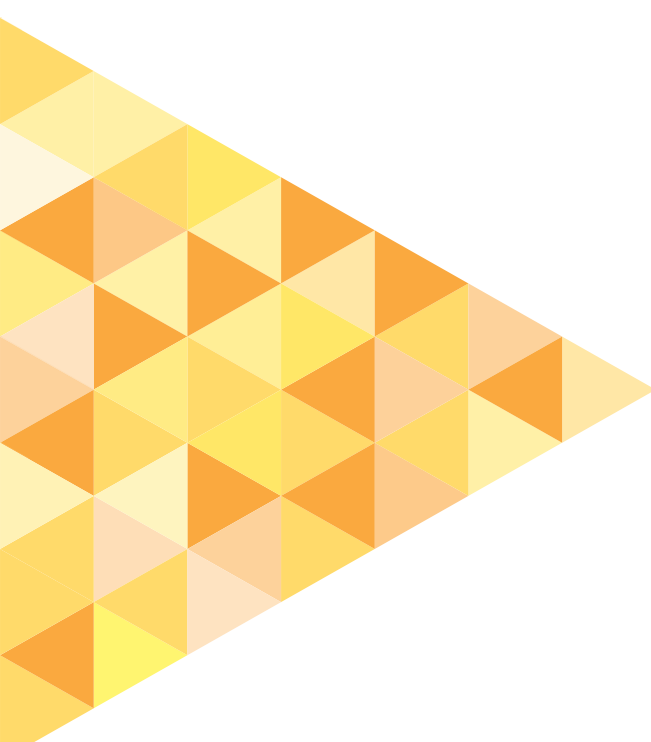


Harry Stolte | Georg Spöttl

Microcredentials – Potential, limitations and applicability of the concept in labour-market-related vocational education and training systems

Expert Opinion



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Microcredentials – Potential, limitations and applicability of the concept in labour-market-related vocational education and training systems: Expert Opinion

Harry Stolte¹, Georg Spöttl²

Prepared on behalf of the Federal Institute for Vocational Education and Training (BIBB).

Abstract:

Microcredentials are gaining relevance in the context of lifelong learning and the flexibilisation of educational pathways. Against this background, this expert opinion examines the extent to which the concept of microcredentials – as defined in the 2022 EU Council Recommendation – can be transferred to workplace related VET systems. The results reveal fundamental areas of tension: the work process-oriented logic of dual VET is only compatible with the modular, small-scale approach of microcredentials to a limited extent. Particular challenges arise in the areas of competence orientation, quality assurance and recognition practices. While the EU Council Recommendation emphasises microcredentials as a tool for promoting mobility and lifelong learning, the study reveals serious systemic resistance and considerable implementation hurdles for the vocational training sector. The structural differences between small-scale learning opportunities and vocational training logic lead to conflicting goals – especially between the desired flexibility and the preservation of established quality standards in vocational training. The study warns against uncritical adoption of the concept, as this could jeopardise proven dual training structures and lead to a decline in quality, and calls on stakeholders involved in the issue to take greater account of the specific requirements of in-company training. The study is intended to stimulate a differentiated discussion on the possibilities and limitations of microcredentials in dual systems, without making any hasty recommendations for implementation.

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Table of Contents

Index of abbreviations	7
1 Introduction and aim of the report	9
2 Task	10
3 Microcredentials in vocational education and training – outlining the problem	11
4 Microcredentials from an international perspective	15
4.1 Critical reflections on the international debate	15
4.2 OECD positions	17
4.3 Discussion at World Bank, UNESCO and ILO	24
4.4 National Vocational Qualifications (NVQs) and microcredentials	25
4.5 European Union (EU) positions	26
5 Microcredentials and the debate in Germany	30
5.1 Positions from the higher education sector	31
5.2 Bundesrat position on microcredentials	32
5.3 Contexts of German vocational education training and positions on microcredentials	34
5.4 Interest group positions on microcredentials	35
5.5 Reflections on the benefits of microcredentials in initial, advanced and continuing vocational education and training	41
6 Mutual recognition of competencies and transferability of microcredentials	44
6.1 Terminological and conceptual variances in the design, assessment and recognition of microcredentials	44
6.2 Approaches to recognition and transferability in vocational education and training.	46
6.3 Compatibility of microcredentials with the structures of dual vocational education and training	48
6.4 Summary	54
7 Conclusions	55
7.1 Effects of microcredentials in terms of strengthening employability are not evident	55
7.2 The design of microcredentials conflicts with the promotion of occupational competence	55
7.3 Microcredentials are not compatible with the dual system.	56
7.4 The terminology surrounding microcredentials is confusing	57
7.5 Various national and European stakeholders are advocating the integration of the microcredentials concept into VET systems.	58

