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Assessor Training Lighting Unit

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Development of Micro-Credentials
"Light & Sound" and Assessor Training

WP 4.1: Formalization of Credentialization



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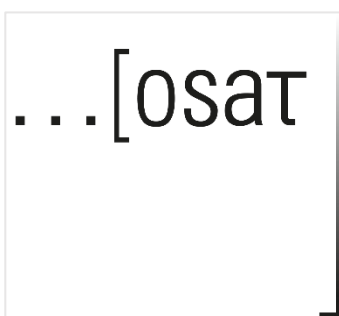


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1. Introduction

A great majority of the project partners (BF/M, OSAT, STEPP and VPLT) have been involved in numerous Erasmus+ projects focusing on the validation of informally and non-formally acquired learning outcomes in the live-performance and event industry sector. They are also engaged in educational policies and educational programs in VET in their respective Member States. This was very advantageous for the development of the two microcredential “Units” – “Light” and “Sound”, for the definition of the assessor skill profiles, and for the creation of a predefined standard for assessing, validating and certifying the learning outcomes of candidates.

There was a common and deep understanding of formal qualification systems, European initiatives, EQF (European Qualifications Framework), ESCO (European Classification of Skills, Competences, Qualifications and Occupations), ECVET (European Credit System for Vocational Education). Experience, reflection and results from conducting the validation process “ETTE- Safety Certificate”¹ in several Member States facilitated an “achievable and no-nonsense” approach to the entire process. The success of this validation and certification process (Belgium/Finland/Sweden/The Netherlands) demonstrates the enormous potential of PACE-VET.

2. Microcredentials

2.1 Definition

The recent dynamic speed of emerging skill needs in almost all labour markets have made the term “microcredential” omnipresent not only in the area of higher education but also in vocational and continuing vocational training. There is no universally recognized definition of what “microcredentials” exactly are.² The term can mean very different things to learners, employers, policy-makers, scholars and educators. This “collective term” first appeared in Google searches in 2013 and refers, more or less, to compact and thematically focused educational programs connected with proven assessment methods to validate learning outcomes.

Despite the relatively new abundance of educational studies and policies surrounding “microcredentials”, it is clear, as Hudak and Camilleri have asserted: *For decades, short courses have been an essential part of adult education and have had a prominent role in continuing professional education in many professions. In driving instruction, vendor-led IT certification, and in medical continuing professional development, they are even the*

¹ The ETTE project. European safety training for stage workers with a corresponding safety passport. <https://www.podiumtechnieken.be/en/health-safety-and-sustainability/ette/>, (accessed: October 25th, 2024)

² Oliver, Beverley. Unesco. Division of Policies and Lifelong Learning Systems. Towards a common definition of micro-credentials. Published in 2022 by the United Nations Educational, Scientific and Cultural Organization 7, place de Fontenoy, 75352 Paris 07 SP, France. 2022. Page 5

*dominant form of education.*³ In other words, forms of compact training courses or certification of a few specific competences have been a self-evident element of professional development and further training for some time.

Since the adoption of the Council Resolution on Lifelong Learning in 2002, there has been a great deal of activity in the European Union to gain support for the development and implementation of methods to ensure pathways to partial recognition of competences and life-long re- and upskilling. The Council Recommendation of 24 November 2020 on vocational education and training (VET)⁴ stresses the importance of “flexibility and opportunities to progress within and between education” and these opportunities lead to “employability” as key elements for VET systems in the future. The Council Recommendation on a European Approach to Micro-credentials for Lifelong Learning and Employability from 2022 states: *Education and training systems should cater for the diverse individual needs, abilities and capacities of all learners.*⁵ It seems clear, that microcredentials will play an important role towards achieving these goals, either in allowing non-formal and informal learners opportunities to validate their learning outcomes and gain access to the labour market, or to facilitate qualified workers to supplement, improve or update knowledge, skills and competences. When vocational qualifications are divided into smaller parts of learning outcomes, VET can provide more flexible, customised content to the needs of individual learners, workers and employers in the sector. This was one of the major goals of PACE-VET.

