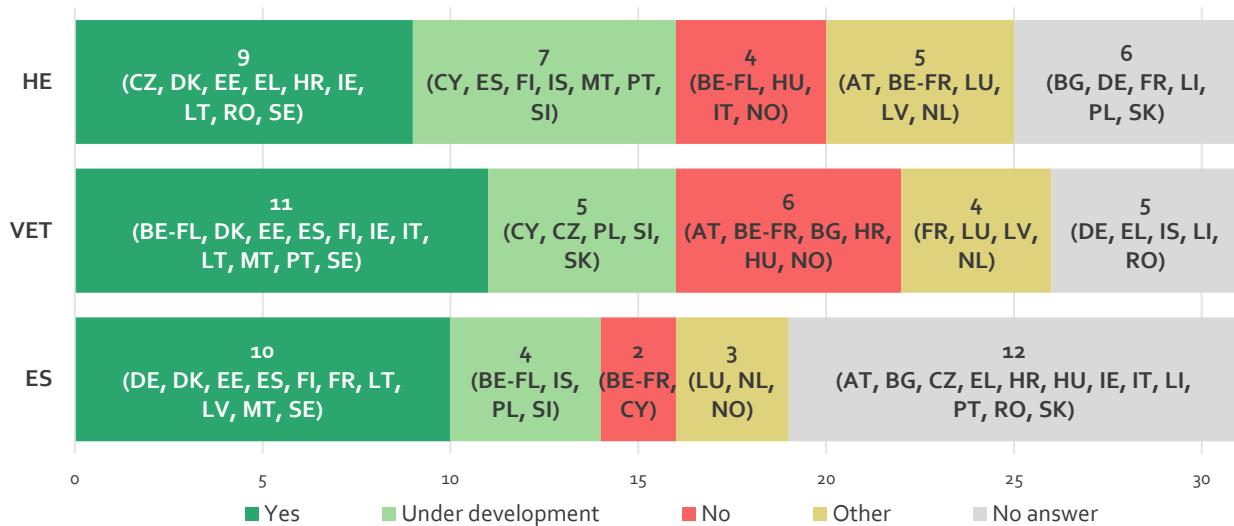
Survey responses highlighted the growing importance of 'skills intelligence' systems in informing the development and updating of micro-credentials. Education and training systems show a similar level of promotion of the use of skills intelligence systems to analyse labour market needs and demographic changes for developing micro-credentials across the three fields of education and training, as shown in Figure 14. Within higher education, 29 % (9) promote skills intelligence systems, and 23 % (7) are working on doing so. In VET, 35 % (11) have implemented measures, and 16 % (5) are in the process

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([91]) As stated in qualitative answers.
([92]) OJ C 243, 27.6.2022, p. 10, Article 8(c).

of implementing them. In employment systems, 32 % (10) have implemented the measures, and 13 % (4) are in the process of doing so.

Figure 14. Do your education and training systems promote the use of skills intelligence systems to analyse labour market needs and demographic changes so they can identify any need to develop or update micro-credentials?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Education and training systems that have already implemented skills intelligence systems that facilitate cross-sectoral dialogues to gather data on skills demands and mismatches aim to create information flows between regional markets and education and training systems to inform the design of various education and training offers, including micro-credentials. **Most systems choosing the option 'other' have already implemented skills intelligence systems to inform the development of full qualifications. However, the systems do not directly inform the development and design of micro-credentials.**
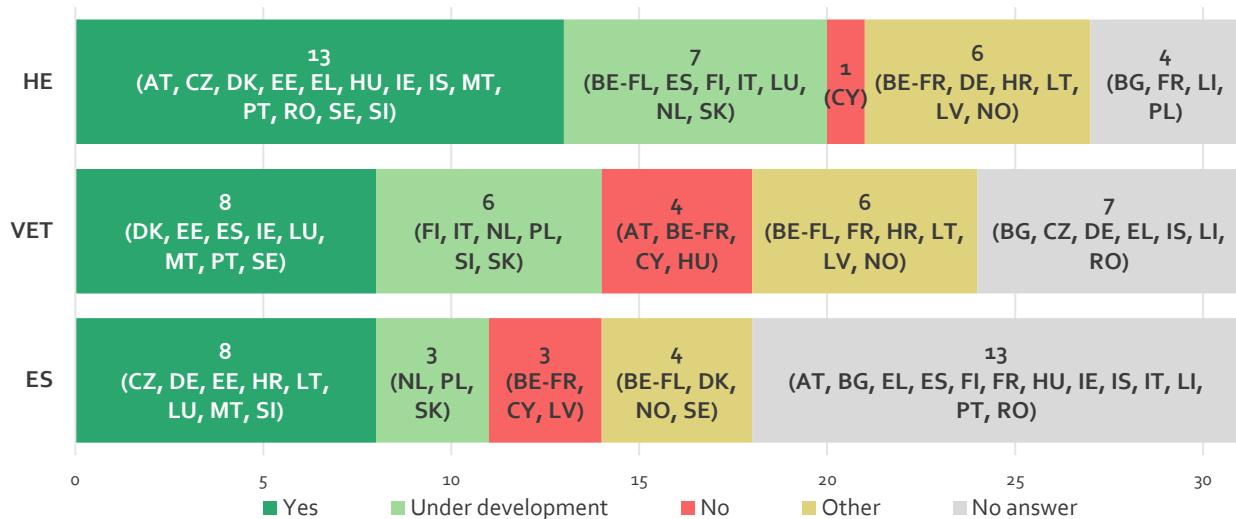
4.7. Inclusion of micro-credentials in institutional and official catalogues

The Council Recommendation advises Member States to encourage 'providers to publish catalogues of micro-credentials they offer, including, where relevant, their policy' ([93]). These catalogues may showcase micro-credentials alongside traditional educational offers to illustrate the variety of learning pathways available, thereby promoting broader engagement in lifelong learning.

The field of higher education is leading in encouraging providers to publish catalogues of their education and training programmes leading to micro-credentials on their websites, as shown in Figure 15. Within higher education, 42 % (13) of the systems promote this and 23 % (7) are in the process of doing so. In VET, 26 % (8) promote it and 19 % (6) are in the process of doing so. In employment systems, 26 % (8) promote the publishing of catalogues and 10 % (3) indicate related developments.

([93]) OJ C 243, 27.6.2022, p. 10, Article 9(c).

Figure 15. Do your education and training systems encourage providers to publish catalogues of their education and training offers leading to micro-credentials on their website?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.
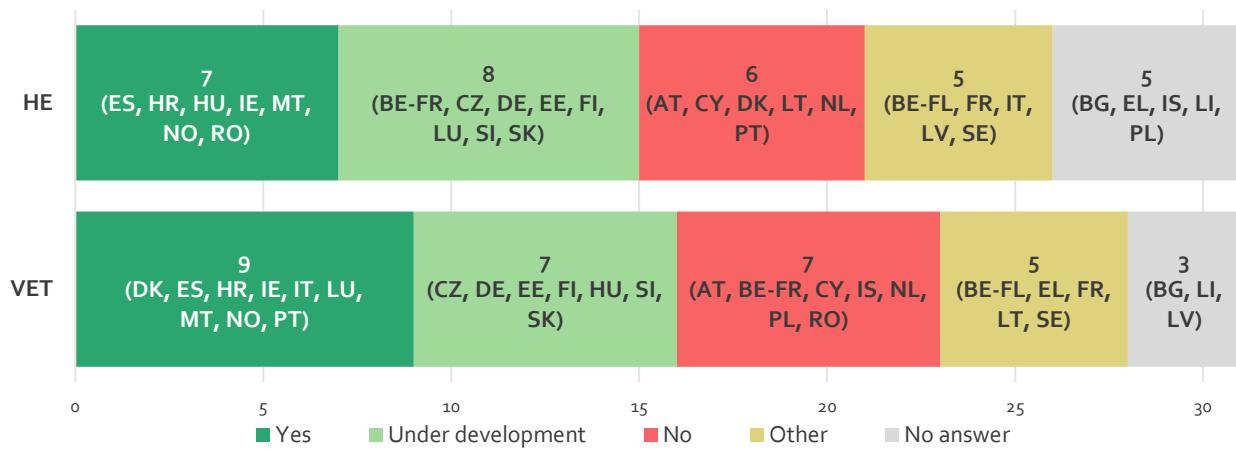
Source: Survey data.

While most systems do not mandate specific methods for publishing learning offers, they strongly encourage ensuring transparency through NQFs, guidelines or funding criteria. However, if micro-credentials are not included in their NQFs, this suggestion may not apply to this category of credentials. In a few cases, publishing catalogues with all educational offers (including micro-credentials) is mandatory, such as in higher education in Austria, Iceland and Romania. In VET, a common approach is publishing those catalogues on official educational websites, or in official catalogues or frameworks. In employment systems, providers usually publish their offers on websites or directories of employment services.

The Council Recommendation also advises Member States to encourage 'the inclusion of education and training offers leading to micro-credentials in catalogues of education and training opportunities that are on offer' ([94]). This measure aims to increase the visibility and transparency of micro-credential programmes, making it easier for individuals to discover these opportunities and understand their value.

Relatively few education and training systems have included education and training offers leading to micro-credentials in official catalogues of education and training opportunities, as shown in Figure 16. In higher education, 23 % of systems (7) have integrated micro-credentials in official catalogues, and 26 % (8) are in the process of doing so. In VET, 29 % (9) have integrated them, and 23 % (7) are in the process of doing so.

([94]) OJ C 243, 27.6.2022, p. 10, Article 11(a).

Figure 16. Do your education and training systems include education and training offers leading to micro-credentials in official catalogues of education and training opportunities?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Some education and training systems have embedded micro-credentials in pre-existing NQFs or educational portals, leveraging established systems to enhance visibility. Others are developing or have implemented dedicated platforms specifically for micro-credentials, while a third group utilises a combination of methods to promote these opportunities. Table 9 outlines the approaches used by each system, highlighting the platforms, databases and strategies used to ensure the transparency and accessibility of micro-credential programmes for learners.

Table 9. Official catalogues of education and training including offers leading to micro-credentials

Respondent	Approach	Platform
Croatia (HE and VET)	The Croatian Qualifications Framework Register offers data on occupational standards, sets of competences and qualification standards. The education voucher management system includes a catalogue of skills and programmes (Croatian Employment Services).	Croatian Qualifications Framework: http://www.kvalifikacije.hr/ Croatian Employment Services: https://vauceri.hzz.hr/
Denmark (VET)	Adulteducation.dk provides a national overview of micro-credentials within VET.	Adulteducation.dk: https://voksenuddannelse.dk/
Hungary (VET)	The Innovative Training Support Centre manages a micro-credential data registry (as provided for by Decree 341/2023). The centre is developing a new platform for the registration and promotion of micro-credentials.	Innovative Training Support Centre: https://ikk.hu/
Ireland (HE and VET)	The Irish Register of Qualifications provides information on the relationship between qualifications and the NFQ.	Irish Register of Qualifications: https://www.qqi.ie/what-we-do/the-qualifications-system/irish-register-of-qualifications
Italy (VET)	The information system for social and labour inclusion, introduced by Law Decree 48/2023, promotes the collection and publication of learning opportunities and job vacancies.	Information system for social and labour inclusion: https://siisl.lavoro.gov.it/
Luxembourg (VET)	lifelong-learning.lu and the National Centre for Continuous Vocational Training's training catalogue list training programmes leading to 'certificates'.	lifelong-learning.lu: https://www.lifelong-learning.lu/accueil/en National Centre for Continuous Vocational Training: https://cnfpc.public.lu/fr/nos-formations.html
Malta (HE and VET)	A MFHEA platform lists all accredited education and training opportunities, including micro-credentials.	MFHEA: https://qualifications.mfhea.gov.mt/#/qualifications
Norway (HE and VET)	The Utdanning.no portal includes information on micro-credentials.	Utdanning.no: https://utdanning.no/
Portugal (VET)	The Training Offer Portal includes various short-term and modular learning opportunities related to micro-credentials.	Training Offer Portal: https://www.ofertaformativa.gov.pt/#/home
Romania (HE)	The National Register of Higher Education Qualifications lists higher education programmes, suggesting the inclusion of micro-credentials.	National Register of Higher Education Qualifications: https://www.anc.edu.ro/registrul-national-al-calificarilor-din-invatamantul-superior-rncis/ National Register for Postgraduate Programmes: https://www.anc.edu.ro/registru_rnpp/
Slovakia	The information system for further education lists accredited programmes and their individual modules according to the accreditation requirements of the Ministry of Education, Research, Development and Youth. Modules are designed as independent educational units. Some of these training courses meet the criteria for micro-credentials.	Information system for further education: http://isdv.iedu.sk/
Spain (HE and VET)	The Ministry of Education, Vocational Training and Sports offers a catalogue of vocational training cycles and specialisation courses, organised by professional categories (*familias profesionales*).	Formación Profesional: https://todofp.es/que-estudiar/ciclos.html

NB: HE, higher education.

Source: Survey data.

Education and training systems implementing 'other' approaches utilise specific registers or qualifications frameworks to list qualifications but lack systematic micro-credential integration. They noted that this requires the development of guidelines and agreeing on specific approaches across higher education, VET and employment systems.

4.8. Links between education and training systems

The survey findings presented in this report suggest rather limited synergies between education and training systems, as reflected by the three distinct groups of respondents. Ministries of education typically coordinate micro-credential development in higher education. However, higher education institutions are often granted autonomy to develop their micro-credential offers (in Denmark, France, Norway, Portugal and Iceland). Small-volume learning activities are common in VET, where competent authorities offer a higher level of guidance. The fields of higher education and VET appear to be more advanced in adopting the measures proposed by the Council Recommendation than employment systems. In multiple cases, respondents representing employment systems indicated that they needed to follow developments in higher education and VET, and wait for those to be finalised to align their approach.

The survey identified several synergies between different systems within countries and regions. Some examples include the following.

— Some countries integrated micro-credentials into legal frameworks on lifelong learning spanning higher education and VET systems and focusing on continued adult learning (Croatian Act on Higher Education and Scientific Activity, Irish NQF, Spanish lifelong learning framework).

— In the Flemish Community of Belgium, the implementation of micro-credentials is being discussed across education and training systems, including in higher education, adult education and non-formal education.

— In Bulgaria, there are synergies between VET and employment systems whereby some partial qualifications awarded within the VET framework include professional competences to be recognised in the labour market.

— In Denmark, the same adult vocational training system is used in VET and employment systems.

— In Germany, partners in VET and employment systems (the Federal Ministry of Labour and Social Affairs, the Federal Ministry of Education and Research, the Federal Ministry of Economics and Climate Protection, and the Federal Employment Agency) are exchanging information as part of the national continuing education and training strategy, although not yet specifically on micro-credentials.

— In Ireland, employment systems' providers partner with higher education institutions to develop micro-credentials.

— In Cyprus, representatives of the Ministry of Education, Sport and Youth, the Ministry of Labour and Social Insurance, the Human Resource Development Authority of Cyprus, the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, and the Cyprus Productivity Centre are currently discussing the development of micro-credentials.

— In the Netherlands, a national working group on micro-credentials brings together systems in all three fields of education and training to coordinate developments at the national level.

— In Finland, the ministries of economic affairs and employment and education and culture are jointly preparing the draft framework on micro-credentials.

— In Sweden, a joint pilot project is exploring the development of micro-credentials across VET and employment systems.

Based on survey respondents' comments, lifelong learning strategies tend to have a cross-system outlook regarding adult education and micro-credentials. Furthermore, synergies appear to be more common between VET and employment systems, while higher education institutions often retain autonomy in developing the micro-credentials they offer.

There have also been synergies across countries and regions, most notably formed through the development of micro-credentials by higher education institutions collaborating as part of European Universities alliances.

Key challenges across education and training systems include the following.

— **Balancing the approaches to micro-credentials across education and training.** This involves considering each field's unique characteristics and needs while striving for consistency across systems. The autonomy of higher education institutions contrasts with the lack of autonomy in VET and the lack of frameworks within employment systems. Hence, developing approaches that bring the three fields to a similar point could be challenging.

— **Ensuring interoperability.** Interoperable systems can seamlessly exchange data, which is essential for verifying the authenticity and quality of credentials, and for building trust and facilitating the recognition and portability of credentials across different education and training systems. Without interoperability, verifying information on micro-credentials and ensuring consistent quality assurance becomes a significant challenge. A lack of interoperability can hinder employers' and educational institutions' recognition and acceptance of micro-credentials, ultimately limiting their value and portability for learners. To promote interoperability, it is recommended that shared data standards and models are developed, open-source technologies are adopted, and collaboration between stakeholders is fostered, ultimately contributing to a more cohesive and effective micro-credential ecosystem.

— **Developing comprehensive and transparent quality assurance mechanisms across education and training systems.** While quality assurance frameworks established in higher education and VET often have robust structures, micro-credentials frequently operate outside these frameworks. The absence of transnational quality assurance standards results in variability in assessment methods, learning outcomes and provider reliability, making it difficult to compare and recognise micro-credentials across national boundaries and different fields of education and training.

— **Consolidating empirical data from employment systems.** Despite the increasing promotion of micro-credentials as tools for upskilling and reskilling, there is a lack of empirical data from employment systems regarding their actual impact on job placements, career progression and wage benefits. While some pilot projects and employer-driven initiatives are in place, approaches to measuring the impact of micro-credentials on employees and employers are still limited.

— **Consolidating comprehensive guidance about micro-credentials.** There is a lack of centralised and user-friendly information systems that provide learners, employers and education-providers with clear guidance on the value, purpose and recognition of micro-credentials. Many micro-credentials are offered with limited information and clarity on how they stack to form larger qualifications, their alignment with NQFs or their recognition by employers. Additionally, while some countries have developed national registers or databases, these initiatives are still

in their infancy and often do not integrate data across different education and training systems.

5. Delivering on the potential of micro-credentials

The Council Recommendation highlights the potential of micro-credentials to transform lifelong learning and employability by providing individuals with targeted, flexible opportunities to acquire, update and improve skills needed in the labour market and society. This potential hinges on several key elements:

— using micro-credentials to improve access to education and training;

— embedding micro-credentials in guidance services;

— providing strategies for stacking micro-credentials;

— implementing ILAs.

This section presents how European education and training systems build on this potential of micro-credentials.

5.1. Use of micro-credentials

The Council Recommendation proposed that Member States integrate micro-credentials into education and training systems and skills policies in Article 12 ([95]). The use of micro-credentials in various contexts has the following purposes:

— addressing skills mismatches, upskilling and reskilling workers, and supporting self-employed and non-standard workers in labour market settings;

— improving access to education and training by, for example, reaching disadvantaged and vulnerable groups and supporting re-entering, transitioning in or continuing employment;

— supporting policy initiatives like the digital education action plan, the European Pillar of Social Rights action plan, the green transition and the Youth Guarantee.

The following three subsections describe the use of micro-credentials accordingly.

Employment and labour market settings

Analysis of the survey responses shows that relatively few higher education systems promote the use of micro-credentials in employment and labour market settings, with 23 % (7) acknowledging promotion and 16 % (5) indicating ongoing development, as shown in Figure 17. This may be due to the field's focus on degree-oriented structure or lesser integration into employment-focused micro-credentials promotion strategies. The VET sector leads in promoting the use of micro-credentials: 32 % of the respondents (10) indicated that they are promoting the use of micro-credentials, while a further 26 % (8) of the systems are developing measures to do so. Employment systems showed moderate promotion, with 26 % (8) of the respondents confirming active promotion and 13 % (4) indicating developments in this area. The overall trend suggests that micro-credentials are gaining traction, but some disparities persist across education and training systems.

([95]) OJ C 243, 27.6.2022, p. 10.

Figure 17. Do your education and training systems promote the use of micro-credentials in employment and labour market settings?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Survey respondents who shared additional insights mentioned various approaches to promoting micro-credentials. In higher education, key examples are as follows.

— The new Act on Higher Education and Scientific Activity (2022) in Croatia enables higher education institutions to provide lifelong learning programmes in which competencies are aligned with occupational standards and NQF learning outcomes. These programmes include micro-credentials and are designed to meet labour market needs. Additionally, a voucher system incentivises adults' participation in lifelong learning, enhances employees' competences, ensures a high-quality workforce and supports transitions from unemployment to employment, focusing on green and digital skills across higher education, VET and employment systems ([96]).

— In Italy, major multinational companies and VET institutes use micro-credentials or equivalent credentials to certify qualifications, activities and skills. For employers, key advantages include rapid communication of qualifications and competences; the acceleration, automation and expansion of the screening phase of recruitment processes; improved cooperation with higher education institutions; and facilitation of reporting of mandatory employee training activities.

— Luxembourg is further exploring the promotion of the use of micro-credentials in employment and labour market settings through a pilot project. At present, courses similar to micro-credentials exist and are promoted, but they have not yet been marketed under the term.

— In Sweden, higher education institutions have institutional autonomy to use micro-credentials for multiple purposes.

In VET, survey respondents highlighted the following practices.

— Public authorities in the Flemish Community of Belgium inform, facilitate and advise providers on setting up training programmes in adult education.

([96]) Croatian Employment Services, 'Voucher for learning Croatian language', Croatian Employment Services website, accessed 6 May 2025, https://vauceri.hzz.hr/.

— In Ireland further education and training micro-qualifications are promoted in employment and labour market settings through a network of enterprise engagement personnel employed by education and training boards ([97]). These boards comprise the boards' staff, directors of further education and training, directors of schools, directors of organisations, and directors of support and development forums.

— As part of Italy's national recovery and resilience plan, the guaranteed employability of workers programme ([98]) is a reformative action to upgrade active labour policy services. The programme tests micro-credentials to provide more flexible options compatible with the timing and needs of insertion/reintegration into the labour market. Additionally, the New Skills Fund promotes short training courses enabling workers to adapt to the green and digital transitions.

— The Sectoral Councils Alliance ([99]) in Slovakia is promoting the adoption of micro-credentials through its work on harmonising the education system with the labour market's needs. The members of the alliance comprise the Ministry of Labour, Social Affairs and Family of the Slovak Republic; the Ministry of Education, Research, Development and Youth of the Slovak Republic; and professional associations of representatives of employers, trade unions, educational institutions and self-governing regions.

— In Finland, some micro-credentials are already well established, and several different training providers offer them; for example, the 'hygiene passport' is mandatory in the food service industry, the 'safe working passport' is mandatory in construction and the 'forklift operations passport' is mandatory in the field of logistics.

Respondents representing employment systems highlighted the following.

— Trade unions are developing links between sectoral qualification funds, ILAs and micro-credentials under ESF+ projects in Bulgaria.

— In Germany, within the framework of Section 81(3a) of the Social Code third book ([100]), it is possible to promote participation in measures to acquire basic skills that create the basis for successful further vocational training or improve employability.

— Although the term 'micro-credential' is not explicitly mentioned in Lithuania, short-term education and training activities are promoted through a recently launched ILA scheme funded by the Employment Service.

The survey respondents indicated multiple purposes of promoting micro-credentials in employment and labour market settings. Figure 18 shows that education and training systems rated the same set of seven purposes similarly. They include three main areas of purpose: addressing skills mismatches, upskilling and reskilling workers, and supporting transitions and re-entry into the labour market.