7.6	Establishing microcredentials as an additional instrument alongside existing modularisation concepts and systems is not a sensible step.	59
7.7	It remains to be seen whether microcredentials can help in supporting the Europeanisation of national VET concept	59
7.8	The introduction of microcredentials has so far been insufficiently focused on the realities and challenges of education and training systems.	60
7.9	An improved link to labour market requirements is not anticipated from the use of microcredentials.	60
7.10	Shortcomings in the quality assurance of microcredentials make it harder to ensure transparency and recognition of the competencies delivered.	61
7.11	There is no clarification of the potential for accumulating and combining microcredentials in terms of “modules”.	61
7.12	Microcredentials cannot be regarded as problem-solvers for education and training systems and for employability	62
7.13	Doubts are justified as to whether effects can be achieved with microcredentials that have not been seen with ECVET and ESCO	62
7.14	The potential advantages of microcredentials are assessed very differently	63
7.15	The holistic approach of the dual system leads to employability and should not be challenged by compartmentalised approaches	63
	Bibliography	65
	Appendix	72

Index of tables

Table 1:	Vocational education and training models with transitions	50
Table 2:	Comparative examination of the characteristics of dual/dualised VET and of microcredentials in VET	52

List of figures

Figure 1:	Types of credentials in education and training ecosystems	15
Figure 2:	Validation modes in the context of verification and certification.....	17
Figure 3:	Integration models of alternative credentials	18
Figure 4:	Participants in a microcredential ecosystem	20
Figure 5:	Options for mechanisms to support the implementation of policy initiatives for establishing microcredential ecosystems	21
Figure 6:	Competence dimensions of the German qualifications framework (GQF) and occupational competence.....	47

Index of abbreviations

Abbreviation	Original name Translation
AQF	Australian Qualifications Framework
BBiG	Berufsbildungsgesetz Vocational Training Act
BDA	Bundesvereinigung der Deutschen Arbeitgeberverbände Confederation of German Employers' Associations
BEM	Beyond Europe with Microcredentials (Erasmus Plus project)
BIBB	Bundesinstitut für Berufsbildung Federal Institute for Vocational Education and Training
BMBF	Bundesministerium für Bildung und Forschung Federal Ministry of Education and Research
Cedefop	European Centre for the Development of Vocational Training
DGB	Deutscher Gewerkschaftsbund German Trade Union Confederation
GQF	German Qualifications Framework
ECVET	European Credit System for Vocational Education and Training
ECTS	European Credit Transfer and Accumulation System
ENQA	European Association for Quality Assurance in Higher Education
EQAR	European Quality Assurance Register for Higher Education
EQF	European Qualifications Framework
ESCO	European Skills, Competences, Qualifications and Occupations
ETF	European Training Foundation
EU	European Union
FIBAA	Foundation for International Business Administration Accreditation
HRK	Hochschulrektorenkonferenz German Rector's Conference
ILO	International Labour Organisation
LLL	Lifelong learning
OECD	Organisation for Economic Co-operation and Development
NQF	National Qualifications Framework
NVQ	National Vocational Qualification

Abbreviation	Original name Translation
RQF	Regulated Qualifications Framework
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-UNEVOC	International Centre for Technical and Vocational Education and Training
VET	Vocational education and training