According to the European Commission and Cedefop (European Centre for the Development of Vocational Training), the definition of a microcredential is: *Record of the learning outcomes that a learner has acquired following a small unit of learning, and that have been assessed against a predefined standard.*⁶

Cedefop exemplifies both of the meanings inherent to the term: “small unit of learning” and “record... – that the learning outcomes have been assessed against a predefined standard”. It should be noted that “microcredentials” are often equated with “digital credentials”. The certification of competences bundled in a small unit of learning *can*, and certainly will in the future, lead to a “digital credential” = digital form of verification, but

³ Hudak, R.; Camilleri, A. F. The Micro-Credential Users' Guide. MicroHE Consortium. 2018. https://microcredentials.eu/wp-content/uploads/sites/20/2021/05/D3_3_MicroHE-Users-Guide-1.pdf. Page 5, (accessed on October 24th 2024)

⁴ Council Recommendation of 24 November 2020 on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience. (2020/C 417/01). (2020). https://www.cedefop.europa.eu/files/celex_32020h120201_en_txt.pdf, (accessed on October 25th 2024)

⁵ Council of the European Union. (2022). Proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. (15). <https://data.consilium.europa.eu/doc/document/ST-9237-2022-INIT/en/pdf>, (accessed on October 15th, 2024)

⁶ Terminology of European education and training policy. Cedefop – European Centre for the Development of Vocational Training. <https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=M>, (accessed October 25th 2024)

currently it could also lead to an analogue or digital document issued by an accredited certifying body.

2.1.1 Meaning and Implementation in PACE-VET

In PACE-VET, the “microcredentials” are understood to be the sets of competences that were defined in the occupational profiles (Units) in the Erasmus+ Projekt TeBeVAT⁷ and their validation through assessment which can lead to a certification of the competences in those units. These profiles are directly related to qualification requirements for live performance and event technicians within the sector in several Member States (Belgium, Germany, The Netherlands), corresponding EQF level 4. They currently do not represent a complete “European Qualification” for a stage technician or event technology specialist – but they could in the future. However, the goal of both projects, TeBeVAT and PACE-VET, was not to create a set of knowledge, competences and skills for a full qualification, but to create an application where learners can store specific competences or competence sets that they consider to have mastered and to enable accreditation centres to assess and validate them. Candidates stipulate: “This is what I know and can do” and PACE-VET provides them with the flexibility for the individual recognition that they need. At the same time, the process supports coherence between the involved actors at the institutional level by providing a professional and adequate framework to work within. In order to provide a basis for the interoperability of the chosen framework, quality assurance systems and high quality standards (IEC 17024:2012) are an integral part of the PACE-VET project.

Both assessment units “Lighting” and “Sound” reflect sets of common tasks in the sector, but are not too encompassing in order to allow for assessment efficiency and accuracy. Experience with assessment processes for the “ETTE Safety Certificate”⁸ helped to facilitate the selection of the competences, knowledge blocks and transversal skills. The assessor unit could be modelled on the ETTE standards. Since the assessment methods in PACE-VET are more varied, and a combination of assessment methods (triangulation) were considered necessary, the assessor unit was more comprehensive.