([97]) Education and Training Boards Ireland (ETBI), 'About ETBI', ETBI website, accessed 7 May 2025, https://etbi.ie/about-etbi/.

([98]) Italy: Ministry of Labour and Social Policies, 'GOL programme', Ministry of Labour and Social Policies website, accessed 7 May 2025, https://www.lavoro.gov.it/temi-e-priorita/occupazione/focus/pagine/programma-gol.

([99]) Sector Councils Alliance, 'Our mission', Sector Councils Alliance website, accessed 7 May 2025, https://www.alianciasr.sk/en/our-mission/.

([100]) Social Code (SGB) third book (III) – Employment promotion: (SGB III), Principle 81, https://www.buzer.de/81_SGB_3.htm.

Figure 18. For what purposes do your education and training systems promote the use of micro-credentials in employment and labour market settings?

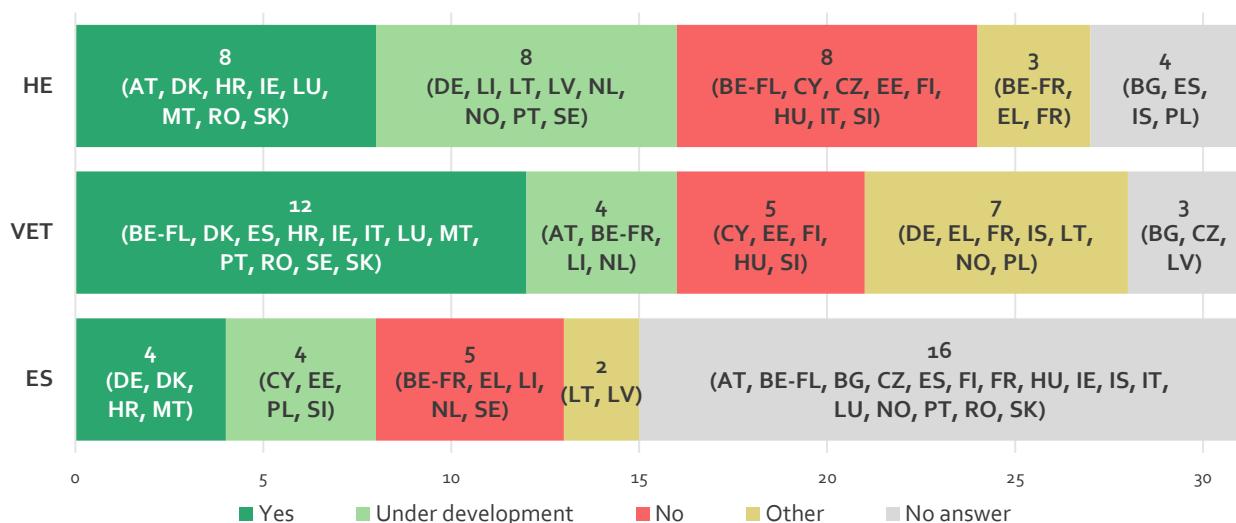NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

The variability of reasons for promoting micro-credentials in employment systems is not highly significant, as most categories score similarly. Some slight variations, such as a marginally higher focus on addressing skills mismatches, re-entry into the labour market and supporting transitions, suggest a broadly uniform approach to the use of micro-credentials across the three fields of education and training.

Enhancing access to education and training

Higher education and VET are actively promoting micro-credentials to improve access to education and training, as shown in Figure 19. 52 % of higher education and VET systems (16) either have implemented or are implementing micro-credentials to enhance access to education and training. Employment systems lag behind, with 26 % of systems (8) actively promoting micro-credentials or developing measures, highlighting the need to fully leverage micro-credentials as a tool for promoting inclusive access to education and training. Such disparity underscores the more pronounced alignment of VET systems with lifelong learning goals and the systems' intrinsic connection to skills development.

Figure 19. Do your education and training systems promote the use of micro-credentials to improve access to education and training?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Examples of survey respondents sharing insights on the use of micro-credentials to enhance access to education and training in higher education include the following.

— In Malta, micro-credentials enhance flexibility and focus on skills development, providing flexible learning options tailored to individual needs and schedules. This flexibility helps to make education and training more accessible to diverse groups of learners, including those balancing work, family or other commitments. Hence, higher education can provide pathways that may not require full-time study or extensive prerequisites.

— Micro-credentials offered and acquired before, during and after higher education are considered part of lifelong learning in Austria. This implies that micro-credentials could be 'bridging courses', offering access to education and training.

— Learning Slovakia ([101]) and Slovakia's 2030 lifelong learning strategy ([102]) have drawn attention to the potential of providing short-term qualifications and micro-credentials to support early leavers from education and training, and low-qualified adults, often from disadvantaged environments. For these target groups, the stackability of micro-credentials is a significant advantage.

Examples of survey respondents sharing insights on the use of micro-credentials to enhance access to education and training in VET include the following.

— In Spain, the Ministry of Education and Vocational Training has incorporated micro-credentials to upskill and reskill the workforce and help individuals adapt more quickly to evolving labour market needs. Additionally, the possibility of combining micro-credentials into larger occupational skills offers a modular and personalised approach to education and training.

([101]) Cedefop, 'Learning Slovakia strategy paper', Cedefop website, 2023, accessed 7 May 2025, https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/28565.
([102]) Slovakia: Ministry of Education, Science, Research and Sport, *Strategy for Lifelong Learning and Guidance 2021–2030*, 2022, https://zakladnezrucnosti.sk/wp-content/uploads/2022/10/EN_Strategia-CZVaP_fin.pdf.

— Italy, as part of the National Recovery and Resilience Plan dual system investment, is testing micro-qualifications for adults with low-level qualifications.

— In Romania, according to Government Decision No 772/2022, the system of transferable credits used in the professional training of adults was established to facilitate lifelong learning and the recognition of skills and qualifications.

Key examples of survey respondents sharing insights on the use of micro-credentials to enhance access to education and training in employment systems are as follows.

— In Denmark, the labour market system offers micro-credentials to unemployed people as a part of a flexicurity system ([103]). A system of labour market courses offers flexible educational solutions that allow workers to upgrade their skills in a way that fits into their work life. These skills can often be used to recognise prior learning and allow workers to transition from the unskilled to the skilled labour force.

— Croatian employment services have embedded micro-credentials in their regular activities to offer career guidance and promote the use of educational vouchers.
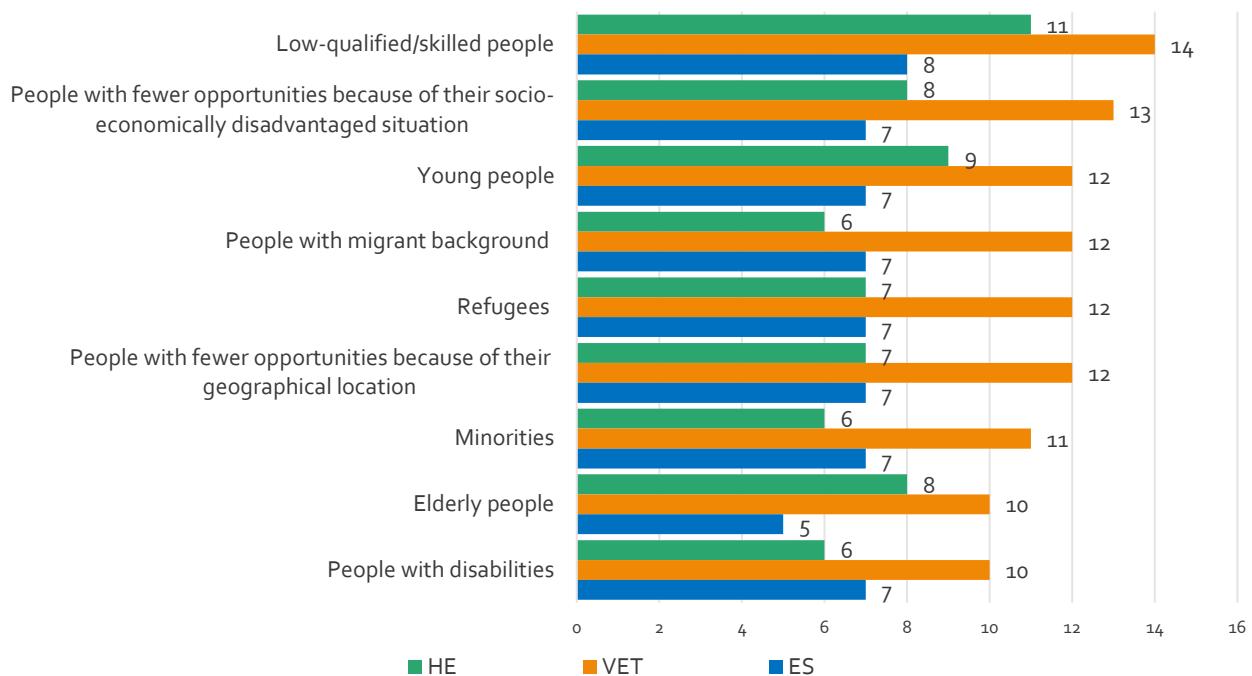
Education and training systems implementing 'other' measures to promote the use of micro-credentials to improve access to education and training emphasised the importance of validating prior learning to help individuals enter or continue education. Education and training systems also implement a range of measures to offer various small-volume learning activities to enhance access to education and training despite these not fully meeting the criteria to be classed as micro-credentials, as described in the Council Recommendation. Additionally, survey respondents noted that initiatives such as Erasmus+ projects have provided funding for developing flexible education and training opportunities.

Numerous target groups are addressed - in a balanced way - by micro-credentials policies developed by education and training systems to improve access to education and training, as presented in Figure 20. The systems have taken into account demographic characteristics (young and older people), socioeconomic disadvantages (low-qualified/skilled people), geographical distribution (people with fewer opportunities due to their geographical location) and disadvantaged groups (people with disabilities, people with migrant backgrounds, refugees and minorities).

Education and training systems also emphasised that, in some cases, the lack of specification of particular target groups in their initiatives to promote micro-credentials implies their openness to all target groups. As a result, those implementing such initiatives for different target groups are expected to adapt them according to their needs.

([103]) The employment system in Denmark is built around the Danish flexicurity model, which combines flexibility with security for citizens; see Danish Agency for Labour Market and Recruitment, 'Flexicurity', Danish Agency for Labour Market and Recruitment website, 11 December 2024, accessed 7 May 2025, https://www.star.dk/en/about-the-danish-agency-for-labour-market-and-recruitment/flexicurity.

Figure 20. Which target groups do micro-credentials policies aim to improve access to education and training?
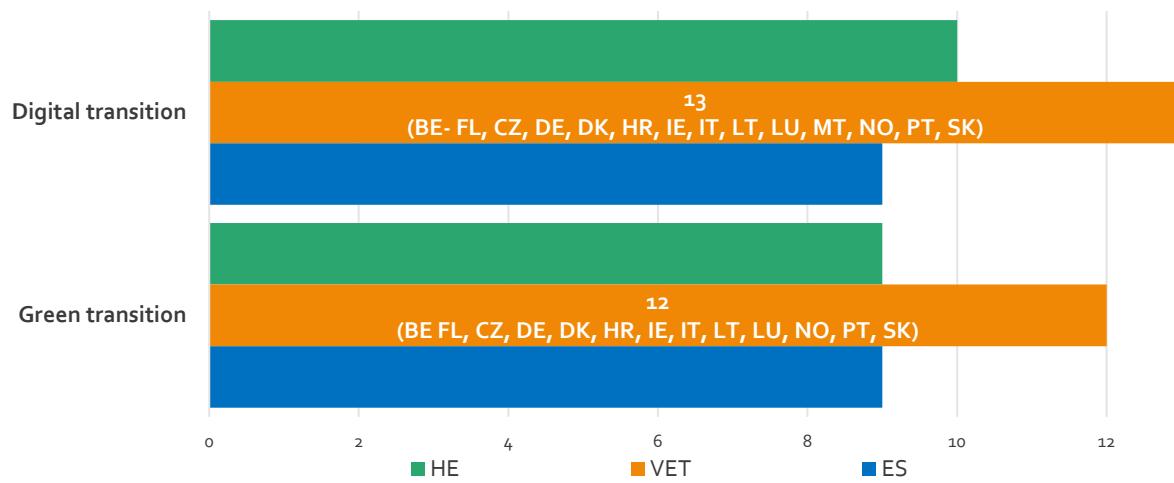

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Supporting the green and digital transitions

Micro-credentials are used specifically to upskill and reskill workers in the context of the digital and green transitions in several systems. 32 % of respondents (10) from the higher education sector indicated the use of micro-credentials to support the digital transition, and 29 % (9) used them to support the green transition. The field of VET leads, with 42 % (13) of the systems using micro-credentials to support the digital transition and 39 % (12) to support the green transition. In employment systems, micro-credentials are used to the same extent to support the digital and green transitions, as indicated by 29 % (9) of respondents (see Figure 21).

Figure 21. Do your education and training systems use micro-credentials to upskill and reskill workers in the context of the digital and green transitions?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Some concrete examples mentioned by the respondents representing higher education systems include the following.

— Intersectoral dialogue with intermediaries in the Flemish Community of Belgium helped to identify professions for which a partial qualification linked to social challenges, such as inflow in care professions or the green and digital transitions, is relevant.

— There is a strategic focus on welfare and green technologies in Denmark. The Danish Agency for Labour Market and Recruitment has extensive knowledge of the labour market, the employment system and the many opportunities available for upskilling both unemployed and employed individuals. The initiative works to address labour market shortages and recruitment challenges and thereby create value for companies, employees and jobseekers across Denmark.

— In Estonia, several micro-credentials develop skills needed for the green and digital transitions. They cover areas such as transport, energy, agriculture, food processing, construction, chemical technology, materials processing, environmental science and waste management.

— In Croatia, higher education institutions offer lifelong learning programmes (essentially micro-credentials) that cater to the specific needs of the labour market, providing tailored educational opportunities for skills development. These programmes, recognised and financed through a voucher system, aim to enhance employability by focusing on green and digital skills. There is a specific catalogue for green and digital skills, and the strategic focus on developing micro-credentials providing digital and green skills is set to continue.

— In Slovenia, there are ongoing pilot projects in multiple public higher education institutions to implement experimental micro-credential programmes as part of the project 'Reforming higher education for a green and resilient transition to society 5.0', financed through the EU's RRF. Some of the pilot projects also promote micro-credentials. Four public higher education institutions have undertaken pilot projects between 2022 and 2025 to increase their capacity to respond to social and labour market needs arising from the green and digital transitions.

Examples mentioned by respondents representing the VET sector are as follows.

— In Ireland, the twin transitions are seen as a key emerging skills areas for employees and as part of the 'skills to advance' policy initiative. The initiative supports the upskilling and reskilling of those in employment to enable them to adapt to market changes and develop new skills in response to emerging skills areas, including the green and digital transitions. Green/sustainability-related skills were identified as a priority for the new Further Education and Training Micro-Qualifications Model and rolled out nationally as part of the 'skills to advance' policy initiative.

— Italy has a designated New Skills Fund, which is aimed at promoting short training courses enabling workers to adapt to the green and digital transitions.

— The Norwegian Committee on Skills Needs provides evidence-based analyses and assessments of Norway's future skills needs at all levels of education. During its first period of activity (2017–2020), the committee produced comprehensive reports addressing both short-term and long-term skills needs for the green and digital transitions.

— In Portugal, micro-credentials have been used in response to emerging needs associated with energy, environmental, digital and social transitions. Examples include short- and medium-duration pathways on hydrogen, solar photovoltaics and wind power.

Overall, micro-credentials have been widely recognised by the survey respondents as a suitable approach to providing small-volume learning activities to support the green and digital transitions.

Using micro-credentials to support other policy initiatives

Several education and training systems are promoting the use of micro-credentials to support various policy initiatives focusing on lifelong learning, upskilling, reskilling and employability, as presented in Table 10. For example, the French Community of Belgium promotes micro-credentials as part of VET learning pathways for jobseekers needing upskilling or reskilling. In Croatia, micro-credentials have offered targeted VET and upskilling opportunities for young people and flexible training programmes to help individuals gain new skills or update existing ones during the recovery from the COVID-19 pandemic. Ireland utilises micro-credentials in further education and training to support the upskilling and reskilling of employees through the 'skills to advance' policy initiative. Sweden has implemented a student finance scheme for transition and retraining in higher education, encouraging adults to reskill or upskill later in life by compensating them for income loss while they study.

Table 10. Do your education and training systems promote the use of micro-credentials to support other policy initiatives?

Policy initiative(s)	Higher education	VET
Implementing the reinforced Youth Guarantee to support young people, including through preparatory training and high-quality opportunities for continued education or training.	IT, MT.	BE-FR, HR, IT, LT, LU, MT, PT.
Implementing the **Commission Recommendation (EU) 2021/402 of 4 March 2021 on an effective active support to employment following the COVID-19 crisis (EASE)**.	MT, NO, SI.	HR, MT, PT.
Supporting the professional development of workers and meeting mandatory requirements for upskilling and reskilling in certain jobs and types of work (e.g. for licences, training and permits).	FI, IT, LU, MT, SE, SI.	EL, ES, FI, HR, IE, IT, LT, LU, MT, NO, PT.
Others	SE: Student finance scheme provided for by the Transition and Retraining Act (*Lagen (2022:856) om omställningsstudiestöd*), aimed at adults who have already entered the labour market and compensates students for their net income loss when they take leave from their career to study.	LU: Offering educational opportunities to young people who have trouble progressing within the regular school system through social and vocational integration centres (*Centres d'insertion socio-professionnelle*).

Source: Survey data.

Most higher education systems overlap with VET in the use of micro-credentials to support other policy initiatives, but the field of VET shows wider use.

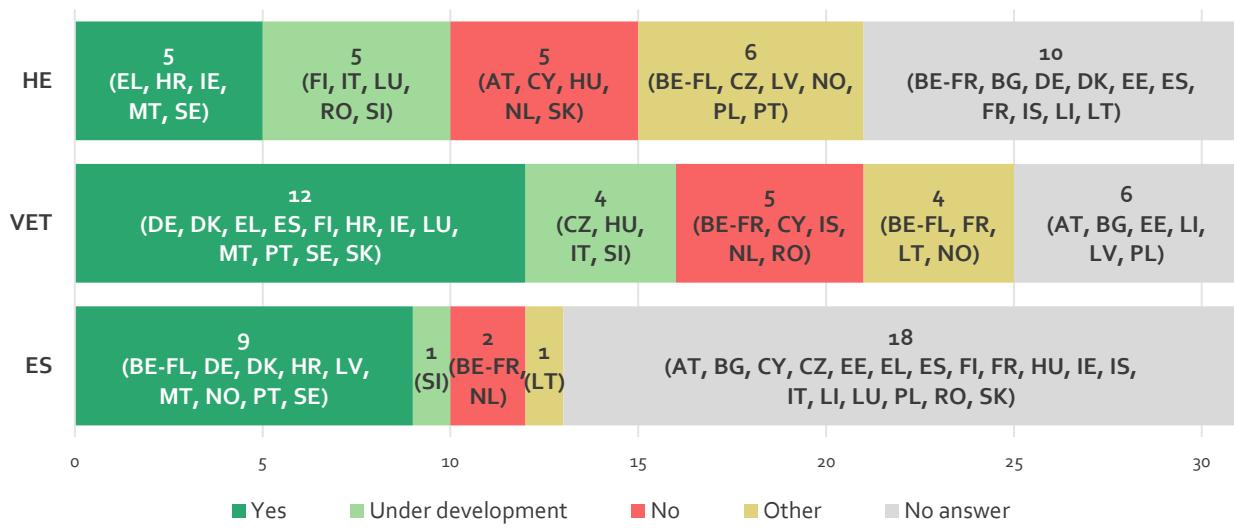## 5.2. Services providing information and guidance

The Council Recommendation emphasises the integration of information and advice on identifying and selecting micro-credentials into services providing guidance on lifelong learning, to support all learners. These services include higher education career centres, public and private employment services, social services, and other guidance services offering employment, career, education, training and coaching support ([104]). This integration should support the making of informed decisions about education and training, cater to learners' diverse needs and empower individuals to choose relevant credentials that align with their personal and professional goals.

In this context, the field of VET leads in ensuring that information and advice on identifying and selecting micro-credentials is incorporated into services providing guidance on lifelong learning. As shown in Figure 22, 39 % of systems (12) in VET confirmed the integration of micro-credentials into these services, with another 13 % of systems (4) indicating ongoing

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([104]) OJ C 243, 27.6.2022, p. 10, Article 14.

development. VET is followed by employment systems, with 29 % of systems (9) confirming this incorporation and 3 % (1) indicating progress. Meanwhile, 16 % of respondents (5) in higher education confirm the incorporation of or indicate progress on integrating micro-credentials into services providing information and advice. These disparities suggest that services providing guidance on lifelong learning are better developed in VET and employment systems.

Figure 22. Do your education and training systems ensure that information and advice on identifying and selecting micro-credentials is incorporated into lifelong learning guidance services?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

The primary focus in higher education is on integrating micro-credentials into services provided by higher education career centres. In a similar vein, there is strong engagement with PESs and private employment services in VET, indicating robust integration in the labour market. In employment systems, PESs dominate as a target group, complemented by private employment services.

VET exhibits the most developed structural approaches to the integration of guidance on micro-credentials. For instance, Denmark's labour market training system provides comprehensive information about short modules, while Spain's new law on VET explicitly mandates career guidance.

In employment systems, there is a clear division between countries with established guidance services and those without. Some PESs' offices have already integrated guidance on micro-credentials. These include Malta's Jobsplus, providing comprehensive career guidance including advice on micro-credentials. Portugal's qualification centres (*Centros Qualifica*) include micro-credentials in adult qualification pathways.
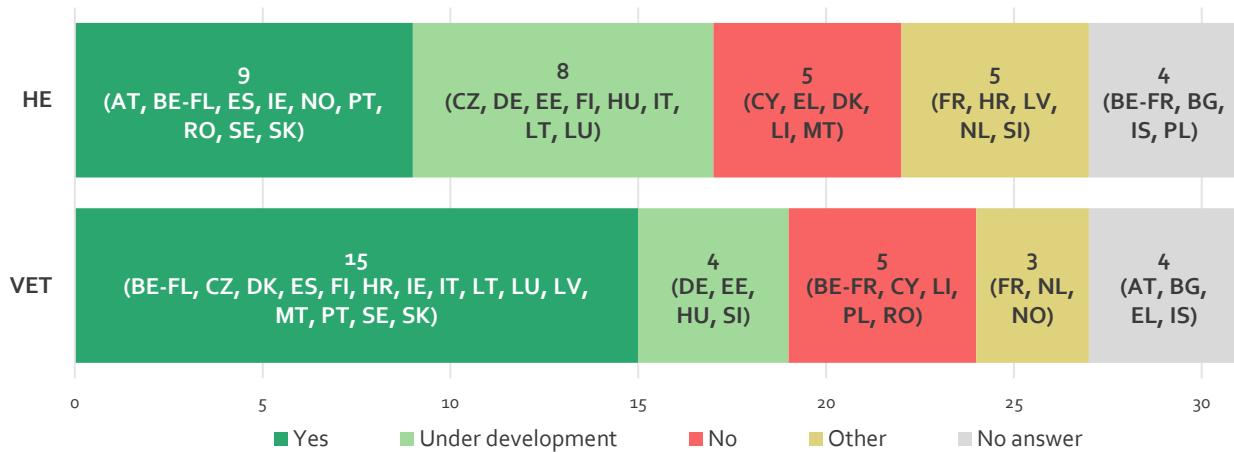
A clear pattern also emerges across education and training systems regarding the development of measures to incorporate micro-credentials into services providing guidance on lifelong learning. Some countries explicitly acknowledge that they are not yet ready (e.g. Slovenia reported that it would incorporate micro-credential information once its system was developed). Others are actively developing frameworks (e.g. Croatia provides a comprehensive example across sectors, with its national qualification framework register in higher education, new Law on Adult Education within VET, and employment voucher system all incorporating guidance relating to micro-credentials).