1 Introduction and aim of the report

In the proposal for a “Empfehlung des Rates über einen europäischen Ansatz für Microcredentials für lebenslanges Lernen und Beschäftigungsfähigkeit” [Council Recommendation on an European approach to micro-credentials for lifelong learning and employability] (cf. COM 2021a) reference is made to the Commission President's stated intention in the European Commission political guidelines *“to bring down barriers to learning and improve access to quality education”* (COM 2021a, p. 1). The importance of inclusion and quality in lifelong learning (LLL) is emphasized, as declared in the European Pillar of Social Rights (cf. *ibid.*). The recommendation of the Council (Employment, Social Policy, Health and Consumer Affairs) of December 2021 (cf. *ibid.*) was accepted at the meeting of the Council on 16 June 2022 (cf. RAT DER EUROPÄISCHEN UNION 2022). The development, implementation and recognition of microcredentials for lifelong learning and for improving employability across institutions, companies, sectors and borders lies at the heart of the adopted proposal. Hippach-Schneider and Le Mouillour (2022, p. 35) establish that the European Commission set the course for a recommendation on microcredentials as early as 2000 in the European Skills Agenda for sustainable competitiveness, social fairness and resilience (cf. COM 2020). The strategy pursued by the Commission is to help people *“develop skills in a rapidly changing labour market”* (COM 2021a, p. 1). An initiative on microcredentials is intended to support this strategy and, above all, to help shape the European Education Area by 2025.

The European Commission paper (cf. *ibid.*) sets out why the development and use of microcredentials (as a component of national education systems) is recommended:

- *“In Europe, people need to continually update their knowledge, skills and competences to fill the gap between their education and training and the demands of a rapidly changing labour market.”* (COM 2021a, p. 1).
- *“The COVID-19 crisis has led to rapid growth in demand for short, tailored learning opportunities. This demand for new forms of learning has led to a corresponding increase in interest in ‘micro-credentials’ that certify the outcomes of these small learning experiences.”* (COM 2021a, p. 1).
- *“Micro-credentials enable the targeted, flexible acquisition and recognition of knowledge, skills and competences to meet new and emerging needs in society and the labour market. [...] [Micro-credentials] can complement traditional qualifications and serve as a lifelong learning opportunity to all.”* (COM 2021a, p. 2).

Reference is also made to the fact that the microcredentials can be delivered by a variety of providers in many different formal, non-formal and informal learning settings. By way of a caveat, however, the Council of the European Union notes that there is neither a common definition nor basic standards for microcredentials. The Council states that concerns therefore have to be raised regarding the value, quality transparency and portability of microcredentials (cf. RAT DER EUROPÄISCHEN UNION 2022). Eliminating the deficits referred to is identified as a key task in resolving the current problems. The explanation in the European Commission paper (cf. COM 2021a) and the Council Recommendation (cf. RAT DER EUROPÄISCHEN UNION 2022), based on consultations in 2021 (see HIPACH-SCHNEIDER/LE MOUILLOUR 2022, p. 35 ff.), have given significant impetus to discussion surrounding microcredentials in Europe.

Currently, there is a noticeable increase in the scope and intensity of the focus on microcredentials. In the context of VET, there is evidence of increasing contributions to the discussion from a range of institutions (European Centre for the Development of Vocational Training (Cedefop), European

Training Foundation (ETF)) (cf. POULIOU 2023). At the same time, it is also becoming clear that many different approaches are being discussed on the basis of numerous projects (cf. SHAPIRO FUTURES /ANDERSEN/NEDERGAARD LARSEN 2020), however, in terms of established training and education systems, no final clarification of concepts is arrived at, nor are implications being considered (cf. SABBAGH 2022). It therefore makes sense to examine some of the unresolved issues in greater detail.

Although in use in higher education and in English-speaking countries, the term “microcredentials” has been an unfamiliar term in VET in Germany up until now. Much is still unresolved and unclear, and no uniform understanding or notion exists regarding the role which microcredentials could or should play in the member states.