⁷ See: [Annex WP4.2](#) TeBeVAT: occupational profiles

⁸ European Theatre Technicians Education(ETTE).2017. Basic safety for the theatre and event industry. Erasmus + project no. 2014-1-DE02-KA202-001393. Deutsche Theatertechnische Gesellschaft (DTHG). https://www.podiumtechnieken.be/wp-content/uploads/2019/04/ETTE-combi-handbook-v01_01_EN_03_TEA.pdf, (accessed on October 15th, 2024)

3. Credentialization

3.1 Definitions

3.1.1 Credentials

Neither the European Commission nor Cedefop have an official definition of the term 'credential'. The term has many different meanings to different stakeholders within and outside of educational systems: degrees, diplomas, qualifications, licenses, certificates, badges, microcredentials, and professional/industry certifications as well as documentation of learning achievements in courses, internships, apprenticeships, and various types of military training programmes.⁹ It is apparent that there is little understanding in traditional education institutions for a credential ecology as put forth by leading educators such as Mark Brown, Dublin City University – National Institute for Digital Learning, who was a keynote speaker for the TeBeVAT online event "Learning to Be – Building Resilience in the Event Industry Labour Market in Europe" in April of 2021. Brown, Mac Lochlainn, Nic Giolla Mhichíl and Beirne have attempted to illustrate a credential ecology (see Figure 1), which differentiates between credit-bearing and non-credit-bearing credentials, and credentials that are bundled and unbundled.

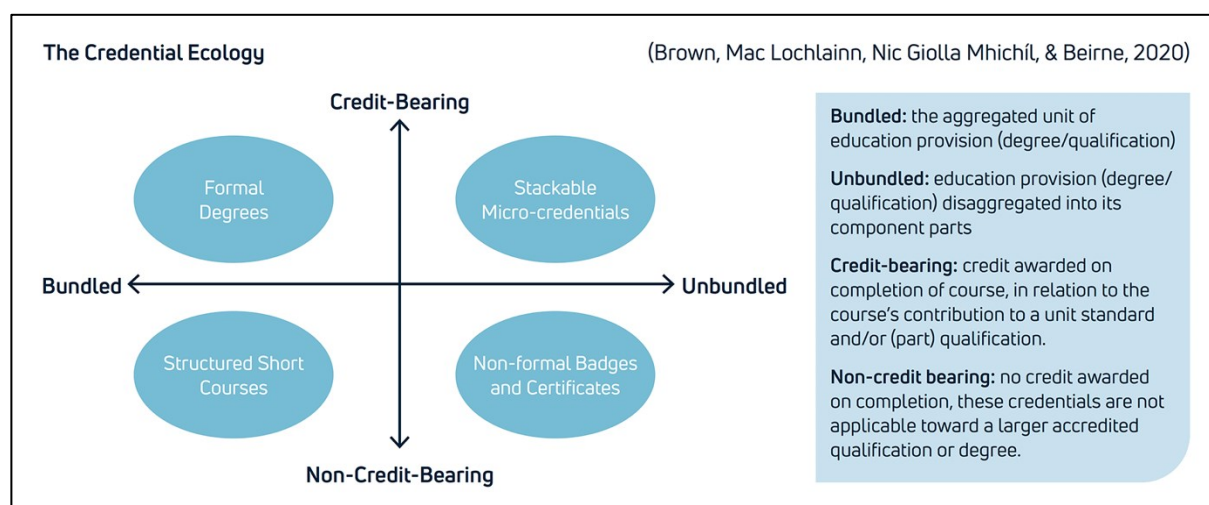


Figure 1: The Credential Ecology

Source: Beirne et al. (2020). Micro-credentials: an evolving ecosystem. Dublin City University. <https://www.skillnetireland.ie/publication/insightpaper-micro-credentials-an-evolving-ecosystem/>, Page 6.4 (accessed on October 15th, 2024)

In this diagram, microcredentials are differentiated from traditional degrees, digital badges or shorter courses as unbundled, credit-bearing credentials. In reality of course, the lines are not that precise or clear. For instance, a live performance and event technician could

⁹ Poulou, A. (2024). Exploring the emergence of microcredentials in vocational education and training (VET). Publications Office of the European Union. Cedefop working paper series, 22. Page 8. <http://data.europa.eu/doi/10.2801/671358>, (accessed on October 15th, 2024)

have taken a non-credit bearing short course at a light board manufacturer and receive a non-formal certificate for that course. The certificate could be used, if it is based on viable and valid evidence of an assessment of learning outcomes related to the use of light boards, to be accepted as partial or complete recognition of prior learning by an accredited assessment centre and therefore contribute to a “microcredential”.