5.3. Stacking of micro-credentials

Micro-credentials are designed to be modular so that other micro-credentials may be added to create larger credentials. Decisions to stack or combine credentials lie with the receiving organisation (e.g. education and training institutions, employers). Decisions are in line with their practices, and should support the goals and needs of the learner. Stacking does not provide automatic entitlement to a qualification or a degree. Regional and national authorities or institutions make decisions to stack credentials in line with their awarding processes. Stackability supports flexible learning pathways, including by enabling the validation, recognition and stacking of micro-credentials from various systems ([105]).

Analysis of the survey responses shows that VET systems are more open to the stacking of micro-credentials, with 48 % of VET systems (15) confirming this practice compared with 29 % of systems (9) in higher education (as shown in Figure 23). An additional 26 % of systems (8) in higher education and 13 % (4) in VET reported ongoing developments, which reflects efforts to expand or formalise stacking opportunities.

Figure 23. Can micro-credentials in your education and training systems be stacked?

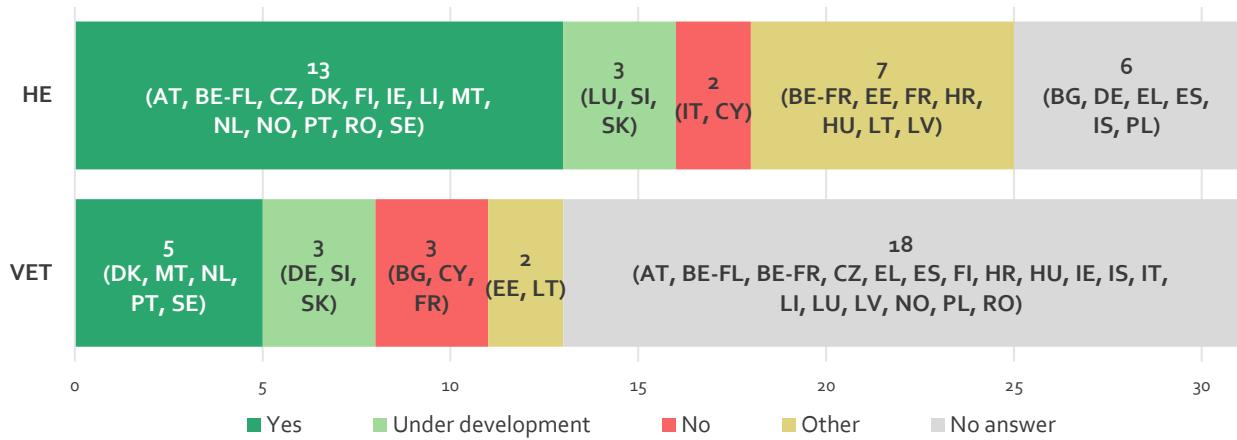NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

The finding that VET is more open to implementing stacking mechanisms is probably related to its modular and skills-focused structure, which naturally aligns with the concept of stacking. Multiple respondents indicated that their ongoing policy developments will involve the better integration of stackability into their qualifications systems.

The autonomy of institutions to stack micro-credentials is more advanced in higher education than VET, as indicated in Figure 24. 42 % of respondents (13) from the field of higher education indicated that institutions have the autonomy to stack micro-credentials, and 10 % (3) reported ongoing developments. VET displays considerably less autonomy, with 16 % (5) of the systems confirming that institutions have the autonomy to stack micro-credentials and 10 % (3) indicating ongoing developments. These findings are largely unsurprising and reflect the traditional emphasis on academic freedom and institutional autonomy in higher education. Meanwhile, VET appears to rely on more centralised or standardised systems that grant less institutional flexibility.

([105]) OJ C 243, 27.6.2022, p. 10, Article 5(h).

Figure 24. Are institutions in your education and training systems autonomous/allowed to stack micro-credentials?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Survey respondents also reflected on stackability in higher education and VET systems. In higher education, there is a notable divide between respondents regarding the philosophy of stackability. Some systems express strong caution about unlimited stacking. For example, Austria explicitly states that accumulating 'countless micro-credentials' to acquire degrees would jeopardise pedagogically created and coherent curricula. Germany emphasises that stacking should not become an alternative to proper degree programmes. However, a prototype programme in which small digital learning units could be stacked into a full master's degree was launched by the University of Southern Denmark in 2019, attracting considerable student attention. However, most of the respondents' explanations pointed towards integrating micro-credentials and partial credentials into ongoing studies. The respondents from the Flemish Community of Belgium, the Netherlands, Norway, Portugal and Spain all explained that the stackability of micro-credentials was at the discretion of institutions.

In contrast, the VET sector shows more openness to stackability. This is exemplified by Latvia's VET law, allowing module certificates to be used independently or stacked to form full qualifications, and Lithuania's fully modularised VET system, enabling multiple pathways for module certification. VET also demonstrates more structured approaches to stackability.

5.4. Individual learning accounts

An ILA is a 'delivery mode for individual training entitlements. It is a personal account that allows individuals to accumulate and preserve their entitlements over time, for whichever eligible training, guidance or validation opportunity they deem most useful and whenever they want to, in line with national rules. It grants the individual full ownership of the entitlements, irrespective of the funding source' [106]. ILAs aim to widen the participation of adults in learning. The Council Recommendation suggested that micro-credentials could be linked as part of education and training offerings within ILAs [107].
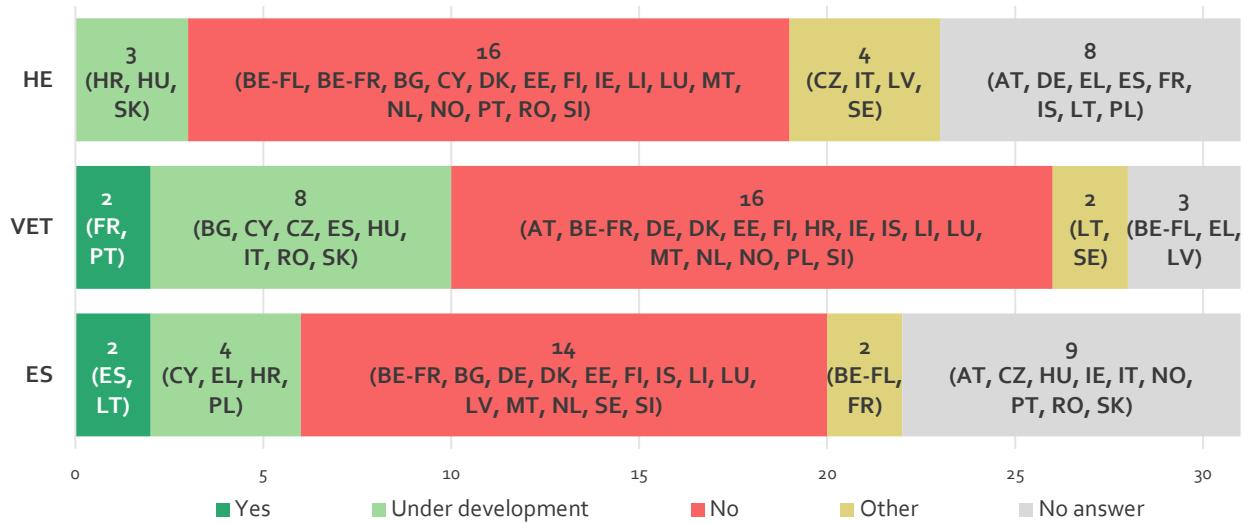
The survey data show that a limited number of education and training systems have implemented ILAs, as illustrated in Figure 25. In higher education, no respondents

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[106] OJ C 243, 27.6.2022, p. 26.
[107] OJ C 243, 27.6.2022, p. 10, Article 15(a).

confirmed the full implementation of ILAs, and 10 % (3) indicated ongoing developments. The VET sector exhibits limited implementation, with 6 % (2) of the systems implementing ILAs and 26 % (8) indicating ongoing developments. The results for employment systems are similar, with 6 % (2) implementing ILAs and 13 % (4) indicating ongoing developments.

Figure 25. Have your education and training systems implemented ILAs?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

This finding contrasts with the first review of the Employment Committee on the implementation of the 2022 Council Recommendation on ILAs, which took place from 29 to 30 October 2024 in Brussels. The committee showed that 14 Member States had an ILA scheme in place or had concrete plans to introduce one in the future; two of those report that national ILA schemes are already in place, and another two either have recently started or are in the process of transforming an existing scheme into an ILA scheme. The majority are planning to or have started to pilot the scheme. The fact that most of the schemes are in the planning phase could explain why respondents to this survey were not aware of them.

France stands out as having an established ILA system. Their personal training account, implemented in 2015, credits employed individuals with EUR 500 to EUR 800 annually to be used for training ([108]). Lithuania introduced ILAs in 2023, providing up to EUR 500 per individual for training ([109]). Starting in 2025, the ILA scheme will cover training funded by the Lithuanian PES.

Portugal established a 'qualification passport' as an electronic tool for recording the qualifications and competencies acquired throughout an adult's life and providing guidance on learning pathways ([110]). Spain is establishing the State Registry of Vocational Training, which citizens can access to obtain an up-to-date report detailing their training experience and professional experience.

Several systems are in the planning or pilot phase. For instance, Bulgaria's employment system established a working group in January 2024 to develop a pilot model for ILAs funded by the ESF+. Some systems are integrating ILAs into broader reforms; for example,

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([108]) https://www.moncompteformation.gouv.fr/espace-prive/html/#/.
([109]) https://www.kursuok.lt/.
([110]) https://www.passaportequalifica.gov.pt/cicLogin.xhtml?windowId=5a2.

Slovakia includes ILAs in its new adult education law. Some employment systems show concrete developments; for instance, Greece has established relevant legal frameworks in Law 4921/2022 ([111]) and plans to implementation ILAs through its skills portal.

In higher education, responses indicate less direct engagement with ILAs, with several systems reporting no implementation or plans. However, Sweden introduced a student funding scheme for transitioning and retraining on 1 October 2022 to strengthen the position of employees in the labour market and enable skills development. The support package includes a grant of 80 % of the individuals' previous salary and a supplementary loan. The initiative began disbursing funds in 2023, benefiting 5 200 individuals. Most of them studied at a higher vocational institution, university or university college, and 7 out of 10 were over 40 years old. Nearly 40 % of the participants engaged in part-time studies.

Other respondents report implementing supporting systems rather than full ILAs. The Flemish Community of Belgium launched a training credit portal ([112]) in September 2023, providing citizens with personalised information on training incentives. Estonia implemented a training credit platform across all systems, created by higher education institutions and employers. This was their closest system to an ILA system ([113]). These variations suggest different national approaches to achieving similar goals of supporting individual learning pathways.

5.5. Good practices for the uptake of micro-credentials

Survey responses highlighted a number of different approaches and practices related to adopting micro-credentials across education and training systems. In higher education, some of the good practices include the following.

— In 2019, the University of Southern Denmark enrolled 36 students in the first prototype of a new flexible educational programme. Students could stack their master's education through small digital learning units (nano-modules) that could be accessed any time and anywhere. In 2021, it had 115 applicants, with about half being admitted to the programme.

— Rae Parish, a municipality near Tallinn, Estonia, and Tallinn University's School of Governance, Law and Society collaborated to create a micro-degree programme targeting the municipality's staff.

— Several universities in Spain offer micro-credentials at the master's level (EQF level 7) across various fields. The University of Oviedo provides courses in commercial distribution, client analysis and digital retail; the University of Valencia offers online courses on topics like the stock market and water management; the Pablo de Olavide University covers education, marketing, law and health; the University of Alcalá focuses on big data in the sciences and health; and Cardenal Herrera University offers the widest range of courses, enhancing skills in ethics, soft skills and technical skills.

— In Finland, faculties of education have traditionally offered 'separate studies' (*Erilliset opinnot*) for non-degree students through short courses similar to open higher education courses, which can equate to even only one ECTS credit. Universities of applied sciences also offer teaching qualifications as extra credentials separate from regular degrees.

([111]) Law 4921/2022, *Government Gazette*, Vol. A', No 75, 18 April 2022.
([112]) Vlaanderen.be, 'Opleidingstegoed', Vlaanderen.be website, accessed 7 May 2025, https://www.vlaanderen.be/werken/opleiding-op-de-werkplek/als-werknemer-een-opleiding-volgen/opleidingstegoed.
([113]) https://koolituskrediit.ee/?setlang=eng.

— In France, Gradeo is a distance learning platform developed as part of the Erasmus+-funded 'European MOOC Consortium for the labour market' project ([114]). The project established a common micro-credential framework that enables the development and consolidation of professional Gradeo, allowing learners to combine training courses from different partner institutions and obtain a diploma or professional certification.

— Over 30 higher education institutions in Hungary offer short courses up to a maximum of 6 ECTS credits through the K-MOOC platform ([115]). Some higher education institutions have begun developing micro-credentials based on new curricula and target groups of learners. Dennis Gabor University, for instance, offers online micro-credential programmes in business and ICT, developed and delivered together with industry experts. Similarly, Széchenyi István University offers a range of micro-credentials, including one on robotics and programming targeting female secondary school students.

— In Italy, local working groups in Bicocca (a district of Milan), Bologna and Padua have described micro-credentials specifying learning outcomes, workload, assessment methods and ECTS value. For example, the University of Milan-Bicocca offers nearly 50 stackable micro-credentials in the fields of sustainability and digital and civic engagement, with certifications awarded as open badges.

— In the Netherlands, the development paths initiative supports branches of industry with staff shortages through modules using work-based learning as the main methodology. These modules can be part of formal educational programmes (higher education and VET) or non-formal education within various industries. Employers' organisations in the target industries decide on the content of these 'development paths'. Public funding is available for participation (through the subsidy scheme for learning and development in SMEs).

— In Norway, the University of Bergen offers the 'digital competence for working life' micro-credential (among several others), addressing the growing demand for digital skills. The university provides small online courses across disciplines to help professionals understand digital technologies, each worth 2.5 ECTS credits. Meanwhile, the University of Stavanger participates in the ECIU University alliance ([116]) through which it provides micro-courses and challenge-based learning opportunities focused on sustainable development.

In VET, some examples of good practices shared include the following.

— In Denmark, adult vocational training courses enable education-like learning progression in various areas; an example is basic management training, which lasts 13 days spread over four to six months ([117]). In several industries, adult vocational training packages have been established to meet competence requirements that cannot be met with a single course ([118]). Course packages consist of several courses that provide competencies in a subject area or industry. Learners can take the courses individually or as a package.

— The voucher system implemented in Croatia in April 2022 aims to increase adult learning with a focus on digital and green skills. The goal is to have 40 000 users

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([114]) https://emc.eadtu.eu/projects/emc-lm-project.
([115]) https://www.kmooc.uni-obuda.hu/.
([116]) https://www.eciu.eu/.
([117]) Amukurs.dk, 'The basic leadership training', Amukurs.dk website, accessed 7 May 2025, https://www.amukurs.dk/kompetencepakker/hakl/den-grundlaeggende-lederuddannelse.
([118]) Danish Agency for IT and Learning, 'AMU course packages', Adulteducation.dk website, accessed 7 May 2025, https://voksenuddannelse.dk/uddannelse/amu-kursuspakker.

by 2026. The skills catalogue ([119]), developed in collaboration with employers, includes 655 green skills and 1 911 digital skills, all linked to the Croatian NQF.

— In Italy, the project 'Micro-credentials: A passport for employment and inclusion' ([120]), funded by the Erasmus+ programme, aims to develop an 'employment passport' – that is, a set of micro-credentials certifying that an individual possesses the basic skills necessary to enter the labour market.

— In Lithuania, VET programmes are modular, allowing students to receive a certificate of completion for one module of a training programme.

— Malta has seen successful collaborations between educational institutions and industry partners to create micro-credentials that address specific skills gaps. These partnerships ensure that the micro-credentials offered are relevant to current job market demands and enhance the career prospects of learners.

In employment systems, some of the good practices shared are as follows.

— The Danish Society of Engineers offers a range of courses and training programmes for STEM professionals to ensure market value and facilitate the development of skills ([121]). These courses and training programmes are specifically tailored to the needs of engineers, science graduates and information technology graduates.

— In Iceland, the MCEU hospitality project ([122]) aims to develop micro-credentials to support the upskilling and reskilling of hospitality workers. The project develops demand-led micro-credential courses for specific green and digital skills needed in the hospitality industry. The courses are designed to provide learners with specific knowledge, skills and competencies that respond to societal, personal, cultural or labour market needs. The micro-credentials align with the European approach to micro-credentials.

— In Lithuania, Maxima, one of the largest retailers, has a school of mastery for chefs, bakers, butchers and confectioners ([123]). The company has established employee training centres to prepare newly employed individuals for their future positions through a two-month training programme. Maxima sets specific standards for the training of its employees. No costs are associated with the training, and employees receive a salary throughout the programme. This initiative has come about due to a lack of candidates with the required skills for these positions. The company has taken on the responsibility for providing potential employees with the skills they lack in specific positions.

— In Malta, the 'training pays' scheme, offering financial assistance to individuals to enable them to engage in further training was implemented from March 2017 until the end of July 2023. During this period, Jobsplus received over 8 000 applications, out of which 6 192 were eligible. Around 79 % of the eligible applications were for

([119]) Croatian Employment Services, 'Catalogue of programmes', Croatian Employment Services website, accessed 7 May 2025, https://vauceri.hzz.hr/en/catalogue-of-programmes/.
([120]) Mediterranean Management Centre, 'Key skills micro-credentials: A passport to employment and inclusion for people entering the labour market and disadvantaged groups', Mediterranean Management Centre website, accessed 7 May 2025, https://mmclearningsolutions.com/eu-projects/moral/.
([121]) Danish Society of Engineers (IDA), 'Courses & training programmes', IDA website, accessed 7 May 2025, https://english.ida.dk/courses-training-programmes.
([122]) MCEU, 'Empowering the hospitality industry to reach new heights', MCEU website, accessed 7 May 2025, https://mceu.dk/about/.
([123]) Maxima, 'Employee training centres are beneficial for both newcomers and employers: less stress, more knowledge and motivation', Maxima website, 8 October 2020, accessed 7 May 2025, https://www.maxima.lt/naujienos/darbuotoju-mokymu-centrai-naudingi-ir-naujokams-ir-darbdaviams-streso-maziau-ziniu-ir-motyvacijos-daugiau.

accredited micro-credentials. Meanwhile, the investing in skills scheme ([124]) offered financial assistance to employers who trained their employees. Out of the 45 097 trainees subsidised under the scheme, 4 310 (9.6 %) were for accredited micro-credentials.

5.6. Recent developments in the uptake of micro-credentials and outlook for the future

Several survey respondents also reported on recent developments in the uptake of micro-credentials in their education and training systems. In higher education, initiatives such as the MicroCreds project in Ireland are working towards developing a coherent national framework for micro-credentials, supported by the HCI ([125]). In Iceland, micro-credentials were incorporated into the legal framework for higher education in spring 2024. Meanwhile, in Latvia the Academic Information Centre ([126]) initiated workshops and studies to integrate micro-credentials into the Latvian qualifications framework.

In VET, micro-credentials are being adopted in Portugal to address emerging labour market needs in the energy, environmental, digital and social transitions, with specific examples including short courses on hydrogen and renewable energy sources. Meanwhile, in Denmark, adult vocational training packages promote lifelong learning and skills progression in VET, while serving as stepping stones towards formal qualifications. In Norway, vocational training councils are exploring modularisation in some trades. However, regulated professions, such as aviation and maritime sectors, are deemed unsuitable for such modularisation due to international regulations. In Latvia, the law on VET was amended in 2022, yet there is an ongoing need for stakeholder dialogue to develop a transparent system for micro-credentials.

Several survey respondents reported their perception of the outlook for the future on the development of micro-credentials in their education and training systems. Examples are provided in Table 11.

([124]) Jobsplus, 'Investing in skills', Jobsplus website, accessed 7 May 2025, https://jobsplus.gov.mt/funding-employer/investing-in-skills.
([125]) https://microcreds.ie/.
([126]) https://aic.lv/en.

Table 11. Future outlook on the development of micro-credentials

Higher education	
Austria	Many institutions have already implemented micro-credentials. The market is growing, and micro-credentials are a priority on the agenda of higher education institutions.
Belgium – Flemish Community	The working group of higher education institutions and the Ministry of Education continue their work on the development of micro-credentials. Further developments await the new government's policy note.
Belgium – French Community	The government of the French Community of Belgium has included micro-credentials in its Community Policy Declaration (*Déclaration de politique communautaire*) in a section on adult education, underlining its commitment to lifelong learning and workforce adaptability. This political backing is expected to accelerate the creation of an official micro-credential framework. The integration of micro-credentials into adult education in the French community benefits from a pre-existing modular system, facilitating their implementation. A working group is developing a structured framework that aligns with existing modular learning approaches in adult education. This political backing is expected to accelerate the creation of an official micro-credential framework.
Croatia	The outlook for the future is promising, with several strategic initiatives to enhance the relevance and accessibility of micro-credentials on the horizon. These include establishing an expert body through the ESF+, including micro-credentials in the NQF, a new act on higher education that connects lifelong learning with the NQF and the expansion of funding for the government's voucher system.
Cyprus	Political intention regarding the implementation, evaluation and accreditation of micro-credentials is promising.
Denmark	Integrating micro-credentials into the NQF works well but must be further promoted along with impact evaluation.
Estonia	The Adult Education Act will be adopted soon, improving the quality of further training and opportunities for people to upgrade their skills.
Finland	Pilot projects started in the autumn of 2024 and are expected to provide valuable information on the outlook for the future, and development.
Hungary	Significant progress has been made on the legislative framework, funding allocation and digital infrastructure. However, challenges remain in areas such as a precise definition, the governance structure, quality assurance and sustainable funding.
Italy	The forthcoming adoption of ministerial guidelines would create a clear reference scenario for universities to enable them to design and deliver innovative learning units.
Latvia	A pilot project launched in September 2024 focuses on micro-credentials. The project will develop a definition and framework, analyse international best practices and make recommendations for legal regulations and quality assurance.
Luxembourg	The evaluation of a related pilot project is in progress, while best practices from other countries are simultaneously being explored.
Malta	Micro-credentials are expected to become more widely integrated into formal education systems. Institutions will probably expand their offerings, incorporating micro-credentials into standard curricula and lifelong learning programmes.
Netherlands	Pilot projects are ongoing on micro-credentials in public formal education (higher education and VET), in private education (non-formal education) and in various branches of industry (non-formal education). The national working group on micro-credentials has decided to use these pilots to obtain information and gain insights that will be used for future decision-making on the development of policies and policy frameworks on micro-credentials.