In parallel with this development, the European Commission published a call for proposals at the end of 2021 in the field of “Capacity Building” within the scope of the Erasmus Plus programme. In December 2022, the Federal Institute for Vocational Education and Training (BIBB) took on the task – in a partnership of EU member countries, associated countries and non-EU countries in the Erasmus+ “Capacity Building” project BEM (Beyond Europe with Microcredentials) – of transferring experience and approaches from ECVET (European Credit System for Vocational Education and Training) to the development of microcredentials relevant to the labour market (cf. <https://www.bibb.de/en/174468.php>). In light of this, the creation of a report which critically assesses the concept of microcredentials for their applicability in the labour market, in dual systems of VET and in VET systems seeking greater integration between the labour market and the education system, is also of huge relevance to practice.

2 Task

The task issued by the Federal Institute for Vocational Education and Training (BIBB) to produce a report on microcredentials in VET comprises the following background and areas for examination.

Currently, there is a noticeable increase in the scope and intensity of the discussion surrounding microcredentials as regards VET. It is also becoming evident that, as of yet, there is no clarification of the role microcredentials might play in a VET structure as it exists in Germany. Clarification is therefore needed on what the implications will be of using microcredentials to support employability, training quality and training course design and of their use in “systems” such as European Skills, Competences, Qualifications and Occupations (ESCO) in terms of learning, learning support and systemic developments. To provide answers, the following will be analysed in detail:

- Review of the current state of the discussion (from a factual, education policy and structural perspective), including a description of whether, and if so, how other countries and organisations (e.g. Organisation for Economic Co-operation and Development (OECD)) value microcredentials in VET and how they are already using them.
- Compatibility with dual or dualized VET systems structures (also in terms of compatibility with underlying standards and regulatory instruments).
- Potential and limitations of microcredentials with regard to
 - transferability of microcredentials between different systems and countries
 - the significance and benefit of microcredentials to the employment system (including in the context of ESCO)
 - a mutual recognition of competencies
 - requirements in terms of appropriate examination procedures (including the impact which the use of micro credentials would have on the examination system)

The report has been produced based on an analysis of literature. The following materials were included in the analysis:

- Publications from the European Commission and the Council of the European Union. This also includes reports commissioned by the European Commission.
- Opinions of German bodies such as the Bundesrat, parties, BIBB and associations on the proposals and recommendations of the European Commission and the Council of the European Union.
- Publications on the subject in periodicals, magazines, scientific journals and on the Internet.
- Publications from international organisations such as UNESCO-UNEVOC, OECD, the International Labour Organization (ILO), Cedefop and others.
- Selected biographies on the subject of microcredentials (cf. EBERHARDT 2023).
- Publications from training providers, initial and continuing VET organisations and from projects.

The literature identified was analysed in relation to the issue addressed. The results of the analyses are presented and evaluated in the individual sections.

The advantages of microcredentials in terms of sustainable employability, labour market relevance and the quality of institutional and systemic developments are also unclear (cf. RALSTON 2021). This therefore provides scope for an analysis of selected key questions:

- What are the main positions being discussed on the topic of microcredentials and by whom, and how are these positions justified?
- Who defines micro credentials and with what intention?
- Which “institutions”/VET organisations are indicating interest in using microcredentials and why?
- What potential and limitations would microcredentials entail if used in VET systems with relevance to the employment market?
- What is the response from the continuing education training market to the microcredentials format?
- Are microcredentials compatible with the dual system of VET?
- What role does “interoperability” play within European VET practices?
- Is VET policy-making developing approaches to support the transnational and mutual transferability of microcredentials and, if so, what are they?

These issues are addressed as central questions in the report and, as far as possible, answers are provided in the summary.

An overarching objective, however, must be to identify whether microcredentials can contribute to improving quality in VET and can help to facilitate the transferability of competencies acquired.

3 Microcredentials in vocational education and training – outlining the problem

This section focuses on:

- The level of importance currently given to discussion surrounding microcredentials within VET in Germany.

- The problems associated with this
- Key themes in VET (flexibilisation, partial qualifications, continuing education, individualisation, lifelong learning, modularisation, German Qualifications Framework (GQF)) being linked to microcredentials.

The practical relevance of microcredentials and relevance in terms of VET policy-making are addressed in more detail below; the transfer aspect is also discussed.