The changing landscape of microcredentials can be seen in both the public and private spaces that exist within VET.¹⁰ Whereas the public space has always played a traditional and prominent role in initial vocational education and training (IVET), the private sector has always been more active in “continuing” VET (CVET). The current drivers for changing this are: digitalisation, globalisation of skills, continuous changes in teaching and learning, and the needs of the labour market for sector specific updated skills.

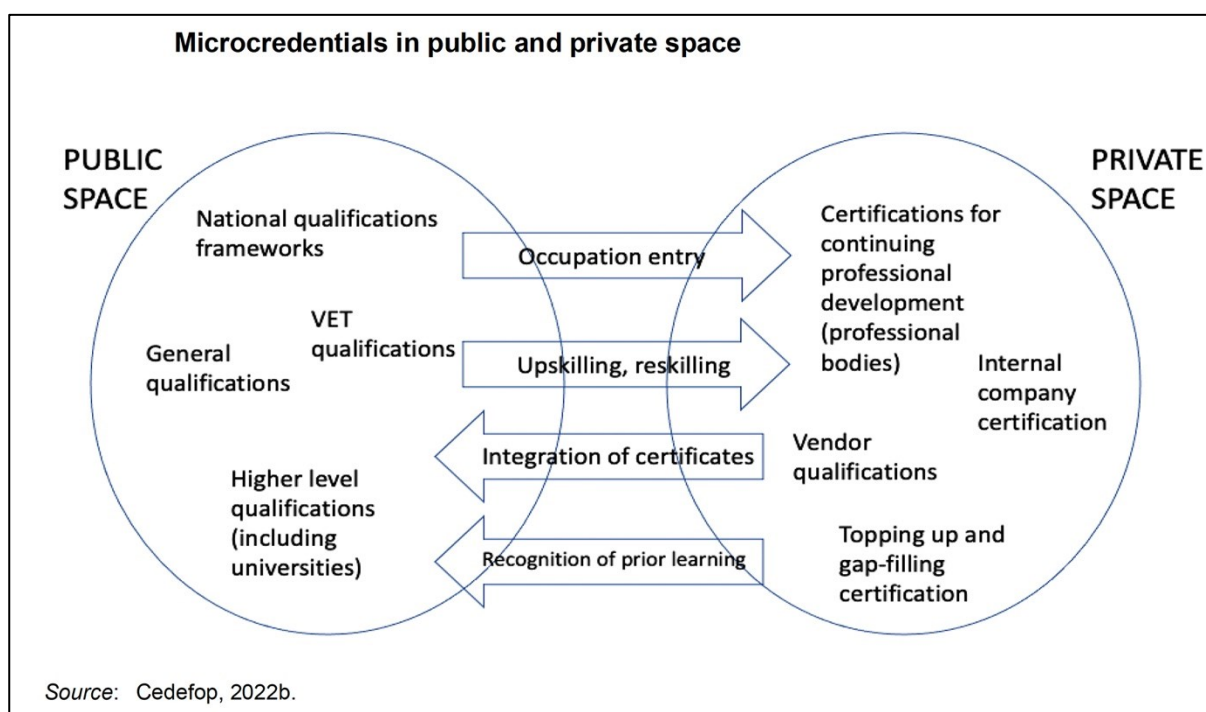


Figure 2: Microcredentials in public and private space

Source: 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, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2801/351271>, Page 10. (accessed on October 15th, 2024)

The TeBeVAT Erasmus+ projects originally concentrated on methods to enable the recognition of prior learning (informal and non-formal) in the live-performance and event technology sector. The results led to PACE-VET, which encompasses a digital structured

¹⁰ 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, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2801/351271>, (accessed on October 15th, 2024)

portfolio and the assessment of many competences that directly relate to national qualification frameworks. It is no longer necessarily a question of “where” or “how” learning activities and outcomes take place. Essential is a platform with an assessment structure for skills and competences, that also has a direct connection with the labour market, combined with quality assurance to validate them. PACE-VET offers transparent, more understandable, comparable and transferable identification, recognition, validation and certification of learning outcomes. Information on the content of the microcredential “Units” is also clear and easily accessible to individuals through the application.