Norway	A few micro-credentials in higher education have become very popular, potentially indicating expansion of the learning offer.
Portugal	Micro-credentials will be maintained and developed, in accordance with a guidance document that is being produced following approaches developed in the European Higher Education Area.
Slovenia	Micro-credentials are planned to be adopted in higher education by 2026.
VET	
Bulgaria	Systemic decisions regarding responsible institutions, regulations, quality assurance and steps for adopting the Council Recommendation are awaited.
Croatia	The outlook is promising, with developments including NQF expansion, new recognition of prior learning regulations, expansion of the voucher system, increased institutional participation, a focus on digital/green skills, and EU collaboration.
Cyprus	Several key issues require resolution: the distinction between higher education and VET micro-credentials, organisational structure, approval processes, funding mechanisms, criteria for stacking qualifications, duration standards and labour market needs assessment.
Estonia	Adopting the Adult Education Act would improve the quality of training and skills development opportunities.
France	Work is in progress on identifying micro-certifications and stakeholders, analysing implementation processes and exploring integration with the national qualification system.
Germany	Increased uptake and establishment of labour market standards is anticipated.
Hungary	Progress on framework establishment and legislative processes indicates a positive outlook.
Ireland	Plans are in place to expand the micro-qualifications offered in education and training to meet the need for workforce development and critical skills needs.
Luxembourg	Pilot projects (Diplom+, BREVET, Skillsbridges, CISP) continue, with future implementation plans based on outcomes and international cooperation.
Malta	The qualifications framework and the existing history of lifelong learning in Malta are being built on, with a positive growth trajectory detected.
Norway	Initial VET is making progress on curriculum modularisation for select professions, and in higher VET a knowledge base and shorter study programmes are being developed.
Romania	Legislation is being developed to fully implement transferable credits in adult vocational training.
Spain	Implementing a VET modernisation plan through public–private collaboration entails an integrated VET system with stackable micro-credentials, flexible pathways and a focus on accessibility.
Employment systems	
Belgium – Flemish Community	A Flemish Education Council Recommendation calls for the creation of a legal framework for micro-credentials that determines quality criteria while giving education and VET providers freedom to create their own education and training programmes.
Iceland	Most work-related courses are offered in partnership with lifelong learning centres; their approach will set an example.
Malta	Current practices will continue and be consolidated.

NB: CISP, *Centres d'insertion socio-professionnelle*.
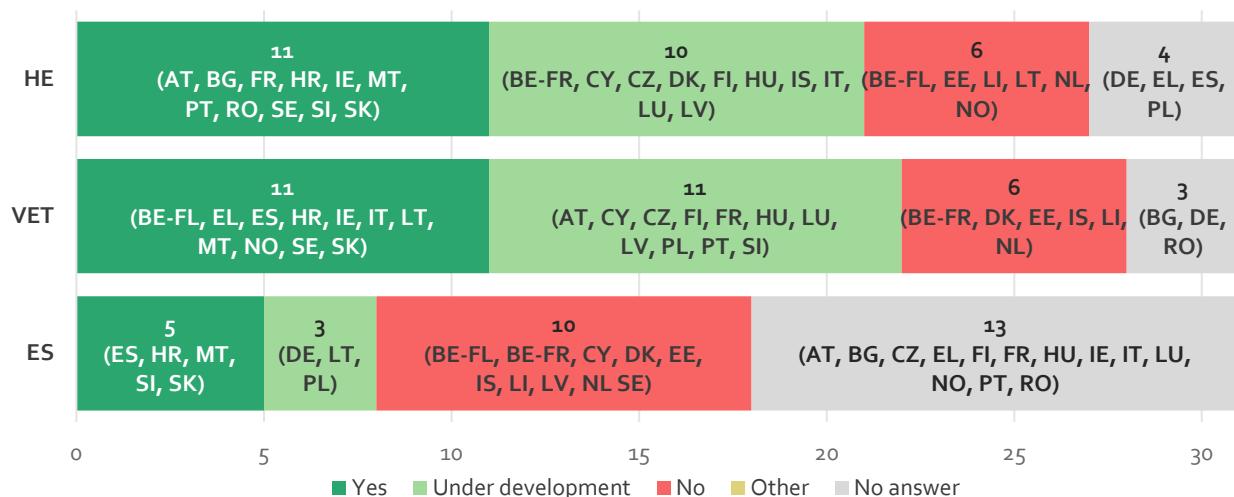
Source: Survey data.

6. Policy embeddedness of micro-credentials

This section explores the various policies and initiatives intended to increase uptake of micro-credentials, the use of EU instruments, coordination mechanisms for collaborative work and the challenges of effectively adopting micro-credentials in education and training systems.

6.1. Implementation of policies on micro-credentials

Most education and training systems surveyed have already developed or are developing policy initiatives to promote the uptake of micro-credentials aligned with the Council Recommendation. **There has been substantial progress on the implementation or development of policy initiatives to promote the uptake of micro-credentials in higher education and VET**, as shown in Figure 26. In both sectors, 35 % of the respondents (11) indicated that policy initiatives were in place, and 32 % (10) and 35 % (11), respectively, reported ongoing development. In employment systems, 16 % (5) have developed policy initiatives, and 10 % (3) are developing them, representing over a quarter of the sample.

Figure 26. Have your education and training systems developed policy initiatives to promote the uptake of micro-credentials?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.
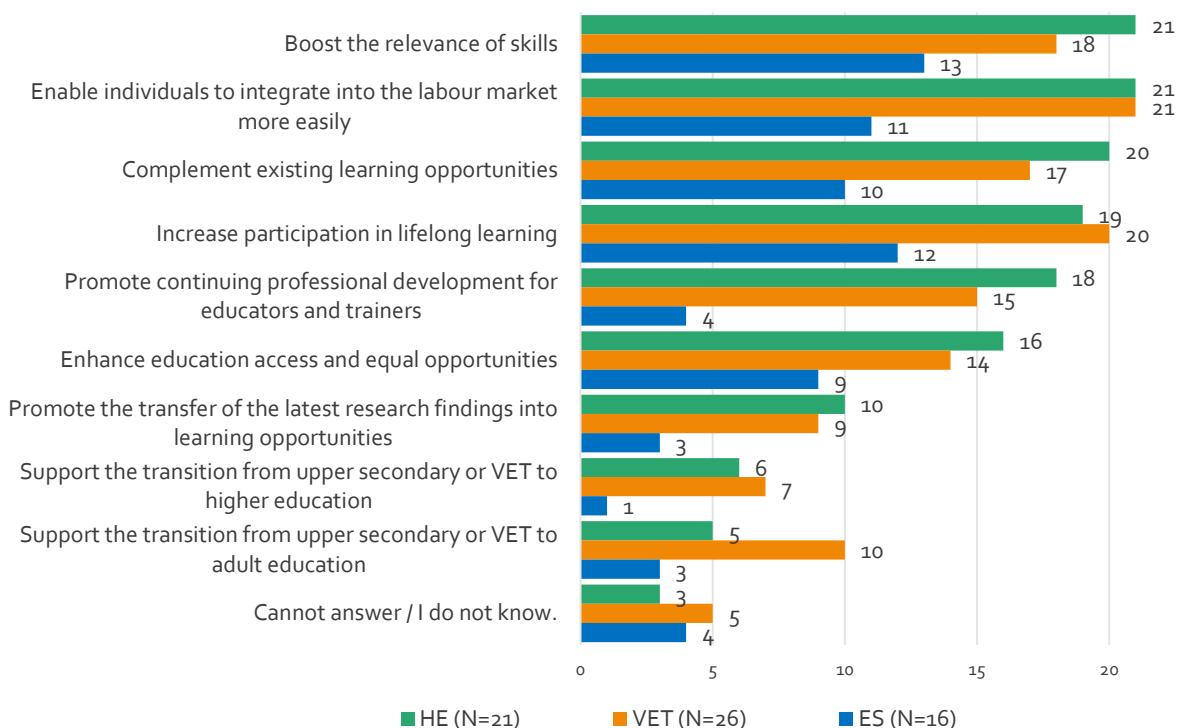
Source: Survey data.

In higher education, examples of policy developments include a nationally funded policy development initiative in France, an ongoing pilot programme in Ireland and an ongoing development programme in Portugal (aimed at increasing uptake in science, technology, engineering, the arts and mathematics and adult education). Croatia, Malta and Romania indicated that they already adopted legislation aimed at promoting micro-credentials. Belgium (French community) and Bulgaria are drafting policy proposals in cooperation with stakeholders. Three out of seven countries claiming there were no policy initiatives provided explanations citing the lack of legal framework (Estonia is in the process of adopting a new adult education act), and a lack of initiatives at the policy level (Lithuania). Norwegian authorities, respecting institutional autonomy, leave the developments to the higher education institutions.

In VET, Greece, Norway and Spain have passed designated legislation promoting micro-credential uptake. The rest of the respondents have policies in place that involve the offering of micro-credentials. Respondents indicate a focus on upskilling and reskilling, the recognition of already-obtained partial qualifications, the promotion of the uptake of partial VET competences for those not in vocational education and the promotion of lifelong learning as the focus of policy initiatives. Member States that indicated that they were developing policy initiatives are at different stages of implementing them. Czechia, Luxembourg and Austria are conducting initial discussions, while France, Hungary, Poland, Portugal and Finland are in the process of introducing policies and legislation or already have policies in place that need to be adapted and oriented towards micro-credentials.

Employment systems indicated that policy initiatives had been developed to promote micro-credential uptake. Slovenia has not formally integrated micro-credentials into its policy frameworks. Still, respondents indicated that smaller learning units are already recognised and regulated by the law on its NQF. Spain and Malta both have extensive policy initiatives and have approved legislation on micro-credentials, integrating their formalised VET systems and training provided by employers. In the Croatian context, the developments are similarly combined with the VET system, with multiple education strategies having extensive provisions on micro-credentials and policy being geared towards satisfying the needs of the labour market. Representatives of all three systems indicated that their initiatives were already in place, with results to be seen in the future. Among the systems where policy initiatives are still under development, Germany, Lithuania and Poland are all in the discussion stage.

Most countries see boosting skills relevance, increasing participation in lifelong learning and helping individuals integrate into the labour market as the most important policy purposes of using micro-credentials. **Error! Reference source not found.** shows that four policy purposes have a response rate of above 60 %, all related to the educational outcomes of individuals and their position in the labour market. Higher education and VET respondents also frequently mentioned continuing professional development for educators and trainers. It is not seen as relevant in employment systems, where no other purposes had higher than a 25 % response rate. The fewest respondents indicated support for transitioning between different levels of education and transferring research findings into learning opportunities as relevant policy purposes.

Figure 27. For which policy purposes are micro-credentials used in your education and training systems?
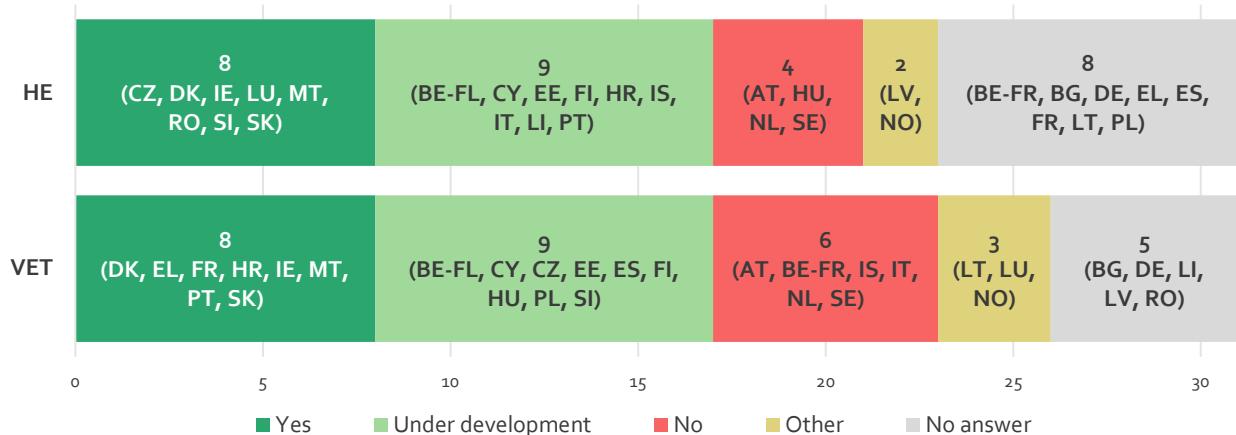

Boost the relevance of skills: HE 21, VET 18, ES 13

Enable individuals to integrate into the labour market more easily: HE 21, VET 21, ES 11

Complement existing learning opportunities: HE 20, VET 17, ES 10

Increase participation in lifelong learning: HE 19, VET 20, ES 12

Promote continuing professional development for educators and trainers: HE 18, VET 15, ES 4

Enhance education access and equal opportunities: HE 16, VET 14, ES 9

Promote the transfer of the latest research findings into learning opportunities: HE 10, VET 9, ES 3

Support the transition from upper secondary or VET to higher education: HE 6, VET 7, ES 1

Support the transition from upper secondary or VET to adult education: HE 5, VET 10, ES 3

Cannot answer / I do not know.: HE 3, VET 5, ES 4

HE (N=21)   VET (N=26)   ES (N=16)

Source: Survey data.

6.2. Measures for implementing the European approach to micro-credentials

Survey data show comparable levels of progress in higher education and in VET on setting out measures to adopt the European approach to micro-credentials, as shown in Figure 28. 26 % of education and training systems (8) in both fields stated that they have set out such measures and 29 % (9) indicated development. The findings highlight that a substantial number of systems in both fields are addressing the European approach to micro-credentials.

Figure 28. Have your education and training systems defined measures to implement the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability?

	Yes	Under development	No	Other	No answer
HE	8 (CZ, DK, IE, LU, MT, RO, SI, SK)	9 (BE-FL, CY, EE, FI, HR, IS, IT, LI, PT)	4 (AT, HU, NL, SE)	2 (LV, NO)	8 (BE-FR, BG, DE, EL, ES, FR, LT, PL)
VET	8 (DK, EL, FR, HR, IE, MT, PT, SK)	9 (BE-FL, CY, CZ, EE, ES, FI, HU, PL, SI)	6 (AT, BE-FR, IS, IT, NL, SE)	3 (LT, LU, NO)	5 (BG, DE, LI, LV, RO)

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.

Source: Survey data.

Survey respondents indicated significant variation in adopted approaches. Some systems have integrated micro-credentials into existing legislation. For example, Romania's higher education system reports incorporating the recommendation's definitions and Annex I into the Law for Higher Education (Law No 199/2023), while Croatia's VET system cites its 2021 Law on Adult Education as recognising micro-credentials. Other systems are developing new frameworks. For example, Latvia launched a pilot project in September 2024 focusing on definition development and quality assurance. Notably, some systems, like Swedish VET, stated that no additional measures are needed, as their formal education is already modularised. Denmark also noted that their system predated the recommendation, with adult vocational training programmes referred to in their NQF since 2009.

The responses also show distinct sectoral approaches to adopting the European approach to micro-credentials. In higher education, several systems are using project-based approaches. These include Slovenia, which is implementing micro-credentials through its project 'Reforming higher education for a green and resilient transition to society 5.0' ([127]), and Ireland, which mentions implementation through the MicroCreds project ([128]). In VET, there is more emphasis on systemic integration. For example, Portugal reports that the European approach to micro-credentials reinforced principles of the existing NQF, and Greece references Law No 5082/2024, enabling digital certificates and micro-credentials through its Single Digital Portal ([129]).

Education and training systems demonstrate varying stages of introducing measures to implement the Council Recommendation. Cedefop previously classified European countries into three categories (countries introducing measures, at the initial stage of implementing measures or where advanced policy discussions are ongoing) ([130]). This study identified

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([127]) Slovenia: Ministry of Higher Education, Science and Innovation, 'Systemic support for the greening of higher education', GOV.SI website, 19 February 2024, accessed 7 May 2025, https://www.gov.si/en/registries/projects/e-vodnik-za-ozelenitev-visokega-solstva/dodaj-stran-231201161825/.
([128]) https://hea.ie/skills-engagement/microcreds/.
([129]) Greece: Ministry of Digital Governance, 'Single Digital Portal gov.gr', Government of the Hellenic Republic website, accessed 7 May 2025, https://digitalstrategy.gov.gr/en/digital_services_portal.
([130]) Cedefop, *Microcredentials for Labour Market Education and Training – Microcredentials and evolving qualifications systems*, Cedefop Research Paper No 89, Publications Office, Luxembourg, 2023, http://data.europa.eu/doi/10.2801/566352.
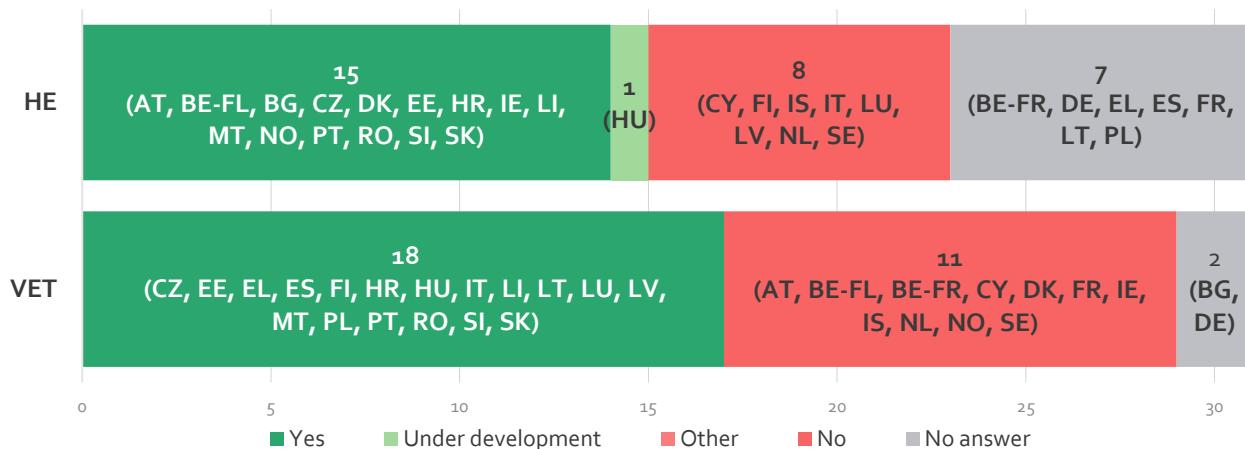
similar dynamics. Some education and training systems, such as Cyprus, are in the early stages of adopting measures, reporting that no official policies have been developed yet. At the same time, the Flemish Community of Belgium notes that it is taking exploratory steps. Others have more advanced frameworks. Malta's higher education system has taken specific measures, including integration into the NQF and developing quality assurance guidelines through the National Commission for Further and Higher Education. Several systems, including Hungary and the Netherlands, stated that they were working on implementation or that frameworks were being developed, indicating an active but incomplete implementation process.

6.3. Use of EU instruments

The European approach to micro-credentials encourages Member States to leverage EU funds and instruments to support the necessary micro-credential reforms. This financial support is intended to facilitate the development of an enabling framework for micro-credentials and to support their development and use ([131]). It suggests that using EU funds can help Member States effectively implement the recommendation's objectives.

Figure 29 provides an overview of the education and training systems using EU funds and instruments to support micro-credential uptake. 48 % of higher education systems (15) and 58 % of VET systems (18) indicated that they were using EU funds and instruments to support the necessary reforms, ranging from providing the enabling framework to the development and use of micro-credentials. This indicates significant uptake.

Figure 29. Have your education and training systems used EU funds and instruments to support the necessary reforms, from the enabling framework to the development and use of micro-credentials?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.
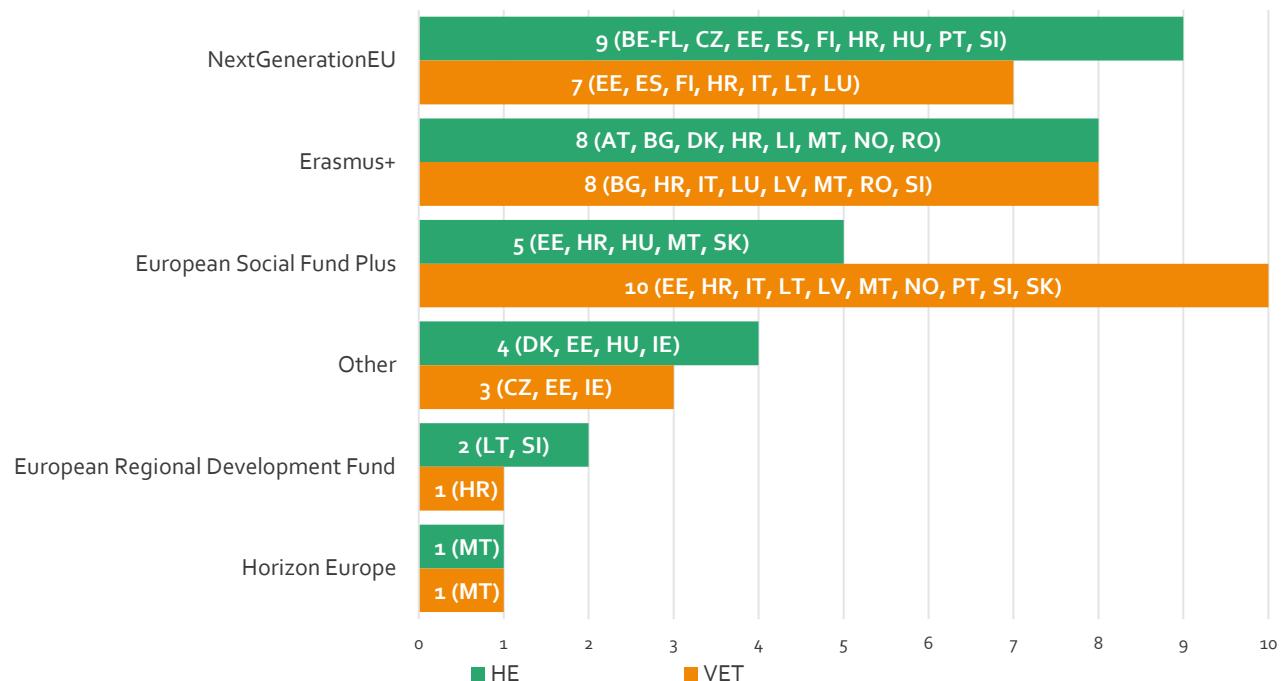
Source: Survey data.

In VET, strategic projects were funded in Spain and Malta, and policy reforms were financed in Croatia and Lithuania. Finland has utilised EU funds to build and operate the Service Centre for Continuous Learning and Employment, which is responsible for developing, assessing and financing new VET programmes. Greece, Portugal and Slovenia employed EU funds to integrate micro-credentials into their existing VET structures and NQFs. Ireland

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([131]) OJ C 243, 27.6.2022, p. 10, Article 15(b).

used EU funding to integrate provisions suggested by the Council Recommendation into their NQF.