The communication from the Commission to the European Parliament, the Council of the European Union, the European Economic and Social Committee and the Committee of the Regions regarding the “Europäische Kompetenzagenda für nachhaltige Wettbewerbsfähigkeit, soziale Gerechtigkeit und Resilienz” [European Skills Agenda for sustainable competitiveness, social fairness and resilience] (see COM 2020) contains the proposal for the development of microcredentials. This proposal was discussed in the relevant Bundesrat committees in September 2020 (the Bundesrat's recommendations are addressed below). The European Commission papers use the following as the basic definition of microcredentials (cf. COM 2021c; see info box).

Info box: Microcredentials as defined by the European Commission (see COM 2021c, p. 5)

“‘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.”

Annex I of the appendix to the Council Recommendation (cf. RAT DER EUROPÄISCHEN UNION 2022) specifies “European standard elements” to describe the microcredentials. These are:

- Mandatory elements: Identification of the learner, title of the microcredential, region of the issuer, learning outcomes and others.
- Optional elements: Prerequisites needed to enrol in the learning activity, identity verification, grade, stackability options and others

The Council recommendations (adopted on 16 June 2022) specify objectives and functions which apply with the introduction of microcredentials (cf. RAT DER EUROPÄISCHEN UNION 2022, p. 3 ff.). The focus is on the certification of small, tailored learning experiences in order to meet the needs of the labour market by means of the targeted, flexible acquisition of knowledge, skills and competencies. In terms of learners, the purpose of microcredentials is to enable them to close individual skills gaps without replacing traditional qualifications. In this respect, microcredentials represent flexible education and training formats which can be designed and issued by a range of providers in different learning settings (formal, non-formal and informal). It is implied that the flexible and modular design of microcredentials will facilitate the development of new learning opportunities for disadvantaged target groups and promote access to tertiary education and opportunities for reskilling and upskilling. The “European Pillar of Social Rights Action plan” refers to microcredentials as an innovative instrument that can “*facilitate flexible learning pathways and support workers in their job or during professional transitions*” (COM 2021b). Microcredentials are

assigned a role in delivering the EU's headline targets by 2030, including the target of 60 percent of all adults participating in initial and continuing VET each year and a targeted employment rate of at least 78 percent (cf. COM 2021b)

The fragmented extracts cited above from the Council's recommendation provide an excellent insight into the purpose and intent of the recommendations. This is primarily organisational information on how to ensure the flexible use of microcredentials. The focus is on the design of microcredentials in the form of small, tailored learning units and the associated accumulation of learning experiences to support the targeted and flexible acquisition of knowledge, skills and competencies. Benefits from this flexibility are implied in terms of creating dynamic labour markets and supporting the digital transformation. The recommendations culminate in objectives (see above), the implementation of which is recommended to the member states. The goal is to provide training providers with an instrument for the planning of training and competency development concepts and for offering these as affordable units. The intention is also to only use microcredentials outside of approaches characterised by regulatory instruments. The focus here is on non-formal and informal learning. Validation processes may be used in this case. In the Council recommendations on a European approach to microcredentials for lifelong learning and employability (cf. COM 2021b), member states are encouraged to ensure the development of microcredentials. They should:

- explore the use of microcredentials in initial and continuing VET and in reskilling,
- consider making public funding available for the broad-based provision of microcredentials at all levels of VET,
- support the widest possible range of microcredential providers,
- adapt existing procedures for the validation of non-formal and informal learning processes in order to facilitate the awarding of microcredentials,
- develop quality assurance mechanisms for microcredentials,
- initiate the integration of microcredentials in national qualifications frameworks, and
- promote effective trialling, cooperation, governance and partnerships between stakeholders.

Potential microcredential providers are urged to publish catalogues of microcredential courses and to ensure their recognition/accreditation. Annex II of the appendix to the Council Recommendation (cf. RAT DER EUROPÄISCHEN UNION 2022) specifies the "Principles for the design and issuance of microcredentials":

- Quality: Microcredentials are subject to quality assurance by the system producing them.
- Transparency: Microcredentials are measurable and focussed on learning outcomes.
- Relevance: Microcredentials are designed as distinct, targeted learning achievements.
- Valid assessment: Microcredential learning outcomes are assessed against transparent criteria.
- Learning pathways: Microcredentials support flexible learning pathways and their design ensures recognition across different systems.
- Recognition: Microcredentials are recognised by the competent authorities. This applies both to academic as well as to general and VET. Recognition procedures should be standardized.
- Portable: Microcredentials are owned by the credential-holder (the learner).
- Learner-centred: Microcredentials are designed to meet the needs of learners.