Assessment centres connected with an information, documentation, and accreditation entity on a European level (e.g. ETTEC) can easily cater to the individual needs of learners by offering assessment of microcredential competence bundles distilled from “Units” like the exemplary ones provided in TeBeVAT/PACE-VET. It can also offer access to mentors who can assist candidates through the process and offer further learning opportunities to fill gaps in required learning outcomes. ETTEC would ensure quality assurance and standards for certificates (credentials). These microcredentials represent a new form of recognition of learning outcomes in the sector, acquired both inside and also outside education institutions.

3.1.2 Certification

According to Cedefop, ‘certification’ is: *Process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, know-how, information, values, skills and competences) acquired by an individual have been assessed by a competent body against a predefined standard. Comment: Certification may validate the outcomes of learning acquired in formal, non-formal or informal settings.*

In the PACE-VET process, assessors validate candidate’s learning outcomes. Assessment and certification are carried out within the guidelines of a quality assurance system and an appeals process. Certification takes place within this framework. The certificates are –in agreement with the candidate – then stored in their structured portfolio in the PACE-VET app. For reasons explained in detail in WP2.1, it was agreed that blockchain technology would bring only complexity, higher costs, less efficiency, regulatory concerns, limited added value, and sustainability concerns into the certification process. Traditional database technology for certification issuing and management– when administered properly – should suffice.

3.1.3 Credits | ECVET

The European Credit System for Vocational Education and Training (ECVET) was initiated by the European Commission to facilitate the transferability of assessed learning outcomes of individuals from one VET context to another. The Council Recommendation of November

24, 2020¹¹ marked a change in the status of ECVET in the European VET landscape. Although ECVET as an initiative and as a system was terminated, the principle of “learning outcomes orientation” and “units of learning outcomes” continue to be a priority in European VET.

At Cedefop, “credit” is defined as follows: *Part of a qualification, consisting of a coherent set of learning outcomes that has been assessed and validated by a competent authority, according to an agreed standard, and which can be accumulated towards a qualification or transferred to other learning programmes or qualifications. Comment: A credit is awarded when an individual has achieved the expected learning outcomes, evidenced by appropriate assessment; it can be expressed in a quantitative value (e.g. credits or credit points) demonstrating the estimated workload a learner typically needs for achieving related learning outcome.*¹²

In order to simplify the transnational recognition of learning outcomes and qualifications and make it more transparent, the ECVET concept provided a system for using credit points in vocational education and training. This ECVET element was controversial from the outset. Allocation of ECVET points to a qualification was based on using a convention according to which 60 points were allocated to the learning outcomes expected to be achieved in a year of formal full time VET. In the three-year apprenticeship “Entertainment Technology Specialist” in Germany (Fachkraft für Veranstaltungstechnik) at EQF/DQR Level 4, this would be 180 points.

Credits have often been aligned to learning outcomes in VET to allow for the accumulation of learning modules and to provide for validation and recognition within formal education and training institutions and transferability from one setting to another. Individual modules based on learning outcomes that are expressed in terms of credits are however limited. They usually only really work within the same formal education and training institution, since credits are specifically given to course units, not to competences. In a recent study¹³, interviewees from national authorities and VET providers agreed that the introduction of modular structures in VET and *the application of a learning outcomes-based approach was set to provide more individualised training paths, enabling access and progression for learners*. The credit system, however, can hamper the transferability and mobility of individual modules within and across different VET systems.