Figure 30 presents the specific EU funds used by education and training systems. In higher education, there is variation in which EU funds are employed and how they are employed in each context. Austria, Norway and Romania indicated that only some of their higher education institutions and participants in European Universities alliances applied for funding to develop micro-credentials. Ireland and Lichtenstein had their micro-credentials pilot projects financed by EU funds. Croatia has employed a voucher system since 2022, financed by RRF and ESF+ sources. Lithuania indicated that its pilot project would utilise EU funds starting in late 2024. Czechia is also using RRF funding. As Hungary is in the preliminary stage of developing micro-credentials and the RRF funds are frozen, they are only using the Technical Support Instrument, categorised as 'other' in Figure 1.

Figure 30. Which EU funds have your education and training systems used to support the necessary reforms, from the enabling framework to the development and use of micro-credentials?

NB: *n* = 31 per field (higher education (HE) or VET); *N* = 62.
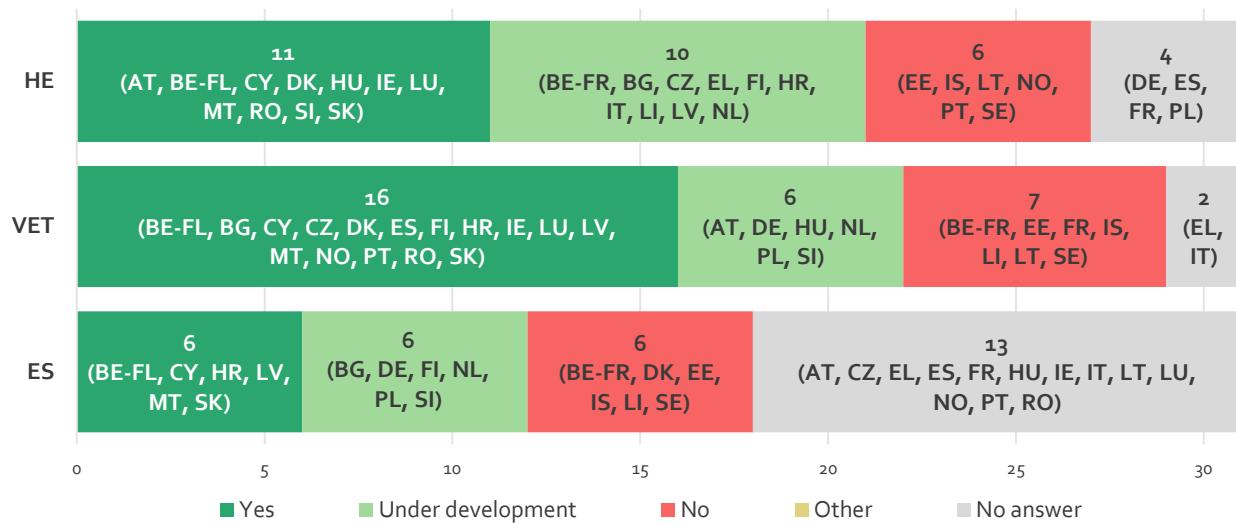
Source: Survey data.

6.4. Coordination mechanisms

The European approach to micro-credentials stresses a collaborative approach among various stakeholders to developing and implementing effective policies. This collaborative effort involves regional and national authorities, education and training organisations, and social dialogue partners representing both employers and workers. Social dialogue should help identify the need for, co-develop and update micro-credentials, as well as assess their impact on skills development and lifelong learning [132].

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[132] OJ C 243, 27.6.2022, p. 10, Articles 10 and 13.

The survey results show that coordination or policy mechanisms to promote the collaborative work of stakeholders in policy development for micro-credentials are in place or being developed in around two thirds of higher education and VET systems, as indicated in Figure 31. The mechanisms are less common in employment systems, in which only about one third of respondents indicate their existence or ongoing developments.

Figure 31. Are there coordination/policy mechanisms to promote the collaborative work of diverse stakeholders for developing policies for micro-credentials?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Out of all respondents with collaborative mechanisms in place, only the Croatian VET and the Maltese employment system include civil-society organisations in policy development. the Flemish Community of Belgium and Norway are the only respondents to mention social partners. The rest of the respondents in all systems work with education and training institutions; research and innovation organisations; employers and industry; local, regional and national authorities; and governmental services.

In the field of higher education, multiple respondents (the Flemish Community of Belgium, Lithuania, Hungary, Malta and Austria) provided a positive response, indicating that their mechanism for coordination includes higher education institutions. Other respondents noted that multiple government bodies coordinate their efforts, while private sector stakeholders are also involved in Ireland and Malta. All collaborative mechanisms in place in VET systems involve employers and industry in the development of policies for micro-credentials through various deliberative methods. Most respondents mentioned collaboration between government bodies, and Lithuania also includes labour organisations.

The countries or regions responding with 'other' across sectors indicated the partial development of coordination mechanisms or that mechanisms were already in place but not applied to micro-credentials specifically. They focus on partial qualifications, which are similar to micro-credentials. As for the concrete mechanisms employed, respondents mentioned the coordinating institution having workshops and consultations with any relevant stakeholders. Support groups, working groups and advisory groups are employed in most cases across the systems.

6.5. Challenges to the uptake of micro-credentials

Survey respondents identified several challenges limiting the development of an ecosystem for micro-credentials. Table 12 demonstrates that while some similarities in the occurrence of challenges can be found, especially between the higher education and VET systems, each area has unique 'pain points'. Higher education and VET systems experience more challenges than employment systems, with promoting the understanding of micro-credentials by the sector being the most prevalent.

Table 12. What are the main challenges to the development of an ecosystem for micro-credentials in your education and training systems?

Main challenges to the development of an ecosystem for micro-credentials	Higher education (*n* = 20)	VET (*n* = 18)	Employment systems (*n* = 11)
Dedicating funding for its development and implementation	**12** (BE-FL, BG, CY, CZ, FI, FR, HR, HU, IE, IS, LT, MT)	**8** (BG, EL, FI, HU, IE, LT, MT, SK)	**3** (BE-FL, LT, MT)
Developing consistent quality assurance and accreditation mechanisms	**8** (CY, EL, HU, IS, IT, LT, LU, MT)	**12** (BG, CY, EL, FR, HR, HU, LT, LU, MT, RO, SI, SK)	**6** (BE-FL, HR, LT, LU, MT, SI)
Developing mechanisms for the recognition of prior, non-formal and informal learning	**7** (CY, IE, IS, IT, LT, LU, MT)	**10** (CY, EL, FR, HR, IE, LU, MT, RO, SI, SK)	**4** (BE-FL, HR, NO, SI)
Developing mechanisms for automatic recognition	**12** (CZ, EL, FR, HR, IE, IS, IT, LT, LU, MT, PT, SK)	**9** (BG, CY, HR, IT, LU, LV, MT, PT, SK)	**3** (BE-FL, HR, MT)
Promoting understanding of micro-credentials by the sector	**13** (BE-FL, CZ, DK, FI, HU, IE, IS, IT, LT, MT, PT, RO, SK)	**13** (CY, EL, FR, IE, IT, LT, LU, LV, MT, PT, RO, SI, SK)	**4** (BE-FL, LT, NO, SI)
Promoting collaboration between micro-credential providers and professional bodies or the labour market	**11** (AT, BE-FL, BG, CZ, IE, IS, IT, LT, MT, PT, SK)	**11** (CY, EL, FR, IE, IT, LT, LU, MT, PT, SI, SK)	**4** (CY, DE, LT, SI)
Aligning micro-credentials with labour market needs	**11** (AT, BG, CY, CZ, FI, HU, IE, IT, LT, MT, PT)	**11** (CY, EL, FI, FR, HU, IT, MT, PT, RO, SI, SK)	**6** (CY, HR, LT, MT, NO, SI)
Developing technological tools for issuing and accessing micro-credentials	**9** (CY, CZ, HR, IE, IS, LT, MT, RO, SK)	**5** (HR, LU, MT, SI, SK)	**3** (BE-FL, DE, SI)
Cannot answer / I do not know	**1** (DE)	**2** (DE, FR)	**1** (ES)

NB: Colour coding is based on occurrence relative to sample size of each system.

Source: Survey data.

Twelve and thirteen respondents respectively identified the two most common problems in higher education systems as the lack of dedicated funding and the lack of promotion of the understanding of micro-credentials by the sector. These issues are correlated because funding is required for the preliminary work, since this phase is resource intensive. With 11 responses each for higher education and VET, micro-credentials are challenging to align with labour market needs. One of the important elements of the European approach to micro-credentials, automatic recognition, is challenging to implement. Another common challenge is promoting collaboration between micro-credential providers and professional bodies or the labour market, highlighting the need for enhancing social dialogue. Eight higher education systems consider it challenging to set up quality assurance and accreditation mechanisms, while nine find it difficult to develop technological tools for issuing and accessing micro-credentials.

Several respondents noted further challenges to their progress. Estonia is about to ratify its new education and training legislation, including micro-credentials, so no legal framework is currently available. Ireland and Greece pointed to the need to make micro-credentials stackable and portable, with Ireland also citing a need for new information technology systems in higher education institutions. Liechtenstein needs international cooperation on account of its size, and Latvia expressed a need for transparency, awareness and financial incentives to overcome its challenges.

The VET systems face challenges in promoting the understanding of micro-credentials, as indicated by 13 respondents. Promoting collaboration between micro-credential providers and professional bodies or the labour market and the alignment of micro-credentials with labour market needs were each indicated as challenges by 11 respondents. Issues with developing consistent quality assurance and accreditation mechanisms are more common than in higher education systems. Some concrete examples include the well-developed Finnish VET system facing issues integrating micro-credentials into its existing modular training system because the funding structure is not flexible enough for their recognition. Lichtenstein expressed its need for international cooperation. Poland does not yet have a policy framework for integrating micro-credentials. Norway is making progress on integrating micro-credentials into its existing modularised VET systems. Sweden already has a modularised VET system in which the courses correspond to the definition of micro-credentials in the Council Recommendation.

In employment systems, only quality assurance and alignment with labour market needs were indicated as challenges by more than 50 % of respondents. The recognition of prior education, promotion of understanding of micro-credentials and collaboration between professional bodies and the labour market have four responses each, significantly fewer than in higher education and VET.

The implementation of micro-credentials brings a different set of challenges. Table 13 indicates these barriers, highlighting challenges in integrating micro-credentials into existing national education systems. The most prevalent challenges across systems, despite the different sample sizes, appear to be the lack of strategic policies promoting micro-credentials, the lack of legislation regulating micro-credentials (including a definition), and gathering sufficient data on outcomes and impacts of micro-credentials. The lack of reliable information is considered to slow the implementation of the European approach to micro-credentials in systems in which partial qualifications are not yet integrated.

Table 13. What are the main barriers/challenges to the implementation of micro-credentials in your education and training systems?

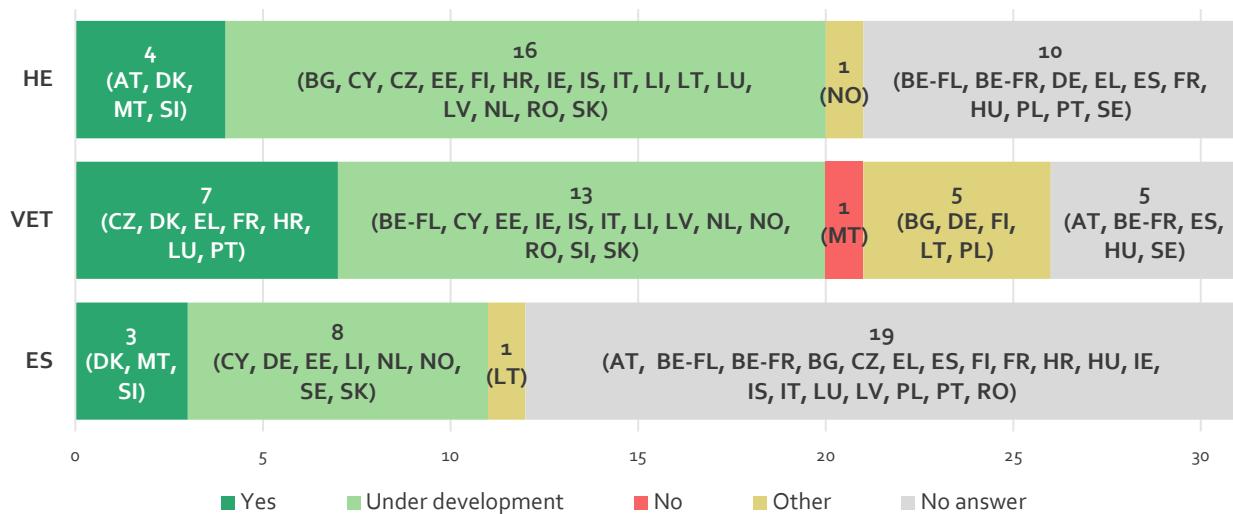| Main challenges to the implementation of micro-credentials	Higher education (*n* = 22)	VET (*n* = 23)	Employment systems (*n* = 13)
Lack of a generally accepted definition	9 (BE-FR, BG, EL, IT, LT, LU, LV, RO, SI)	10 (BE-FL, BG, DE, EL, FR, IS, LU, PL, RO, SI)	5 (BE-FL, BG, DE, NO, PL)
Lack of general elements and principles for the design and issuance of micro-credentials	6 (BE-FR, BG, EL, LT, LU, LV)	6 (BE-FL, DE, EL, FR, LU, PL)	5 (BE-FL, BG, DE, NO, PL)
Lack of strategic policies promoting micro-credentials	12 (BE-FL, CY, CZ, EL, FR, IE, IT, LT, LU, MT, RO, SI)	11 (BE-FL, BE-FR, CY, EL, IE, IS, LT, LU, MT, RO, SI)	4 (BE-FL, BG, LT, SE)
Lack of legislation regulating micro-credentials	12 (BE-FL, BE-FR, BG, CY, CZ, EL, FR, IT, LT, LU, LV, SI)	9 (BE-FL, BE-FR, BG, CY, EL, IS, LU, PL, SI)	4 (BG, LT, NO, PL)
Establishing the purpose of micro-credentials in national education and training systems	9 (AT, BE-FR, CY, CZ, FI, FR, HR, HU, SI)	9 (BE-FL, BG, DE, EL, FR, IS, LT, SI, SK)	2 (BG, LT)
Lack of stakeholders' engagement in the design of policies and decision-making processes	2 (CZ, RO)	3 (EL, IT, RO)	1 (NO)
Aligning the different views of various stakeholders	14 (AT, BE-FL, BE-FR, FI, HR, HU, IE, IS, IT, LT, PT, RO, SI, SK)	13 (BE-FL, BE-FR, DE, EL, IE, IS, IT, LU, LV, PT, RO, SI, SK)	1 (DE)
Integrating micro-credentials in national qualification frameworks	9 (BE-FR, CY, EL, FR, IT, LT, LU, PT, SI)	8 (BE-FL, CY, EL, FI, FR, IS, LU, SI)	3 (HR, NO, PL)
Gathering sufficient data on outcomes and impacts of micro-credentials	12 (FI, HR, IE, IS, IT, LT, LU, MT, PT, RO, SI, SK)	10 (CY, HR, IE, IT, LU, MT, PT, RO, SI, SK)	5 (DE, HR, MT, PL, SE)
Lack of guiding and supporting documents	5 (CZ, DK, HU, LT, RO)	4 (BG, EL, LV, RO)	2 (CY, HR)
Lack of international (cross-border) collaboration on micro-credentials	5 (CZ, LT, LU, MT, RO)	4 (CY, EL, HR, MT)	4 (BG, LT, MT, SE)
Aligning the existing ecosystem of micro-credentials with the Council Recommendation	3 (RO, SI, SK)	3 (BG, EL, SI)	1 (ES)
Cannot answer / I do not know	1 (NO)	2 (HU, NO)	2 (DK, IS)

NB: Colour coding is based on occurrence relative to the sample size of each system.

Source: Survey data.

Twelve respondents from higher education highlighted the absence of clear government or institutional frameworks to support and promote micro-credentials. This aligns closely with responses regarding the lack of policy initiatives to drive the adoption of micro-credentials. The findings suggest that targeted government-led policy initiatives are needed in the field of higher education to advance micro-credentials, even in systems in which legislative frameworks are either in place or in the final stages of development, such as Ireland, Croatia, Malta and Romania. Furthermore, 12 respondents pointed to the absence of legislation specifically regulating micro-credentials, resonating with the previous findings and problematising the lack of legal definition. A similar conclusion can be drawn from the fact that 14 respondents indicated a need for aligning the different views of various stakeholders, which should be the responsibility of national governments.

Survey results show that the plans to address the challenges and barriers are still being drawn up across all systems, as depicted in Figure 32. This aligns with the overall trend of micro-credential measures and policies still being tested and piloted in many education and training systems.

Figure 32. Are any plans/strategies in place to overcome the barriers/challenges?

NB: *n* = 31 per field (higher education (HE), VET or employment systems); *N* = 93.

Source: Survey data.

Among higher education systems, some of the plans include the following.

— In Denmark, a survey on the impact of the micro-credentials system across all educational institutions is planned.

— Malta is actively addressing barriers and challenges through various means, such as quality assurance measures, awareness campaigns, financial support, stakeholder collaboration, digital tools, alignment with labour market needs and policy development.

— Austria plans to organise a stakeholder event involving all Austrian higher education institutions.

— Slovenia has established an informal interdepartmental working group to address challenges to the implementation of micro-credentials.

Education and training systems are still developing their plans, ranging from expectations of possible future developments to having legislative drafts close to being ratified, which would lead to the policymaking process. Norway and Sweden do not envisage the need for any specific measures, with Norway referring to its commitment to respecting the autonomy of higher education institutions in the development of micro-credentials.

Responses from the VET systems show a higher proportion of respondents having made a start on their plans to address the challenges.

— Decision-makers in Czechia plan on implementing legislation on micro-credentials to initiate further ecosystem development and uptake processes.

— Denmark has a robust system aimed at upskilling and reskilling workers in line with labour market needs. It will conduct a survey to assess the challenges and needs of micro-credentials specifically.

— The Greek National Organisation for Certification of Qualifications & Vocational Guidance submitted an integrated funding proposal to the European Education and Culture Executive Agency, which was approved. The proposal focuses on the validation and recognition of continuing vocational education.

— A multi-institution body was set up in France to discuss the matter of micro-credentials, including France Stratégie, in conjunction with France Compétences and the Ministry of Labour.

— Croatia's national development strategy and national plan for the development of the education system address education and will incorporate micro-credentials as they progress.

— In Portugal, a process is under way to revise the National Catalogue of Qualifications to accommodate micro-credentials.

Statuses from respondents choosing 'other' and 'under development' range from 'working on a vision for micro-credentials' and already ongoing discussions between stakeholders to having legislative drafts close to being ratified. Lithuania has integrated micro-credentials (under a different name) into its training system but has limited funding to implement them and there is some regulatory ambiguity in their possible roles.

Among employment systems, Denmark indicated that it already has a robust system aimed at upskilling and reskilling workers in line with labour market needs, and that micro-credentials are being integrated through the Danish Agency for Labour Market and Recruitment. In Malta, the same measures are taken as described by the higher education system. Still, it indicates that training providers' preferences and decisions influence the process, which is yet to be addressed. Slovenia has an informal interdepartmental working group that is looking into the possibilities of updating and improving its supplementary qualifications system, which the national contact point, the SQF-EQF Expert Panel, governs. Further responses mirror those found in the higher education and VET systems described above.

7. Conclusions and recommendations

7.1. Conclusions

Despite its recent introduction, substantial progress has been made on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. Higher education, VET and employment systems are developing provisions essential for the uptake of micro-credentials.

To offer a structured overview of how the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability is being implemented across higher education, VET and employment systems, a set of **three tables with aggregate indicators** was developed. These tables summarise the survey responses using four aggregate indicators: regulations and guidance, quality assurance and recognition, resources and labour market uptake, and information systems. These aggregate indicators are composed of specific key indicators derived from questions within the survey used in this study, which are described in Annex III and discussed throughout this report. A scoring mechanism was applied to each indicator. The final scores, obtained by adding up all indicators, were classified into five categories, as shown in Table 14.

Table 14. Levels of adoption of the Council Recommendation

	Advanced. Most of the recommended policies and mechanisms regarding micro-credentials have been implemented by the system (75 % to 100 % of the total possible score).
	Developing. Some provisions are in place, and there is ongoing progress on implementing the Council Recommendation (50 % to 74 % of the total possible score).
	Initial. Work on implementing the Council Recommendation has started but is still in the early stages, including developing pilot projects and evaluating existing provisions that may require further enhancement (25 % to 49 % of the total possible score).
	Low adoption. No or minimal progress has been made on implementing the Council Recommendation (1 % to 24 % of the total possible score).
	No progress. The system has not taken any steps to implement the Council Recommendation on micro-credentials (0 % score).
	No data. No information was provided by the respondent.

NB: These colour codes provide a reference for reading Tables 15, 16 and 17.

The overview of the implementation of the Council Recommendation in **higher education** is displayed in Table 15 and reveals a **mixed landscape**. Developments regarding regulations and guidance are the most advanced, indicating that many systems have established or are actively developing policy frameworks and/or legislation for micro-credentials. Quality assurance and recognition mechanisms also show significant progress, despite remaining a challenge; many systems are still in the developing or initial stage of implementation, especially in areas related to external quality assurance and recognition mechanisms for micro-credentials. The implementation of resources dedicated to micro-credentials, labour market uptake and information systems is progressing but remains inconsistent, with most systems in the initial and low adoption stages.

Table 15. Overview of the implementation of the Council Recommendation by aggregate indicators: higher education systems

Respondent	Regulations and guidance	Quality assurance and recognition	Resources and labour market uptake	Information systems
AT	dark green	light blue	light blue	orange
BE-FL	dark green	light green	orange	light green
BE-FR	light green	light green	red	light blue
BG	light blue	orange	red	orange
CY	light green	orange	light blue	orange
CZ	dark green	light green	light blue	light green
DE	orange	red	grey	light blue
DK	orange	light green	light blue	red
EE	light green	light green	orange	light blue
EL	light green	light blue	grey	light green
ES	dark green	light green	light blue	light green
FI	dark green	light blue	orange	light green
FR	light green	red	orange	orange
HR	light green	dark green	dark green	dark green
HU	dark green	light green	light green	light green
IE	dark green	dark green	light green	dark green
IS	dark green	light blue	grey	red
IT	dark green	light blue	light green	light green
LI	light blue	orange	red	orange
LT	light blue	orange	orange	light green
LU	dark green	light blue	light green	light green
LV	light green	light green	light green	light blue
MT	dark green	light green	light green	dark green
NL	light blue	light green	orange	red
NO	dark green	light blue	orange	light green
PL	light green	orange	orange	orange
PT	dark green	light blue	light blue	light blue
RO	dark green	dark green	light blue	dark green
SE	dark green	light green	dark green	dark green
SI	dark green	dark green	light blue	dark green
SK	dark green	dark green	dark green	light green

NB: Annex III provides a detailed breakdown of the components of the aggregate indicators in this table.

Source: Survey data (*N* = 31).