- Authentic: It must be possible to check the identity of the credential-holder (learner) and issuer.
- Information and guidance: Information and advice on microcredentials should be incorporated in lifelong learning guidance services and should reach the broadest possible groups.

In Annexes I and II of the Council recommendation (cf. RAT DER EUROPÄISCHEN UNION 2022) it is evident that microcredentials involve an approach which not only relates to non-formal or informal learning but can also be part of the initial and continuing VET standards or of education and higher education processes. By focussing on microcredentials as *“learning outcomes that a learner has acquired following a small volume of learning”* (COM 2021c, p. 5), the European Commission is following an entirely different approach to that which is usual within the German system of initial VET. In Germany, there is a focus on *“Beruflichkeit”* (occupational competency according to state-recognised skilled occupations) as described by the features below (cf. BECKER/SPÖTTL/WINDELBAND 2023, p. 4):

- There is a link to training processes and to job design.
- Quality standards apply to learning and work.
- There is a focus on occupational fields and work and business processes.
- Development of reflective occupational competence is required.
- Clarification of the relationship between a scientific focus and an experiential focus.
- Interests of learners and workers are taken into account.
- A broad-based basic training and specific specialist knowledge and skills.
- Acquisition of professional experience.
- Social protection of individuals.

Comparing *“Beruflichkeit”* (occupational competency) with the above definition of microcredentials shows that the requirement for *“Beruflichkeit”* is not only about a goal-focussed training for the labour market, but also about developing competencies which guarantee greater insight into work contexts, and which also meet social expectations alongside the development of professionalism.

Brown et al. (2021) explore the question of what causes can actually be identified for the emergence of microcredentials. The global changes in the world of work and the skills gaps associated with this are identified as the main reasons to justify this:

- Disruptive forces of change such as increasing globalisation bring about a greater focus of efforts in the area of qualifications
- Ageing populations require flexible training processes
- Climate change requires skilled workers for the construction of alternative energy plants etc.

The study by Brown et al. (2021) further states that technological progress, including the impact of artificial intelligence (AI), underlines the importance of continuing training and reskilling and the development of the ability to be successful in the new digital world. Reference is made to the need to promote lifelong learning and invest in reskilling in order to make people fit for the workplace again following the COVID crisis. Buchanan et al. (2020), on the other hand, argue that *“[...] preoccupation with aspirational curriculum reforms like ‘21st century skills’ and ‘micro-credentials’ promoted to achieve employment growth can be a distraction from what successful education systems can*

achieve.”. This refers to education and training systems focused on broad, experience-based and long-term competence development (cf. RALSTON 2021).

4 Microcredentials from an international perspective

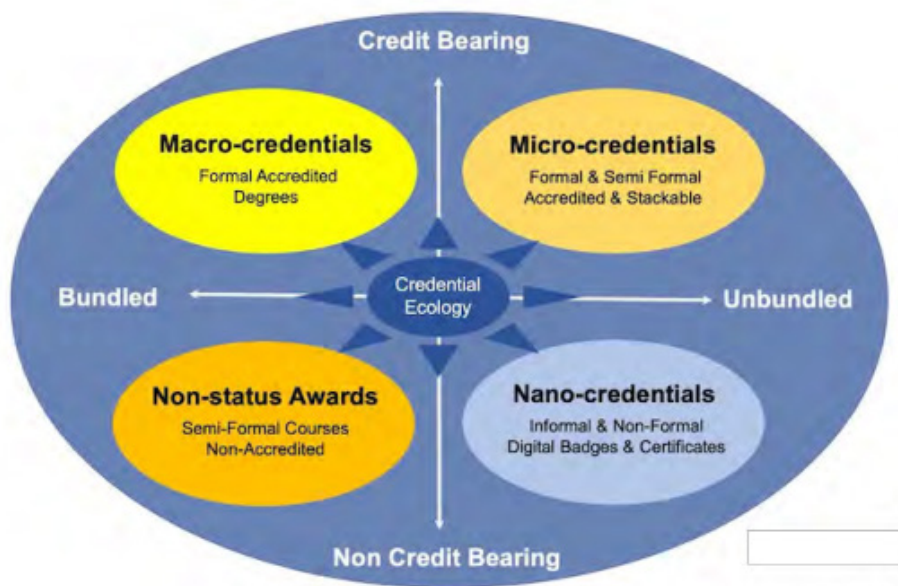
Since the beginning of the 2020s, there have been increasing contributions in the international debate seeking to structure the diffuse nature of educational and training concepts associated with the key term “microcredentials” and to classify them in the context of existing educational systems and areas.