¹¹ Council of the European Union. Council Recommendation of 24 November 2020 on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience. (2020/C 417/01). (2020). https://www.cedefop.europa.eu/files/celex_32020h120201_en_txt.pdf, (accessed on October 25th 2024)

¹² Terminology of European education and training policy. Cedefop – European Centre for the Development of Vocational Training. <https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary?letter=M>, (accessed October 25th 2024)

¹³ Pouliou, A. (2024). Page 54

There are also other challenges in using a credit system such as ECVET when validating single competences or microcredentials such as the “Lighting” and “Sound” Units in PACE-VET. ECVET credits are neither meant for single competences nor microcredentials, but for blocks of learning content. They are too big to measure a single or a few competences. This could only be done by using a derivative of the existing systems, for example centi-credits or credit-hours. (one hundredth of one twenty-fifth of a credit).

As was illustrated in the TALQ project, it would be possible to connect a credit (weighting unit) to a (ESCO) competence and use it to calculate the relation between the fixed and variable parts of an occupation. However, the weighting and the level of a profile is not always an absolute value, based on a fixed calculation. The credits and levels used are more or less only indicators that can be used for better understanding and for workability. They are arbitrary and should be based on consensus to be valid. The real value of a sectoral profile and the certification of learning outcomes in microcredentials can only be measured by a sector and Europe wide support of the stakeholders.