In the field of **VET**, as displayed in Table 16, progress on the implementation of the Council Recommendation is also notable in regulations and guidance, with many systems achieving an advanced or developing level. This suggests that **micro-credentials are being incorporated into policy frameworks**. Information systems also have a higher level of

uptake than in higher education. Many systems have incorporated micro-credentials in their VET information systems. Most of the systems are currently in the developing stage of resources and labour market uptake. Quality assurance and recognition remain the most significant challenge, with most systems at the initial or low adoption stage. In comparison, higher education demonstrates a higher level of adoption of quality assurance provisions for micro-credentials.

Table 16. Overview of the implementation of the Council Recommendation by aggregate indicators: VET systems

Respondent	Regulations and guidance	Quality assurance and recognition	Resources and labour market uptake	Information systems
AT				
BE-FL				
BE-FR				
BG				
CY				
CZ				
DE				
DK				
EE				
EL				
ES				
FI				
FR				
HR				
HU				
IE				
IS				
IT				
LI				
LT				
LU				
LV				
MT				
NL				
NO				
PL				
PT				
RO				
SE				
SI				
SK				

NB: Annex III provides a detailed breakdown of the components of the aggregate indicators in this table.

Source: Survey data (*N* = 31).

In **employment systems**, there is a **significant lack of data across all aggregate indicators**, as shown in Table 17. Many employment systems are developing regulations and guidance at the initial or low adoption stage, which may limit the official integration of micro-credentials into the labour market. About one third of employment systems are in the developing or advanced stages of implementing quality assurance and recognition mechanisms, while most employment systems lack data on quality assurance and recognition within this field. One third of employment systems are in the developing or advanced stages of ensuring the availability of resources and labour market uptake, another third exhibit initial or low levels of action and about one fourth lack data. Progress on information systems within employment systems is stronger, but work is still ongoing, with around one third of the employment systems lacking information or showing no developments.

Table 17. Overview of the implementation of the Council Recommendation by aggregate indicators: employment systems

Respondent	Regulations and guidance	Quality assurance and recognition	Resources and labour market uptake	Information systems
AT	grey	grey	grey	grey
BE-FL	light green	dark green	light green	dark green
BE-FR	orange	red	red	red
BG	orange	grey	orange	orange
CY	light green	light green	light green	blue
CZ	orange	grey	grey	grey
DE	light green	dark green	dark green	dark green
DK	blue	blue	dark green	dark green
EE	light green	dark green	orange	blue
EL	orange	grey	orange	grey
ES	blue	grey	blue	grey
FI	blue	dark green	light green	blue
FR	orange	grey	blue	grey
HR	blue	dark green	dark green	light green
HU	grey	grey	grey	grey
IE	light green	grey	grey	light green
IS	orange	grey	red	light green
IT	grey	grey	grey	grey
LI	orange	grey	red	red
LT	light green	dark green	dark green	light green
LU	orange	grey	orange	orange
LV	light green	dark green	light green	dark green
MT	dark green	dark green	dark green	dark green
NL	blue	blue	orange	red
NO	orange	blue	orange	light green
PL	blue	grey	blue	blue
PT	orange	grey	grey	light green
RO	grey	grey	grey	grey
SE	light green	blue	orange	dark green
SI	light green	dark green	light green	dark green
SK	dark green	grey	light green	light green

NB: Annex III provides a detailed breakdown of the components of the aggregate indicators in this table.

Source: Survey data (*N* = 31).

Key findings for each of the three sectors

This section illustrates the key findings for each of the three sectors: higher education, VET and employment systems.

Small-volume learning activities usually have well-established coordinating systems in the field of VET. This is the case in Belgium (Flemish and French communities), Denmark, Ireland, Spain, Luxembourg, Malta, Portugal, Finland and Sweden, where modular or partial qualifications approaches to VET already formally exist. These systems traditionally coordinate small-volume learning activities in close partnership with various societal stakeholders and businesses, have established methods for recognising prior learning, stacking small-volume learning activities and promoting these activities within their formal information systems. **However, most VET systems show a lower level of uptake of micro-credentials in topics related to quality assurance and recognition mechanisms.**

Higher education institutions typically have more autonomy in implementing micro-credentials but face **challenges in adapting the learning offer and creating incentives** to boost uptake. This **fragmentation** across fields of education and training complicates the alignment of micro-credentials at the national level, hindering interoperability, seamless data exchange, recognition and portability.

In employment systems, there is a significant gap in data. Respondents provided limited responses because some elements of the questionnaire used in this study may not be under their responsibilities (e.g. implementation of an official definition, quality assurance measures and recognition mechanisms). Employment systems typically rely on developments within higher education and VET. The employment systems' perspective is crucial in facilitating cross-sectoral dialogue, utilising micro-credentials in a range of learning settings, harnessing their potential to improve access to education and training, and supporting digital and green initiatives alongside other policy initiatives.

Key findings based on the chapters of the report

The subsequent section will present the key results grouped according to the chapters covered by the report. It will attempt to synthesise the results from across different sectors to provide some overarching observations, on both key achievements in the development of micro-credentials and areas for further improvement.

Survey respondents indicated significant variation in **approaches adopted to implement the Council Recommendation**. Some systems have integrated micro-credentials into existing legislation, while others are developing new frameworks. There are also distinct sectoral approaches, with more project-based approaches in higher education, compared with more system integration in VET.

The **potential of micro-credentials to enable lifelong learning and employability** is recognised across higher education, VET and employment systems, with many developing micro-credentials to support upskilling and reskilling and complement traditional qualifications, thus acting as a bridge between degree programmes and training courses offered by employers or other institutions. Measures are in place to encourage sectoral and cross-industry social dialogue regarding the development of micro-credentials. Some systems have integrated micro-credentials into existing legislation, while others are developing new frameworks. Education and trainings systems are also using EU and national funding to promote different initiatives and policies to promote the uptake micro-credentials.

The **most prevalent challenges across systems in implementing micro-credentials**, despite the different sample sizes, appear to be the **lack of strategic policies** promoting micro-credentials, the **lack of legislation** placing micro-credentials in the education system (including a definition), and an issue with **gathering sufficient data** on outcomes and impacts of micro-credentials. This lack of reliable information is considered to slow down the implementation of the Council Recommendation in systems where partial qualifications have not yet been integrated.

The **alignment of micro-credentials with labour market needs** was identified as **challenge** by higher education, VET and employment systems. Higher education and VET systems are facing problems related to the **lack of promotion** of the understanding of micro-credentials, while VET and employment systems identified **quality assurance** as an issue. There are also challenges specific to particular sectors as to the development of the micro-credentials' ecosystem. For instance, **for the higher education sector**, the lack of **dedicated funding** and the development of mechanisms for **automatic recognition** are among the main challenges. For **VET systems**, more than 50 % of respondents indicated as challenges **collaboration between micro-credential providers and professional bodies or the labour market**.

Delving more deeply into the specific chapters of the report, the **adoption of an official national-level definition** of micro-credentials aligned with the Council Recommendation is perceived by survey respondents **as a starting point for further micro-credential developments**, as it facilitates the alignment of existing provisions or the creation of new ones in accordance with the Council Recommendation. In some cases, the official national-level definition is initially applied within one specific field, such as higher education, and further efforts are required to ensure its consistent adoption across the field of VET and employment systems. **This highlights the need for continued policy coordination** and stakeholder engagement to enable a more integrated approach.

Although the European-level definition outlined in the Council Recommendation has been agreed on by Member States, **some education and training systems have incorporated ECTS credit limits into their national-level definitions, especially in higher education. This may pose obstacles to cross-border collaboration, making the establishment of transnational joint micro-credentials and their comparison challenging.**

The adoption of **principles and standard elements** aligned with the Council Recommendation is more prevalent in higher education and VET, while such integration only occurs in a few employment systems.

With regard to developing a consolidated ecosystem for micro-credentials, many higher education and VET systems already have internal quality assurance mechanisms for micro-credentials, often building on existing practices. In contrast, external quality assurance for small-volume learning activities is applied in a more limited manner, which could indicate the need for further targeted development in this field, particularly for providers outside formal education. This development needs to be carried out in a way that does not hamper the flexibility and adaptability of provision of micro-credentials, for example by adopting a provider-level approach to quality assurance instead of external quality assurance for every small learning provision ('trusted provider' approach). Although some education and training systems are making progress on the implementation of measures, the development of automatic recognition for micro-credentials is still in its infancy. **Education and training systems stressed the importance of the alignment of quality assurance approaches for micro-credentials at the EU level as an initial step to facilitate automatic recognition between transnational education and training systems.**

Micro-credentials are widely recognised as a suitable approach to developing green and digital skills. Systems with strategies in place to support either or both include 42 % in VET, 32 % in higher education and 29 % of employment systems.

The VET sector and employment systems are leading the way in integrating micro-credentials into services providing guidance on lifelong learning, as they are intrinsically closer to the labour market. 39 % of VET systems confirmed the integration of micro-credentials into these services, followed by 29 % of employment systems and 16 % of respondents in higher education.

Survey respondents describe various strategies for **funding the development of an ecosystem for micro-credentials**. National public funding for micro-credentials is frequently linked to performance agreements with institutions, and targeted funding programmes exist. This use of public funding underscores the commitment to ensuring the quality, accessibility and integration of micro-credentials within national education and training systems.

Micro-credentials are not yet widely integrated into NQFs across education and training systems, but findings of the report indicate that some **education and training systems are starting to consider how to integrate micro-credentials into their NQFs**, with some systems having already embedded them. Some key examples include Ireland, which has integrated micro-credentials as non-major awards in the Irish national framework of qualifications ([133]); Spain, integrating them in frameworks for higher education ([134]) and lifelong learning ([135]); Croatia, integrating micro-credentials in the Croatian Qualifications Framework Register ([136]); and Sweden, making them part of the module-based higher education system in the Swedish reference framework for higher education ([137]).

The implementation of measures to promote **sectoral and cross-industry social dialogue** for the development of micro-credentials has seen a high level of uptake. Survey responses also highlighted the growing importance of **skills intelligence** systems in informing the development and updating of micro-credentials.

With regard to the encouragement of providers to **publish catalogues of their education and training programmes leading to micro-credentials** on their websites, the field of higher education emerges as a leader. While most systems do not mandate specific publication methods for learning offers, they strongly encourage transparency through NQFs, guidelines or funding criteria. As mentioned, some education and training systems have embedded micro-credentials in pre-existing NQFs or educational portals, leveraging established systems to enhance visibility. Others are developing or have implemented platforms specifically for micro-credentials, while a third group utilises a combination of methods.

The findings presented in this report suggest the emergence of several new synergies to foster ecosystems for micro-credentials. Some examples of the emerging synergies include integrating micro-credentials into **legal frameworks on lifelong learning spanning higher education and VET** and focusing on continued adult learning; holding **discussions on the**

([133]) Quality and Qualifications Ireland, *A brief guide to the Irish national framework of qualifications*, 2024, https://www.qqi.ie/sites/default/files/2024-08/a-brief-guide-to-the-irish-national-framework-of-qualifications-nfq.pdf.

([134]) Royal Decree 1027/2011, of 15 July, establishing the Spanish framework for qualifications for higher education, https://www.boe.es/diario_boe/txt.php?id=BOE-A-2011-13317.

([135]) Royal Decree 272/2022, of 12 April, establishing the Spanish qualifications framework for lifelong learning, https://www.boe.es/eli/es/rd/2022/04/12/272/con.

([136]) https://www.kvalifikacije.hr/en/register-cqf.

([137]) Association of Swedish Higher Education Institutions, *Guideline on Micro-credentials*, 2024, https://suhf.se/app/uploads/2024/03/SUHF-Guideline-on-Micro-Credentials-EN-240328.pdf.

implementation of micro-credentials across higher education, VET and non-formal education; and **joining efforts across ministries dealing with education, training and employment** to draft new frameworks on micro-credentials, among other policy strategies. **Higher education and VET appear to be more advanced** in adopting the measures proposed by the Council Recommendation than employment systems. In multiple cases, respondents representing employment systems indicated that they were following developments in higher education and/or VET. **Synergies are more common between VET and employment systems**, since they usually follow national-/region-level approaches to the various ecosystem elements of micro-credentials, while higher education institutions often retain autonomy in developing their micro-credential learning offers. **Synergies have been generated across countries and regions**, most notably through the development of micro-credential learning offers by higher education institutions collaborating as part of European Universities alliances. The European Universities alliances started to develop joint micro-credentials and joint approaches to small-volume learning activities, improving their education offer and the permeability across institutions and moving towards the automatic recognition of micro-credentials.

The VET sector leads in promoting the **use of micro-credentials** in employment and labour market settings. Relatively few higher education systems are focused on promoting the use of micro-credentials in labour market settings; this may be due to their focus on full degrees and the use of micro-credentials for purposes such as upskilling researchers and facilitating flexible learning pathways. The overall trend suggests that **micro-credentials are gaining traction, but some disparities persist** across education and training systems.

As regards the **stackability** of micro-credentials, higher education institutions, in line with the principle of institutional autonomy, can usually decide whether micro-credentials can be stacked, while VET systems usually rely on systemic approaches. There is a **gap in information on how stackability works in relation to small-volume learning activities developed by private providers and within the employment systems**. Survey respondents also highlighted that the stackability of micro-credentials could promote the development of flexible learning pathways across systems. Some respondents also expressed that the **stackability of micro-credentials should be complementary rather than an alternative to traditional degree programmes**.

Some VET and employment systems are starting to use ILAs to expand the available options for upskilling/reskilling adults or provide options for learning new skills, while a few higher education systems are working on their implementation. Once ILAs are more widely in place, micro-credentials have the potential to be taken up in registries of courses suitable for ILA users. A pre-requisite for this would be the integration of micro-credentials into NQFs, along with clearer provisions for the external quality assurance of all providers, from education and training institutions to providers that are not part of the formal education and training systems. These issues present challenging tasks that require additional collaboration between various stakeholders and new developments within education and training systems. Respondents reported that they would need extra resources and assistance to foster progress on ILAs.

Education and training systems use various **EU funds** to support a range of policy initiatives related to micro-credentials, such as NextGenerationEU, Erasmus+, ESF+ and the European Regional Development Fund. However, they also stressed the **lack of sustainable funding and the reliance on project-based funding** as a key challenge. Furthermore, they emphasised the need to develop **incentives for education and training institutions, learners and labour market stakeholders** to invest resources in micro-credentials.

Coordination or policy mechanisms to promote the collaborative work of various stakeholders in policy development for micro-credentials are in place or being developed in two thirds of higher education and VET systems. The mechanisms are less common in employment systems, where only about one third of the respondents indicate their existence or ongoing developments.

To summarise, although considerable advancements have been achieved, progress is uneven across the various elements proposed by the Council Recommendation. This disparity is generally related to the unique characteristics of each education and training system, where some provisions are already in place while others require entirely new developments. Some elements have been introduced in specific areas of education and training, especially in higher education and VET. However, broader adoption across education and training systems at the national level is necessary to ensure effective implementation.

7.2. Recommendations

The following subsection lists recommendations made by survey respondents to the European Commission to foster cooperation between **education and training systems** and stakeholders for the uptake of micro-credentials.

— **Prioritising financial support.** Respondents recommend leveraging EU funding instruments, such as Erasmus+, NextGenerationEU, the Technical Support Instrument and the ESF+, to support collaborative projects on micro-credentials. They recommend funding initiatives that implement the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability and expand their availability. Additionally, respondents recommended providing targeted resources for initiatives promoting labour market initiatives and the upskilling and reskilling of vulnerable and disadvantaged groups.

— **Encouraging stakeholders' involvement and collaboration.** Respondents advise the European Commission to promote the involvement of social partners, national governments and other stakeholders in developing micro-credential ecosystems and shaping policy initiatives. This could be achieved by facilitating cooperation between Member States and stakeholders in the development of common frameworks, providing technical and financial support, and enhancing involvement in digital infrastructure.

— **Ensuring alignment of quality assurance approaches with micro-credentials.** Respondents emphasised the importance of aligning quality assurance mechanisms for micro-credentials at the EU level to support their transparency and trust. They highlighted that compatible quality assurance frameworks would facilitate automatic cross-border recognition, ensuring that micro-credentials maintain consistent standards across Member States. This would enhance their portability, enabling learners and workers to seamlessly use their micro-credentials to access further education, training and employment opportunities across Europe.

— **Developing informational, methodological and technical support.** Respondents call for the development of examples of the implementation of micro-credentials at the EU level based on principles on and standard elements of designing and issuing micro-credentials and building on examples of good practices of Member States. Furthermore, further research is needed to understand micro-credentials' impact on learning outcomes and labour market success, ensuring their relevance and value.

— **Fostering knowledge sharing and peer learning.** Respondents recommend that the European Commission supports cooperation between Member States through platforms for exchanging experiences and good practices. This includes setting up a designated community of practice and organising peer learning activities, workshops, study visits and projects between Member States focused on micro-credentials.

— **Investing in digital infrastructure development.** Respondents see the need for promoting, adopting and expanding the use of the Europass platform to potentially support the issuing, sharing and verification of micro-credentials with automatic recognition across Member States. Member States should also be provided with assistance in adopting digital technologies. The European Commission could also develop a European registry for micro-credentials to facilitate transnational recognition.

— **Implementing continuous monitoring.** Respondents recommend that the European Commission conduct regular progress reviews, and ensure the

widespread presentation of progress in other Member States. This would help in identifying challenges, sharing results and supporting policy development. Transparent reporting will support continuous improvement and strengthen trust among stakeholders.

— **Encouraging further research.** Respondents encourage the European Commission to support further research on the implementation and impact of micro-credentials, with a particular emphasis on employment, education and societal outcomes. This information would support evidence-based approaches to refining strategies, addressing implementation gaps and developing solutions tailored to evolving labour market needs and trends.

— **Conducting promotional and awareness campaigns.** Respondents encourage the European Commission to continue promoting micro-credentials by highlighting their value for education-providers, employers and learners. They also advise using Europass and other public platforms to showcase success stories and increase the visibility of the opportunities provided by micro-credentials. Targeted outreach efforts can help build trust and expand the acceptance of micro-credentials across sectors at the EU level.

Annex I: European standard elements to describe a micro-credential

This list of common European standard elements to describe micro-credentials is recommended as a resource to support implementation. The use of the European standard elements to describe micro-credentials does not imply official validation or recognition but is a key enabler for it.

Mandatory elements	Identification of the learner
	Title of the micro-credential
	Country(ies)/Region(s) of the issuer
	Awarding body(ies)
	Date of issuing
	Learning outcomes
	Notional workload needed to achieve the learning outcomes (in ECTS credits, where possible)
	Level (and cycle, if applicable) of the learning experience leading to the micro-credential (EQF, QF-EHEA), if applicable
	Type of assessment
	Form of participation in the learning activity
	Type of quality assurance used to underpin the micro-credential
Optional elements, where relevant (non-exhaustive list)	Prerequisites needed to enrol in the learning activity
	Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or on-site with identity verification)
	Grade achieved
	Integration/stackability options (stand-alone, independent micro-credential/integrated, stackable towards another credential)
	Further information

Annex II: European principles for the design and issuance of micro-credentials

The 10 principles presented below describe the nature of micro-credentials and offer guidance to Member States, public authorities and providers on the design and issuance of micro-credentials and systems for micro-credentials. The principles highlight the key characteristics of the European approach to micro-credentials that enable the trust and ensure the quality of micro-credentials. The principles are universal and may be applied in any area or sector, if appropriate.

1	**Quality**	Micro-credentials are subject to internal and external quality assurance by the system producing them (for example, the education, training or labour market context in which the micro-credential is developed and delivered). Quality assurance processes must be fit for purpose, clearly documented and accessible, and meet the needs and expectations of learners and stakeholders.
		Providers
		External quality assurance is based primarily on the assessment of providers (rather than individual courses) and the effectiveness of their internal quality assurance procedures.
		Providers should make sure that internal quality assurance covers all the following elements:
		— the overall quality of the micro-credential itself, based on the standards referred to below;
		— the quality of the course, where applicable, leading to the micro-credential;
		— learners' feedback on the learning experience leading to the micro-credential and;
		— peers feedback, including other providers and stakeholders, on the learning experience leading to the micro-credential.
		Standards: External quality assurance is to be conducted in line with:
		— Annex IV of the European Qualifications Framework Recommendation, where applicable;
		— the Standards and Guidelines for Quality Assurance in the European Higher Education Area, where applicable;
		— the European Quality Assurance Reference Framework (the EQAVET Framework) in the field of vocational education and training, where applicable;
		— other quality assurance instruments, including registries and labels, to build public trust in micro-credentials, where applicable.
2	**Transparency**	Micro-credentials are measurable, comparable and understandable, with clear information on learning outcomes, workload, content, level and the learning offer, as relevant.
		Workload
		— Higher education institutions should use the European Credit Transfer and Accumulation System (ECTS) and comply with the principles in Annex V to the EQF Recommendation, where possible, to demonstrate the notional workload needed to achieve the learning outcomes of the micro-credential.
		— Providers that do not use the ECTS may use other systems or types of information that can effectively describe learning outcomes and workload, in compliance with the principles in Annex V to the EQF Recommendation.
		Qualifications framework/systems

		— Micro-credentials may be included in national qualifications frameworks/systems, where relevant, and in line with national priorities and decisions. National qualifications frameworks/systems are referenced to the European qualifications framework and, for higher education qualifications, mostly also self-certified to the qualifications framework of the European Higher Education Area, which can further support the transparency of, and trust in, micro-credentials.
		Information on the offer of micro-credentials
		Systems for micro-credentials should provide transparent and clear information (to underpin guidance systems for learners), in line with national practices and stakeholders' needs.
		— Information on providers of micro-credentials is published where possible in existing relevant registers. Higher-education providers (and other relevant providers) should be included, where possible, in the Database of External Quality Assurance Results (DEQAR), based on quality assurance in line with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG);
		— Information on learning opportunities leading to micro-credentials should be accessible and easily exchanged through relevant platforms, including Europass.
3	**Relevance**	Micro-credentials should be designed and issued as distinct, targeted learning achievements and learning opportunities leading to them are to be updated as necessary, to meet identified learning needs.
		Collaboration between education and training organisations, employers, social partners, other providers and users of micro-credentials is encouraged to increase the relevance of the micro-credentials for the labour market.
4	**Valid assessment**	Micro-credential learning outcomes are assessed against transparent criteria.
5	**Learning pathways**	Micro-credentials are designed and issued to support flexible learning pathways, including the possibility to validate, recognise and 'stack' micro-credentials from across different systems.
		Stackability
		Micro-credentials are designed to be modular so that other micro-credentials may be added to create larger credentials. Decisions to 'stack' or combine credentials lie with the receiving organisation (for example, education and training institutions, employers, etc.), in line with their practices, and should support the goals and needs of the learner. Stacking does not create an automatic entitlement to a qualification or a degree. Such decisions are made by regional and national authorities or institutions in line with their awarding processes.
		Validation of non-formal and informal learning
		Obtaining micro-credentials is possible following assessment of learning outcomes, obtained either through a specific course leading to a micro-credential, or on the basis of assessment of learning outcomes resulting from non-formal and informal learning.
6	**Recognition**	Micro-credentials have a clear signalling value of learning outcomes for smaller modules of learning. Recognition paves the way for a wider offer of such learning experiences in a comparable way across the EU.
		Micro-credentials are recognised, where possible, by the competent authorities, for academic, training or employment purposes, based on the information provided according to the European standard elements (Annex I) and the principles for the design and issuance of micro-credentials (Annex II).

| | | When micro-credentials are issued by formal education providers, they are recognised, where possible, based on standard recognition procedures used in recognising foreign qualifications and learning periods abroad.