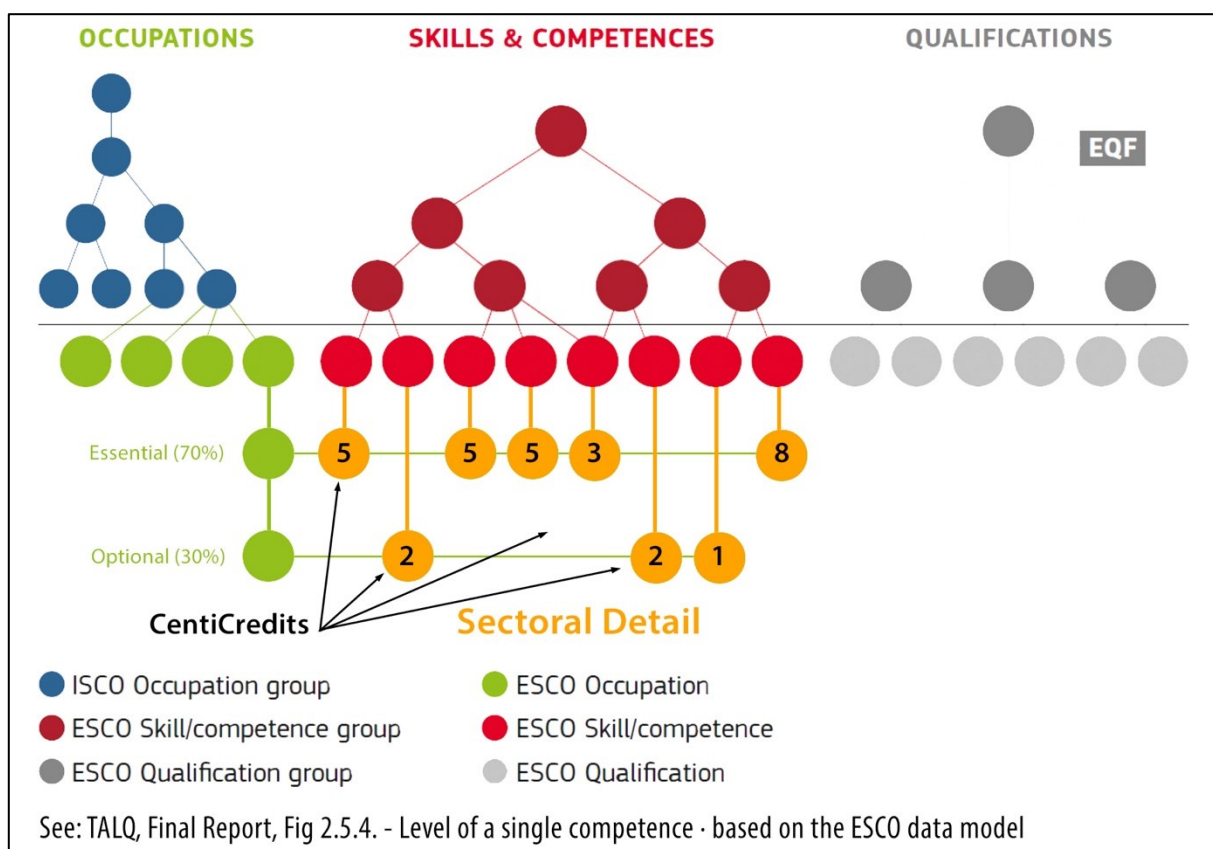


Figure 3: Credits in relation to a single competence

Source: TALQ. 2018. Page 43

The result of the above is a sectoral profile, with a EQF related level, and based on an ESCO occupation defined in ESCO competences, described in a sectoral context. The

sectoral profile has a 30% flexibility, defined by centi-credits to adapt to local specificities. When all these requirements are fulfilled, the profile can be connected to the qualifications pillar.¹⁴

When credits are given to “course units”:

- A candidate may have possibly already achieved some of the competences of a course informally or non-formally, but must repeat them,
- Comparing education programs and courses, to support mobility and inclusion in the EU can be quite difficult, as they are not organised in a similar way.

It is much easier and effective to compare competence profiles than to try and allocate “course credits” in relation to specific learning outcomes in a microcredential. For these reasons and in accordance with the Council Recommendation of 2020, the PACE-VET partners agreed not to attempt to further define “credits” or “points” for the microcredential units chosen for the assessment process. This could be done, but it would have little or no effect on the quality of, or on the acceptance for the entire process.

4. Conclusion

It should be noted that in accordance with Title XII, Article 165 of the TFEU, the European Union must respect: *the responsibility of the Member States for the content of teaching and the organisation of education systems and their cultural and linguistic diversity*.¹⁵ This Article limits the EU in its ability to require the Member States to reform their qualification structures and frameworks to move towards the reforms as stated in the Council Recommendation of 2022. Despite the substantial impact of microcredentials in the development of qualifications in the last decade, most of the studies and implemented solutions take place outside of national education systems (Pouliou).

In the end, if national education frameworks do not reform, they will not be fulfilling their purpose. *Education must evolve to continue to deliver on its mission of supporting individuals to develop as persons, citizens and professionals*.¹⁶ The potential for microcredentials in VET to allow everyone to enter and remain in the labour market is multifaceted. Policy-makers and labour market stakeholders are interested in using microcredentials as a way to recognise and validate prior learning and encourage lifelong learning among adults. Considering the disruptive and transformative changes that are

¹⁴ TALQ. 2018. Page 43

¹⁵ Treaty on the Functioning of the European Union. Consolidated Version. Official Journal of the European Union. C 326/49. 26.10.2012

¹⁶ OECD (2020). Back to the Future of Education: Four OECD Scenarios for Schooling. Educational Research and Innovation, OECD Publishing. Paris, Page 8. <https://doi.org/10.1787/178ef527-en>, (accessed on October 15th, 2024)

expected in the next years, the importance of validating informal and non-formally acquired skills through microcredentials cannot be understated.¹⁷

PACE-VET credentials are based on transparency, trust, European occupational and educational frameworks, and ownership by the learner. The competence-based certificates are evidence of applied learning and developed practical and relevant skills and competences in the sector. The individual learner should be allowed to stack competences and have them documented as they go along their lifelong learning journey.

¹⁷ Pouliou, A. (2024). Page 42.

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Strategic Report

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