This is without prejudice to the right of the competent authorities to define recognition procedures or to verify the authenticity of documents. |
|---|---|---|
| 7 | **Portable** | Micro-credentials are owned by the credential-holder (the learner) and may be stored and shared easily by the credential-holder, including through secure digital wallets (for example, Europass), in line with the General Data Protection Regulation. The infrastructure for storing data is based on open standards and data models. This ensures interoperability and seamless exchange of data, and allows for smooth checks of data authenticity. |
| 8 | **Learner-centred** | Micro-credentials are designed to meet the needs of the target group of learners. Learners are involved in the internal and external quality assurance processes and their feedback is taken into account as part of the continuous improvement of the micro-credential. |
| 9 | **Authentic** | Micro-credentials contain sufficient information to check the identity of the credential-holder (learner), the legal identity of the issuer, the date and place of issuance of the micro-credential. |
| 10 | **Information and guidance** | Information and advice on micro-credentials should be incorporated in lifelong learning guidance services and should reach the broadest possible learner groups, in an inclusive way, supporting education, training and career choices. |

Annex III: Aggregate indicators

The following set of indicators provides a comprehensive overview of the key dimensions of micro-credential uptake across European education and training systems. These indicators are derived from the key elements of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. The data for these indicators are derived from the responses that education and training systems provided to relevant survey questions as part of this study.

Aggregate indicators are as follows:

— **regulation and guidance –** extent to which education and training systems have adopted an official definition, policies and frameworks for micro-credentials:

  - **definition –** existence of a national-level definition of micro-credentials in at least one of the three fields;
  - **defined workload (ECTS credits) –** promotion of the specification of workloads in ECTS credits, where possible;
  - **standard elements –** application of European standard elements used to describe micro-credentials;
  - **principles –** application of European principles for the design and issuance of micro-credentials;
  - **guidance –** policy guidelines and/or regulations coordinating the development of micro-credentials;

— **quality assurance and recognition –** development of quality assurance arrangements and recognition frameworks for micro-credentials:

  - **internal quality assurance –** inclusion of micro-credentials in institutions' internal quality assurance mechanisms;
  - **external quality assurance –** encouragement of quality assurance agencies to adapt and develop quality assurance mechanisms for micro-credentials issued by different types of providers;
  - **automatic recognition –** promotion of the development of automatic recognition systems for micro-credentials;
  - **integration in NQFs –** inclusion of micro-credentials in NQFs;

— **resources and labour market uptake –** availability of resources and use of micro-credentials in labour market contexts:

  - **funding mechanisms –** availability of financial resources to support the development and use of micro-credentials;
  - **ILAs –** use of ILAs to support learners in accessing micro-credentials;
  - **use in the labour market –** promotion of the use of micro-credentials in employment and labour market settings;

— **information systems –** development and availability of data, platforms and services that facilitate awareness, accessibility and transparency of micro-credentials:

  - **promotion –** promotion of the uptake of micro-credentials within formal (higher education and VET sectors) and non-formal (employment systems) learning settings.
  - **integration in catalogues –** inclusion of education and training offers leading to micro-credentials in official catalogues of education and training opportunities;

- **integration in guidance services –** integration of micro-credentials into services providing guidance on lifelong learning.

Table 18. Overview of the implementation of the Council Recommendation: higher education

Respondent	Regulations and guidance					Quality assurance and recognition				Resources and labour market uptake			Information systems		
	Definition	Defined workload	Standard elements	Principles	Guidance	Internal quality assurance	External quality assurance	Automatic recognition	Integration in NQFs	Funding mechanisms	ILAs	Use in the labour market	Promotion	Integration in catalogues	Integration in guidance services
AT															
BE-FL															
BE-FR															
BG															
CY															
CZ															
DE															
DK															
EE															
EL															
ES															
FI															
FR															
HR															
HU															
IE															
IS															
IT															
LI															
LT															
LU															
LV															
MT															
NL															
NO															
PL															
PT															
RO															
SE															
SI															
SK															

Legend: ■ Yes ■ Under development ■ No ■ Other ■ No data

Table 19. Overview of the implementation of the Council Recommendation: VET

Respondent	Regulations and guidance					Quality assurance and recognition				Resources and labour market uptake			Information systems		
	Definition	Defined workload	Standard elements	Principles	Guidance	Internal quality assurance	External quality assurance	Automatic recognition	Integration in NQFs	Funding mechanisms	ILAs	Use in the labour market	Promotion	Integration in catalogues	Integration in guidance services
AT	Yes	No	No	No data	Under dev	Under dev	Yes	Under dev	Under dev		No		Other	Other	No data
BE-FL	Under dev	No	Yes	Yes	Under dev	Other	Other	Other	Other	Yes	No data	Yes	Under dev	Other	Other
BE-FR	Under dev	No	No	No	Yes	No	No	Other	Other	No	No	No	Under dev	No	No
BG	Under dev	No	No data	Other	No	No data	No data	No data	Other	No data	Under dev		Other	No data	No data
CY	Under dev	Under dev	No	Under dev	Under dev	Under dev	Under dev	No	No	Under dev	Under dev	Under dev	Under dev	No	No
CZ	Yes	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Yes	Yes	Under dev	Under dev
DE	No	No	No	Under dev	Other	Under dev	Under dev	No	No	Other	No	Yes	Other	Under dev	Yes
DK	No	No	Yes	Other	Yes	Yes	Other	Other	Yes	Under dev	No	Under dev	Under dev	Under dev	Under dev
EE	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Other	Yes	Other	Under dev	No	No	Under dev	Under dev	No data
EL	Under dev	No data	Yes	No	Yes	Under dev	Under dev	No data	Under dev	Under dev	No data	Under dev	Other	Other	Yes
ES	Yes	Other	Yes	Under dev	Under dev	Under dev	Other	Other	Yes	Other	Under dev	No data	Under dev	Under dev	Under dev
FI	Yes	Under dev	Under dev	Under dev	Under dev	Under dev	Other	Other	Other	Other	No	Under dev	Under dev	Under dev	Yes
FR	Yes	Under dev	No	Under dev	Yes	No	No	No	No	Other	No	Yes	Under dev	Other	Other
HR	No	No	Yes	Yes	Yes	Yes	Under dev	Other	Yes	Under dev	No	Yes	Yes	Yes	Yes
HU	Yes	No data	Under dev	Other	Yes	No data	Under dev	Under dev	Yes	Yes	No	Yes	Yes	Yes	Yes
IE	Yes	No	Under dev	Other	Yes	Yes	Under dev	Other	Yes	Yes	No	Yes	Yes	Yes	Yes
IS	Yes	Under dev	No	No	No	No	No data	No	No data	Under dev	No	No	No	No	No
IT	Yes	Other	Under dev	Other	Yes	Other	Other	No	Other	Yes	No	Yes	Yes	Under dev	Yes
LI	Yes	No data	No	Under dev	Under dev	No data	Other	Other	Other	Other	No	Under dev	No	No data	No data
LT	Under dev	No data	Other	Other	Under dev	Under dev	Under dev	Under dev	Other	Other	Other	Yes	Yes	Other	Under dev
LU	Under dev	No	Under dev	Under dev	Under dev	Under dev	Under dev	No	Under dev	Yes	No	Under dev	Under dev	Yes	Yes
LV	No	Under dev	Under dev	Under dev	Yes	Under dev	Under dev	Under dev	Under dev	Yes	No data	No data	Yes	Yes	Yes
MT	Yes	Yes	Yes	Yes	Yes	Under dev	Under dev	Other	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	No
NL	Yes	No	No	No data	Under dev	Other	Under dev	Other	No	Other	No data	Under dev	Under dev	Yes	No
NO	No	No	Other	Other	Under dev	Other	No	No	No	Other	No	No data	Other	Yes	Under dev
PL	Under dev	No	Other	Other	Under dev	No	Other	Under dev	No	No	No	No	Under dev	No	No data
PT	Yes	Other	Under dev	Yes	Yes	Yes	Yes	Yes	Other	Yes	Yes	Yes	Yes	Yes	Yes
RO	Under dev	Other	Yes	Yes	Under dev	Yes	Yes	No	No	Other	Under dev	No	Under dev	No	No
SE	Yes	No	Under dev	Under dev	Under dev	Under dev	No	No	No	Other	Other	Under dev	Under dev	Other	Under dev
SI	Yes	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	No	Under dev	Under dev	Under dev	Under dev
SK	Yes	No	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Under dev	Yes	Yes	Under dev	Yes

Legend: Yes | Under development | No | Other | No data

Table 20. Overview of the implementation of the Council Recommendation: employment systems

Respondent	Regulations and guidance					Quality assurance	Resources and labour market uptake			Information systems	
	Definition	Defined workload	Standard elements	Principles	Guidance	Internal quality assurance	Funding mechanisms	ILAs	Use in the labour market	Promotion	Integration in guidance services
AT	Yes	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data
BE-FL	Under development	No	Yes	Yes	Other	Yes	Other	Other	Under development	Yes	Yes
BE-FR	Under development	No	No	No	No	No	No data	No data	No	No	No
BG	Under development	No data	No data	Other	No data	No data	No data	No	Under development	Other	No data
CY	Under development	Under development	No	Under development	Under development	Under development	No	Under development	Under development	Under development	No data
CZ	Yes	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data
DE	No	No	Yes	Yes	Under development	No data	Yes	No	Yes	Yes	Yes
DK	No	No	Other	Yes	Other	Other	Yes	No	Yes	Yes	Yes
EE	Under development	Under development	Under development	Under development	Under development	No data	Under development	No	No	Under development	No data
EL	Under development	No data	No data	No data	No data	No data	No data	Under development	No data	No data	No data
ES	Yes	No data	No data	No data	Yes	No data	No data	Yes	No data	No data	No data
FI	Yes	No data	No	No	Under development	Yes	Other	No	Yes	Under development	No data
FR	Under development	No data	No data	No data	No data	No data	Other	Other	Other	No data	No data
HR	No	No data	Yes	No	No data	No data	Other	Other	Yes	Other	Yes
HU	Yes	No data	No data	No data	No data	No data	No data	No data	No data	No data	No data
IE	Yes	Yes	No data	Yes	No data	No data	No data	No data	No data	Yes	No data
IS	Under development	Other	No data	No	No	No data	No data	No	No	Yes	No data
IT	Yes	No data	No data	No data	No data	No data	No data	No data	No data	Yes	No data
LI	Yes	No data	No data	No	No	No data	No data	No	No data	No	No data
LT	Under development	No data	Yes	Yes	Under development	Yes	Yes	Yes	Yes	Yes	Other
LU	Under development	No data	No	No data	No data	No data	No data	No	Other	Other	No data
LV	No	Other	Under development	Other	Yes	Yes	Other	No	Yes	Yes	Yes
MT	Yes	Yes	Yes	Yes	Yes	No data	Yes	No data	Yes	Yes	Yes
NL	Under development	No	No	No data	Under development	Other	Other	No	No	No	No
NO	No	No data	No data	Other	No	Other	Other	No data	Other	No data	Yes
PL	Under development	Other	Other	No	No	No	No	Under development	Other	Under development	No data
PT	Yes	No data	No data	No data	No data	No data	No data	No data	No data	No data	Yes
RO	Yes	No data	No data	No data	No data	No data	No data	No data	No data	Under development	No data
SE	Yes	No data	No data	Yes	Other	Other	Other	No	No	Yes	Yes
SI	Yes	Other	Yes	Other	Yes	No data	Other	No	Yes	No data	Under development
SK	Yes	No data	Yes	Yes	Yes	No data	Yes	No data	Under development	Yes	No data

Legend: Yes — Under development — No — Other — No data

Annex IV: Respondents

This list of respondents mirrors the questionnaire's 'Respondents' sections. In the context of higher education, representatives of ministries of education or higher education authorities were contacted. For VET, members of the tripartite Advisory Committee on Vocational Training were contacted. For employment systems, representatives of PESs were contacted. Notably, within employment systems, a wide range of respondents extending beyond the PES network provided insights.

The questionnaire was formatted as a single editable document, facilitating collaborative input. Consequently, each field could incorporate the perspectives of multiple respondents. Some respondents noted in certain cases that they relied on the responses given in other fields in the same questionnaire. Other respondents contributed to enhancing responses in other fields. In certain instances, systems did not specify particular respondents; therefore, respondents are noted as 'not specified'.

Respondent	Higher education	VET	Employment systems
AT	Federal Ministry of Education, Science and Research (BMBWF)	Federal Ministry of Education, Science and Research (BMBWF)	No answer
BE-FL	Flemish Ministry of Education and Training	Flemish Ministry of Education and Training	VDAB's Department of Work and Social Economy (Departement Werk en Sociale Economie)
BE-FR	Wallonia-Brussels Federation	Le Forem	Le Forem
BG	Ministry of Education and Science and Sofia University St. Kliment Ohridski	Institute for Social and Trade Union Research, Education and Training (ISTURET)	Bulgarian Industrial Capital Association
CY	Department of Higher Education of the Ministry of Education, Sport and Youth	Human Resource Development Authority of Cyprus (HRDA)	Cyprus Public Employment Service
CZ	Ministry of Education, Youth and Sports	VET and adult education departments of the Ministry of Education, Youth and Sports	Not specified
DE	Standing Conference of the Ministers of Education and Cultural Affairs (KMK) and Federal Ministry of Education and Research (BMBF)	Confederation of German Employers' Associations (BDA)	German Federal Employment Agency (Bundesagentur für Arbeit)
DK	Ministry of Higher Education and Science	The Confederation of Danish Employers and Ministry of Children and Education	Danish Agency for Labour Market and Recruitment
EE	Higher Education Department of the Ministry of Education and Research	Not specified	Not specified
EL	Ministry of Education, Religious Affairs and Sports	Ministry of Education, Religious Affairs and Sports (Vocational Education, Training and Lifelong Learning)	Greek Public Employment Service (DYPA)
ES	Ministry of Science, Innovation and Universities	Ministry of Education, Vocational Training and Sports – MEFPD	National Public Employment Service (SEPE)
FI	Department for Higher Education and Science Policy of the Ministry of Education and Culture	Department for General Upper Secondary Education and Vocational Education and Training of the Ministry of Education and Culture	Ministry of Economic Affairs and Employment
FR	Ministry for Higher Education and Research	General Delegation for Employment and Vocational Training (DGEFP) of the Ministry of Labour, and Ministry of Education and Youth	France Travail
HR	Ministry of Science, Education and Youth	Agency for Vocational Education and Training and Adult Education (ASOO)	Croatian Employment Services

HU	Ministry of Science, Education and Youth	Not specified	No answer
IE	Department of Further and Higher Education, Research, Innovation and Science (DFHERIS)	DFHERIS	Skillnet Ireland
IS	Ministry of Higher Education, Science and Innovation	Ministry of Education and Children	Directorate of Labour
IT	Directorate-General for Internationalisation and Communication of the Ministry of University and Research	Ministry of Labour and Social Policies	No answer
LI	Office of Education	Office for Vocational Training and Career Counselling	Not specified
LT	Ministry of Education, Science and Sport of the Republic of Lithuania	Ministry of Education, Science and Sport of the Republic of Lithuania	Ministry of Social Security and Labour of the Republic of Lithuania
LU	Ministry of Research and Higher Education	Vocational Training Department (Service de la formation professionnelle) of the Ministry of Education, Children and Youth	Ministry of Labour
LV	Department of Higher Education, Science and Innovation of the Ministry of Education and Science	Department of VET and Adult Education of the Ministry of Education and Science	State Employment Agency
MT	Malta Further and Higher Education Authority (MFHEA)	National Skills Council (NSC)	Ministry for Home Affairs, Security and Employment (MHSE), Office of the Prime Minister – European Funds, Equality, Reforms and Social Dialogue (OPM – EES)
NL	Department of Higher Education and Student Finance of the Ministry of Education, Culture and Science	Department of Vocational Education and Training of the Ministry of Education, Culture and Science	Department of Labour Relations of the Ministry of Social Affairs and Employment
NO	Ministry of Education and Research	Norwegian Directorate for Education and Training (providing the initial VET perspective) and Norwegian Directorate for Higher Education and Skills (providing the higher VET perspective) of the Ministry of Education and Research	Directorate of Labour and Welfare
PL	Not specified	Department of Vocational Education of the Ministry of National Education	Ministry of Family, Labour and Social Policy
PT	Directorate-General for Higher Education	Institute of Employment and Vocational Training (IEFP) and National Agency for Qualification and Vocational Education and Training (ANQEP)	IEFP
RO	Counsellor within the Directorate General for Higher Education	National Centre for the Development of Vocational and Technical Education (CNDIPT) and Ministry of Labour and Social Solidarity (MMSS)	No answer
SE	Ministry of Education and Research	Ministry of Education and Research	Swedish Public Employment Service (Arbetsförmedlingen)
SI	Higher Education Directorate of the Ministry of Higher Education, Science and Innovation	Upper Secondary, Short-Cycle Higher Vocational and Adult Education Directorate of the Ministry of Education	Labour Market and Employment Directorate of the Ministry of Labour, Family, Social Affairs and Equal Opportunities
SK	Ministry of Education, Research, Development and Youth of the Slovak Republic	Ministry of Education, Research, Development and Youth of the Slovak Republic	Counselling and Education Department of the Employment Services Section of the Central Office of Labour, Social Affairs and Family

Annex V: Survey questions

Survey on the state of implementation of Council Recommendation on a European approach to micro-credentials for lifelong learning and employability

Aim

This questionnaire aims to take stock of the development and use of micro-credentials in European Union Member States and associated countries, with a focus on the implementation of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. This will allow us to identify the current state, developments, and practices, as well as establish a foundation for future initiatives to promote the growth of a micro-credential ecosystem in Europe.

Approach to micro-credentials

This questionnaire is based on the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, adopted on 16 June 2022 (2022/C 243/02), which builds on the potential of micro-credentials to complement and enhance education, training, lifelong learning and employability ecosystems. This communication defines a micro-credential as:

'the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity' (2022/C 243/02, p. 14).

Please consider any shorter credentials other than full qualifications to answer this questionnaire, even if the term micro-credential is not used in your context. Micro-credentials are often referred as:
- micro-certifications,
- badges,
- micro/partial/supplementary qualifications,
- module certificates.

Despite the various terms used, these short learning activities either fully or partly meet the definition proposed by the European Commission.

Instructions

- Identify the main respondents by sector and the lead authority in the **Respondents sheet**.
- Work collaboratively on the same online document. Several respondents are allowed to work simultaneously on this document.
- Anyone having the link to the questionnaire can access and edit it, feel free to share it with your colleagues if you consider it relevant.
- Answer the questions in tabs 1 to 5, according to your sector. You can complete the link to the questionnaire with diverse collaborators in multiple work sessions.
- Please edit the document in the browser. If you encounter problems, please contact the study team and we will provide you with a copy of the questionnaire to be edited offline.
- Most questions have a multiple-choice option and a qualitative component. Please select an option from the drop-down list (yes, no, under development, or other) and provide qualitative details according to your sector.
- Some questions are asking to check given options, please write an X in the corresponding cell.
- For the qualitative component of the questions, we suggest a maximum of 300 words (two-thirds of a 12-point single-spaced page). However, you can exceed this limit.
- The questionnaire is supported by an online Excel format. You can write unlimited text in the cells. To separate paragraphs in the same cell, press Alt + Enter simultaneously.
- We kindly ask you to complete the survey by Friday 30th of August 2024. By this date, we ask the lead authority to send an email to (...) confirming the questionnaire has been completed.

Pre-filled information

Some questions in this questionnaire were pre-filled using several sources of information:

1-OECD reports on the current status of micro-credentials, official reports from the country, and official websites that provide relevant information. These sources provide an overview of the achievements and actions in development to consolidate the national ecosystem of micro-credentials.

2-National experts providing an overview of the achievements and existing elements that support the national ecosystem of micro-credentials. This perspective provides an overview of what has already been implemented but lacks information on ongoing activities aimed at building the micro-credentials ecosystem.

Please review the pre-filled information and make the necessary adjustments or replace it with the updated information that you can provide.

Acronyms used

HE - Higher Education
HEI - Higher Education Institution
VET - Vocational Education and Training
ENIC-NARIC Networks - European Network of Information Centres and National Academic Recognition Information Centres in the European Union networks.
GDPR - General Data Protection Regulation
NQF - National Qualification Framework
ECTS - European Credit Transfer System

Resources

- Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02 (OJ C, C/243), 27.06.2022, CELEX: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02)

- OECD. (2023). Micro-credential policy implementation in Finland, the Slovak Republic, Slovenia and Spain. OECD Education Policy Perspectives 86. https://www.oecd.org/publications/micro-credential-policy-implementation-in-finland-the-slovak-republic-slovenia-and-spain-c3daa488-en.htm

- CEDEFOP. (2022). Microcredentials for labour market education and training. https://www.cedefop.europa.eu/en/publications/5587

Data protection

By participating in this survey, you agree that PPMI will process your answers in accordance with a Specific Privacy Statement. We will securely store your answers and no personal information will be revealed to the public. Only anonymised data will be shared with the public or any third parties.

Contacts

Do not hesitate to reach out to PPMI if you have any questions or need support throughout the data collection process:
PPMI
- **Ieva Grumbinaite:** ieva.grumbinaite@ppmi.lt
- **Hugo Buitrago**: hugo.buitrago@ppmi.lt
European Commission:
- EC-SURVEY-MICROCREDENTIALS-2024@ec.europa.eu

Information on repondents

The completion of this questionnaire requires the participation of three sectors pertinent to the consolidation of an ecosystem for micro-credentials in your country:

1. **Higher Education (HE)**: The authority that oversees the higher education sector.
2- **Vocational Education and Training (VET)**: The authority that oversees the vocational education and training sector.
3- **Employment and labour market**: The authority that oversees human resources, employment, and/or the labour market sector.

We request that these three sectors collaborate on the same online document so that you can have an overview of the shared information, and we can create a comprehensive picture of the consolidation of the micro-credentials ecosystem in your country. The questionnaire has designated spaces for the three perspectives, which are titled respectively and colour-coded: light yellow for HE, light blue for VET, and light purple for employment and the labour market.

Respondent countries may have designated a specific authority to lead the consolidation of the micro-credential ecosystem (e.g. HE authority, VET authority, employment authority). If this is the case, please indicate it below:

Higher education - HE

Contact name and surname:	
Email:	
Position:	
Institution:	
Country:	
Region (if responded from the perspective of autonomous territory):	
Comment (if clarification is needed):	
Is HE the lead authority?	**Please select an option**

Vocational Education and Training – VET

Contact name and surname:	
Email:	
Position:	
Institution:	
Country:	
Region (if responded from the perspective of autonomous territory):	
Comment (if clarification is needed):	
Is VET the lead authority?	**Please select an option**

Employment and labour market

Contact name and surname:	
Contact email:	
Contact position:	
Institution:	
Country:	
Region (if responded from the perspective of autonomous territory):	
Comment (if clarification is needed):	
Is the Employment and labour market the lead authority?	**Please select an option**

1. Definition and standard elements of micro-credentials

Q1	1. How do you call micro-credentials* in your country? *Please consider any unit of learning shorter than a full degree. Other common names for micro-credentials include micro-certifications, badges, micro/partial/supplementary qualifications, and module certificates, among others.	HE Suggested length: 300 words	VET Suggested length: 300 words	Employment & market Suggested length: 300 words

Q2	2. What is the definition of micro-credentials in your country? (If one definition encompasses all three sectors (HE, VET, Employment & Market), please provide the definition in the HE column and write 'same' in the VET and Employment & market columns.)	HE Suggested length: 300 words	VET Suggested length: 300 words	Employment & market Suggested length: 300 words

Q2.1	2.1. A definition has been agreed at European level in the Council Recommendation for a European approach to micro-credentials for lifelong learning and employability*. How does the definition in your country differ from the agreed one? *5(a): 'Micro-credential' means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity (2022/C 243/02, p. 14). (If one definition encompasses all three sectors (HE, VET, Employment & Market), please provide the definition in the HE column and write 'same' in the VET and Employment & market columns.)	HE Suggested length: 300 words	VET Suggested length: 300 words	Employment & market Suggested length: 300 words

Q2.2	2.2. Has your sector analysed how a country-specific definition would impact transnational cooperation and the development of joint transnational micro-credentials by, for example, European Universities alliances?	HE *Please select an option* Suggested length: 300 words	VET *Please select an option* Suggested length: 300 words	Employment & market *Please select an option* Suggested length: 300 words

Q3	3. Have you introduced a lower/upper ECTS limit* to micro-credentials in your country? *For example, some countries apply an upper limit of 15 ECTS. Above this, the credential has a different name in their NQF.	HE *Please select an option* Suggested length: 300 words	VET *Please select an option* Suggested length: 300 words	Employment & market *Please select an option* Suggested length: 300 words

Q4	4. Does your country apply principles* for designing and issuing micro-credentials? *Principles provide orientation to guide the development, quality assurance, recognition, and implementation of micro-credentials. (See 2022/C 243/02, Annex II)	HE *Please select an option* Suggested length: 300 words	VET *Please select an option* Suggested length: 300 words	Employment & market *Please select an option* Suggested length: 300 words

Q4.1	4.1. *[If Q4 is YES]* Are the principles for the design and issuance of micro-credentials in line with Annex II of the Council recommendation on a European approach to micro-credentials for lifelong learning and employability? *(Please mark with an X all the options that apply, multiple answers allowed)* (See 2022/C 243/02, Annex II)	Mandatory			Optional			Not applied			Comment		
		HE	VET	E&M	HE	VET	E&M	HE	VET	E&M	HE	VET	E&M
	1. Quality (Micro-credentials are subject to internal and external quality assurance by the system producing them).												
	2. Transparency (Micro-credentials are measurable, comparable and understandable, with clear information on learning outcomes, workload, content, level, and the learning offer, as relevant).												
	3. Relevance (Micro-credentials are designed and issued as distinct, targeted learning achievements and learning opportunities leading to them are updated as necessary, to meet identified learning needs).												
	4. Valid assessment (Micro-credential learning outcomes are assessed against transparent criteria).												
	5. Learning pathways (Micro-credentials are designed and issued to support flexible learning pathways, including the possibility to validate, recognise and 'stack' micro-credentials from across different systems).												
	6. Recognition (Micro-credentials have a clear signalling value of learning outcomes for smaller modules).												
	7. Portable (Micro-credentials are owned by the credential-holder [the learner] and may be stored and shared easily by the credential-holder, including through secure digital wallets [e.g. Europass], in line with the General Data Protection Regulation).												
	8. Learner-centred (Micro-credentials are designed to meet the needs of the target group of learners).												
	9. Authentic (Micro-credentials contain sufficient information to check the identity of the credential holder [learner], the legal identity of the issuer, and the date and place of issuance of the micro-credential).												
	10. Information and guidance (Information and advice on micro-credentials are incorporated in lifelong learning guidance services and should reach the broadest possible learner groups, in an inclusive way, supporting education, training and career choices).												
	Other(s): See Q6												

	5. Does your country apply standard elements* to describe micro-credentials? *Standard elements provide a framework to describe micro-credentials in a way that is measurable, comparable, and understandable, with clear information on the learning outcomes, workload, content level, and quality assurance mechanisms. (See 2022/C 243/02, Annex I)	HE *Please select an option* Suggested length: 300 words	VET *Please select an option* Suggested length: 300 words	E&M *Please select an option* Suggested length: 300 words

5.1 [If Q5 is YES] Do the standard elements to describe micro-credentials include the following mandatory elements* *(Please mark with an X all the options that apply , multiple answers allowed):*

As described in Annex I of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability (for more details see 2022/C 243/02, Annex I) .

Q5.1	Mandatory			Optional			Not applied			Comment		
	HE	VET	E&M	HE	VET	E&M	HE	VET	E&M	HE	VET	E&M
• Identification of the learner												
• Title of the micro-credential												
• Country(ies)/region(s) of the issuer												
• Awarding body(ies)												
• Date of issuing												
• Learning outcomes												
• Workload needed to achieve the learning outcomes (in European Credit Transfer and Accumulation System, wherever possible)												
• Level (and cycle, if applicable) of the learning experience leading to the micro-credential (European Qualifications Framework, Qualifications Frameworks in the European Higher Education Area), if applicable												
• Type of assessment												
• Form of participation in the learning activity												
• Type of quality assurance used to underpin the micro-credential												
Other(s): See Q6												

5.2. [If Q5 is YES] Do the standard elements to describe micro-credentials include the following optional elements* *(Please mark with an X all the options that apply, multiple answers allowed) :*

As described in Annex I of the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability (for more details see 2022/C 243/02, Annex I).

Q5.2	Mandatory			Optional			Not applied			Comment		
	HE	VET	E&M	HE	VET	E&M	HE	VET	E&M	HE	VET	E&M
• Prerequisites needed to enrol in the learning activity												
• Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or onsite with identity verification).												
• Grade achieved												
• Integration/stackability options (stand-alone, independent micro-credential/ integrated, stackable towards another credential).												
• Further information												
Other(s): See Q6												

6. Does your country apply additional/different principles/standard elements beyond the ones suggested by the Council recommendation? *(Principles and standards suggested by the council recommendation are listed in Q3.1, Q4.1, and Q4.2. See also 2022/C 243/02, Annex I and II)*	HE	VET	E&M
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q6.1 **6.1. [If Q6 is YES]** Has your sector analysed how country-specific principles/standard elements would impact transnational cooperation and the development of joint transnational micro-credentials by, for example, European Universities alliances?	HE	VET	E&M
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

7. Are there any policy guidelines, regulations, or guidance coordinating the development of micro-credentials in your country?	HE	VET	E&M
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

2. Development of the ecosystem for micro-credentials

Q8 **8.** Does your country promote the development of micro-credentials within formal (HE and VET sectors) and non-formal (employment and labour market sectors) learning settings? *(See 2022/C 243/02, articles 7 and 8)*	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q9 **9.** Does your country encourage providers of courses leading to micro-credential to use the European Credit Transfer and Accumulation System (ECTS) to demonstrate the notional workload needed to achieve the learning outcomes?	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q10 **10.** What are the primary sources of funding for micro-credentials in your country? *(See 2022/C 243/02, article 7.c)*	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q10.1 **10.1. [If Q10 is YES]** Does your country provide public funding for micro-credentials? **(See 2022/C 243/02, article 7.c)**	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q10.1.1 **10.1.1. [If Q10.1. is YES]** For education and training providers to offer micro-credentials	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q10.1.2	10.1.2. *[If Q10.1 is YES]* For learners to pursue micro-credentials	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q11	11. Does your country encourage quality assurance agencies to adapt and develop quality assurance mechanisms* for micro-credentials issued by different types of providers? *e.g. making the criteria and practices more agile and flexible, aligned with changing industry and professional skill standards. (2022/C 243/02, article 9.a)*	HE	VET
		Please select an option	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words

Q12	12. Does your country ensure that quality assurance for micro-credentials is informed by relevant regional and international standards and guidelines*? *e.g. the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and Quality assurance principles for qualifications that are part of national qualifications frameworks or systems referenced to the European Qualifications Framework (EQF Recommendation, Annex IV) (2022/C 243/02, article 9.a and Annex II.1).*	HE	VET
		Other (please describe the approach)	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words

Q13	13. Does your country encourage micro-credential providers to implement internal quality assurance? *Providers should make sure that internal quality assurance covers all the following elements: the overall quality of the micro-credential itself; the quality of the course; learners' feedback on the learning experience leading to the micro-credential and; peers' feedback, including other providers and stakeholders. (2022/C 243/02, Annex II, 1)*	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q14	14. Has your country adopted procedures for the recognition of prior learning* and validation of non-formal and informal learning** to allow for the awarding of micro-credentials? *Recognition of Prior Learning refers to the process through which an institution certifies that the learning outcomes achieved in other education settings (unfinished studies or other qualifications) satisfy (some or all) requirements of a particular programme, its component or qualification. **Validation of non-formal and informal learning refers to the process through which an institution certifies that the learning outcomes achieved in non-formal or informal settings (work experience, community activity, independent study, and hobbies) satisfy (some or all) requirements of a particular programme, its component or qualification. (see 2022/C 243/02, article 8.c)*	HE	VET
		Please select an option	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words

Q15	15. Does your country promote the development of automatic recognition* for micro-credentials? *Automatic recognition of a degree refers to the automatic right of an applicant holding a qualification to be considered for entry into the labour market or a programme of further study at the next level in any EHEA country. (See 2022/C 243/02, article 13)*	HE	VET
		Please select an option	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words

Q16	16. Are the European Network of National Information Centres and the National Academic Recognition Information Centres (ENIC-NARIC networks) involved in the development of transparent recognition procedures for micro-credentials? *(See 2022/C 243/02, article 13)*	HE	VET
		Please select an option	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words

Q17	17. Does your country promote the sectoral and cross-industry social dialogue* for the development of micro-credentials? *Social dialogue involves organisations that represent workers and employers from both the private and public sectors, small and medium-sized enterprises (SMEs), and professional and managerial staff (2022/C 243/02, articles 8.b and 10).*	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q17.1	17.1. *[If Q17 is YES]* What is the purpose of the sectoral and cross-industry social dialogue for micro-credentials?	Please mark with an X all the options that apply (multiple answers allowed)		
		HE	VET	Employment and market
	• Identifying needs for micro-credentials.			
	• Co-developing micro-credentials.			
	• Co-delivering micro-credentials.			
	• Updating micro-credentials,			
	• Assessing the impact of micro-credentials on upskilling and reskilling			
	• Assessing the impact of micro-credentials on lifelong learning			
	• Assessing the impact of micro-credentials on career development			
	• Under development (please describe the progress/plans)			
	Other (please specify).	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q18	18. Does your country promote the use of 'skills-intelligence' systems* to analyse labour market needs and demographic changes so they can identify any need to develop or update micro-credentials? *Skills intelligence is the outcome of an expert-driven process of identifying, analysing, synthesising and presenting quantitative and/or qualitative skills and labour market information (as recommended in 2022/C 243/02, article 9.b).*	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q19	19. Does your country encourage providers to publish catalogues of their education and training offers leading to micro-credentials on their website? How do providers promote their training offers leading to micro-credentials? *(See 2022/C 243/02, article 9.c)*	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

20. Has your country integrated micro-credentials in national/regional qualifications frameworks? Please explain and specify who can provide micro-credentials.	HE	VET
	Other (please describe the approach	*Please select an option*
(See 2022/C 243/02, article 9.d)	Suggested length: 300 words	Suggested length: 300 words

Q20

20.1. *[If 20 is YES]* Which national qualification framework levels apply to micro-credentials?	Please mark with an X all the options that apply (multiple answers allowed)	
	HE	VET
Level 1		
Level 2		
Level 3		
Level 4		
Level 5		
Level 6		
Level 7		
Level 8		
Level 9		
Level 10		
Cannot answer / I do not know		
Other (please specify)	Suggested length: 300 words	Suggested length: 300 words

Q20.1

21. What are the main challenges for the development of the ecosystem for micro-credentials in your country?	Please mark with an X all the options that apply (multiple answers allowed)		
	HE	VET	Employment and market
• Dedicating funding for its development and implementation.			
• Developing consistent quality assurance and accreditation mechanisms.			
• Developing mechanisms for recognition of prior, non-formal and informal learn			
• Developing mechanisms for automatic recognition.			
• Promoting understanding of micro-credentials by the sector.			
• Promoting collaboration between micro-credential providers and professional			
• Aligning micro-credentials with labour market needs.			
• Developing technological tools for issuing and accessing micro-credentials.			
• Cannot answer / I do not know.			
Other (please specify).	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q21

22. If available, please mention any other measures or practices to promote the development of the ecosystem for micro-credentials in your country.	
HE	Suggested length: 300 words
VET	Suggested length: 300 words
Employment & market	Suggested length: 300 words

Q22

End of section 2

3. Delivering on the potential of micro-credentials

23. Does your country promote the use of micro-credentials to improve access to education and training?	HE	VET	Employment & market
	Please select an option	*Please select an option*	*Please select an option*
(See 2022/C 243/02, articles 11.b)	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q23

23.1. *[If 23 is YES]* Which target groups do micro-credentials policies aim to improve access to education and training?	Please mark with an X all the options that apply (multiple answers allowed)		
	HE	VET	Employment and market
• Young people			
• Elderly people			
• Low-qualified/skilled people			
• Minorities			
• People with disabilities			
• People with migrant background			
• Refugees			
• People with fewer opportunities because of their geographical location			
• People with fewer opportunities because of their socio-economically disadvanta			
Other (please specify).	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q23.1

24. Does your country include education and training offers leading to micro-credentials in official catalogues of education and training opportunities?	HE	VET
	Please select an option	*Please select an option*
(See 2022/C 243/02, article 11.a)	Suggested length: 300 words	Suggested length: 300 words

Q24

25. Can micro-credentials in your country be stacked*?	HE	VET
	Please select an option	*Please select an option*
*'Stackability' means the possibility to combine different micro-credentials and build logically upon each other. Decisions to 'stack' or combine credentials lie with the receiving organisation (e.g. education and training institutions, employers, etc.). Stacking does not create an automatic entitlement to a qualification or a degree. Such decisions are made by regional and national authorities or institutions in line with their awarding processes.	Suggested length: 300 words	Suggested length: 300 words
(See 2022/C 243/02, article 18.c and Annex II.5)		

Q25

25.1 Are HEIs in your country autonomous/allowed to stack micro-credentials?	HE	VET
	Please select an option	*Please select an option*
(See 2022/C 243/02, article 11.a)	Suggested length: 300 words	Suggested length: 300 words

Q25.1

Q26	26. Has your country implemented Individual Learning Accounts (ILAs)*? *ILAs are virtual skills wallets, established by national authorities, for every person of working age (employed, self-employed, those in atypical forms of work, and the unemployed and people outside the labour force) that attach training rights to individuals, rather than to jobs, to fund future education and training activities. (See 2022/C 243/02, articles 12.b and 15.a)	**HE** *Please select an option* Suggested length: 300 words	**VET** *Please select an option* Suggested length: 300 words	**Employment & market** *Please select an option* Suggested length: 300 words

Q27	27. Does your country promote the use of micro-credentials in employment and labour market settings? (See 2022/C 243/02, article 12)	**HE** *Please select an option* Suggested length: 300 words	**VET** *Please select an option* Suggested length: 300 words	**Employment & market** *Please select an option* Suggested length: 300 words

Q27.1	27.1. *[If 27 is YES]* For what purposes does your country promote the use of micro-credentials in employment and labour market settings?	Please mark with an X all the options that apply (multiple answers allowed)		
		HE	**VET**	**Employment and market**
	• To address skills mismatches and bottlenecks in diverse economic sectors			
	• To re-enter the labour market.			
	• To transition to new jobs.			
	• To upskill and reskill workers in the context of digital transition.			
	• To upskill and reskill workers in the context of green transition.			
	• To update and upgrade employees.			
	• To update and upgrade self-employed and non-standard workers (Non-standard workers refer to different employment arrangements that deviate from standard employment such as part-time and on-call work; temporary agency work and other multiparty employment relationships; platform workers and people working SMEs).			
	Cannot answer / I do not know.			
	Other (please provide details)	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q27.2	27.2 *[If 27 is YES]* Which target groups do these initiatives in the employment and labour market settings address? *(See 2022/C 243/02, article 12.d)*	Please mark with an X all the options that apply (multiple answers allowed)		
		HE	**VET**	**Employment and market**
	• Minimum income recipients			
	• People with disabilities			
	• Long-term unemployed			
	• Low- qualified			
	• NEETs (Not in Education, Employment, or Training)			
	Cannot answer / I do not know			
	Other (please provide details)	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q28	28. Does your country promote the use of micro-credentials to support other policy initiatives? *(See 2022/C 243/02, article 12)*	Please mark with an X all the options that apply (multiple answers allowed)	
		HE	**VET**
	• Implementing the reinforced Youth Guarantee to support young people, including in preparatory training and good quality offers of continued education or training.		
	• Implementation of the Recommendation on an effective active support to employment following the COVID-19 crisis (EASE).		
	• Support the professional development of workers and meet mandatory requirements for upskilling and reskilling in certain jobs and types of work (e.g. for licences, required training and permits).		
	Cannot answer / I do not know.		
	Other (please specify).	Suggested length: 300 words	Suggested length: 300 words

Q29	29. Does your country ensure that information and advice on identifying and selecting micro-credentials is incorporated into lifelong learning guidance services? (See 2022/C 243/02, article 14)	**HE** *Please select an option* Suggested length: 300 words	**VET** *Please select an option* Suggested length: 300 words	**Employment & market** *Please select an option* Suggested length: 300 words

Q29.1	29.1. *[If 29 is YES]* Which target groups do these initiatives in the employment and labour market settings address?	Please mark with an X all the options that apply (multiple answers allowed)		
		HE	**VET**	**Employment and market**
	• Higher education institution career centres			
	• Public Employment Services (PES)			
	• Private employment services			
	Cannot answer / I do not know			
	Other (please provide details)	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q30	30. Has your country defined measures* to implement the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability? *building on relevant existing national arrangements and financial frameworks. This could include links with individual learning accounts where they exist (with due regard for the responsibility and autonomy of education, training and labour-market organisations in the national context). (See 2022/C 243/02, article 15.a)	**HE** *Please select an option* Suggested length: 300 words	**VET** *Please select an option* Suggested length: 300 words

31. Has your country used European Union funds and instruments to support the necessary reforms, from the enabling framework to the development and use of micro-credentials? *(See 2022/C 243/02, article 15.b)*	HE	VET
Q31	*Please select an option*	*Please select an option*
	Suggested length: 300 words	Suggested length: 300 words

31.1. *[If 31 is YES]* Which European Union funds has your country used?	Please mark with an X all the options that apply (multiple answers	
	HE	VET
• European Social Fund (ESF)		
• European Regional Development Fund (ERDF)		
• Erasmus+		
• Horizon Europe		
• NextGenerationEU		
Other (please specify)	Suggested length: 300 words	Suggested length: 300 words

End of section 3

4. Policy embeddedness of micro-credentials

32. For which policy purposes are micro-credentials used in your country?	Please mark with an X all the options that apply (multiple answers allowed)		
	HE	VET	Employment and market
• To support the transition from upper secondary or VET to higher education.			
• To support the transition from upper secondary or VET to adult education			
• To complement existing learning opportunities.			
• To increase participation in lifelong learning.			
• To enhance education access and equal opportunities.			
• To boost the relevance of skills.			
• To promote continuing professional development for educators and trainers.			
• To promote the transfer of the latest research findings into learning opportunities.			
• To enable individuals to acquire, update and improve the knowledge, skills and competences to thrive in an evolving labour market and society.			
Cannot answer / I do not know.			
Other (please provide details).	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q33	33. Has your country developed policy initiatives to promote the uptake of micro-credentials? For which purposes?	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q34	34. Are there coordination/policy mechanisms to promote the collaborative work of diverse stakeholders* for developing policies for micro-credentials? **Education and training institutions, social partners, employers and industry, research and innovation organisations, civil society organisations, employment and inclusion services, and local, regional and national authorities (2022/C 243/02, article 10)*	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

35. What are the main barriers/challenges to the implementation of micro-credentials in your country?	Please mark with an X all the options that apply (multiple answers allowed)		
	HE	VET	Employment and market
• Lack of a generally accepted definition.			
• Lack of general elements and principles for the design and issue of micro-credentials			
• Lack of strategic policies promoting micro-credentials.			
• Lack of legislation regulating micro-credentials.			
• Establishing the purpose of micro-credentials in national education and training systems			
• Lack of stakeholders' engagement in the design of policies and decision-making processes.			
• Aligning different views of diverse stakeholders.			
• Integrating micro-credentials in national qualification frameworks.			
• Gathering sufficient data on outcomes and impacts of micro-credentials.			
• Lack of guiding and support documents.			
• Lack of international (cross-border) collaboration on micro-credentials.			
• Aligning the existing ecosistem of micro-credentials according to the Council recommendation.			
Cannot answer / I do not know.			
Other (please specify).	Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

Q35.1	35.1 Are there any plans/strategies to overcome these barriers/challenges?	HE	VET	Employment & market
		Please select an option	*Please select an option*	*Please select an option*
		Suggested length: 300 words	Suggested length: 300 words	Suggested length: 300 words

End of section 4

5. Closing questions

36. Does your country use these instruments to support the uptake of micro-credentials?

(See 2022/C 243/02, article 16)

Q36		Please mark with an X all the options that apply (multiple answers allowed)	
		HE	VET
	• European Student Card		
	• Europass Platform		
	• Expert Groups		
	• Technical Support Instrument (TSI)		
	Other (please provide details)	Suggested length: 300 words	Suggested length: 300 words

37. How can the European Commission support the cooperation between Member States and stakeholders for the uptake of micro-credentials? *(See 2022/C 243/02, article 17)*

Q37	HE	Suggested length: 300 words
	VET	Suggested length: 300 words
	Employment & market	Suggested length: 300 words

38. Could you name any good practices related to the uptake of micro-credentials in your country?

Q38	HE	Suggested length: 300 words
	VET	Suggested length: 300 words
	Employment & market	Suggested length: 300 words

39. Are there any initiatives in the field of micro-credentials in your country developed by entities other than national/regional/local authorities that you would like to share with us?

Q39	HE	Suggested length: 300 words
	VET	Suggested length: 300 words
	Employment & market	Suggested length: 300 words

40. Were there any recent significant developments related to the uptake of micro-credentials in your country that are not covered in the survey?

Q40	HE	Suggested length: 300 words
	VET	Suggested length: 300 words
	Employment & market	Suggested length: 300 words

41. What is the future outlook on the development of micro-credentials in your country?

Q41	HE	Suggested length: 300 words
	VET	Suggested length: 300 words
	Employment & market	Suggested length: 300 words

Once you have completed the questionnaire, please confirm by sending an email to ieva.grumbinaite@ppmi.lt, hugo.buitrago@ppmi.lt, and EC-SURVEY-MICROCREDENTIALS-2024@ec.europa.eu.

Thank you for your work!