4.1 Critical reflections on the international debate

In the study “The Global Micro-credential Landscape: Charting a New Credential Ecology for Lifelong Learning”, Brown et al. (2021) make reference to the fact that an underlying tension exists between alternative qualifications – such as microcredentials – and the formal (traditional) qualifications existing in parallel. This is particularly evident when introducing microcredentials and endeavouring to embed them coherently in existing qualification frameworks. To help more clearly depict the field, Brown et al. (cf. *ibid.*) have defined four formats of microcredentials intended to help illustrate a newly emerging skills landscape.

Figure 1 shows the four qualification quadrants across two axes.

Figure 1: Types of credentials in education and training ecosystems



Source: BROWN et al. 2021

Traditional macro certificates and credit-bearing micro certificates acquired via formal and semi-formal learning are positioned on the Y axis. The X axis shows the degree to which certificates and related units of study are bundled together by the issuing body or institution. This contrasts with learners having a high degree of choice over how they wish to make up their own learning bundle.

According to this typology, microcredentials are differentiated from traditional macro-credentials (non-status awards such as short courses and nanocredentials, including digital badges or certificates) as unbundled, credit-bearing, stackable credentials. In reality, however, the distinction between the quadrants in this credential map is not always clear-cut. For instance, an individual learner could have a non-credit-bearing credential in project management. This credential could be assessed as recognition of prior learning (RPL) by a university or as part of a wider professional portfolio, which, in turn, contributes to a credit-bearing microcredential. Another way of expressing the different types of microcredentials and related pathways is to visualise three distinct categories. Each category can be represented on a different axis. For example, the y-axis depicts an upward, life-long, career-focused trajectory where different learning blocks can be stacked together to earn a credit-bearing microcredential. This vertical “stackable” representation contrasts with the x-axis which encapsulates non-formal and informal short learning experiences with more of a “sideways”, lifelong, interest-focused trajectory. Such horizontal learning is typically non-stackable and contributes to non-credit-bearing microcredentials that may or may not relate to one’s work or employability. The microcredentials by RPL or portfolio example presented above can be depicted as a diagonal line that joins or connects both axes as people reflect on a collection of small informal and non-formal learning experiences completed over time. Of course, such a learning portfolio needs to be formally assessed against transparent criteria. This third category shows that the vertical and horizontal depiction of microcredential types is not binary or mutually exclusive.

Brown et al. (2021) identify technology (IT) companies, IT-based learning platform operators and content providers as a driving force – following business interests – behind microcredentials being established. The establishing of Massive Open Online Courses (MOOCs) and other online learning offers observed around 2019 underwent an enormous expansion due to the coronavirus pandemic and this has continued with an increasingly upward trend ever since (over this period, online formats became firmly established worldwide). This development was also increasingly accompanied by an interest in certifying online learning opportunities (supporting business) – generally limited to shorter time periods. This desire is in line with the microcredentials approach. As is evident from where the market is heading, as illustrated in Figure 1, business volumes are also expected to grow in this area in the years ahead.

A discussion paper by the AI Campus Berlin on developments in the higher education sector (FLASDICK et al. 2022) references the fact that microcredentials and microdegrees have become established in particular in the international digital learning platforms market – primarily in order to attract or retain clients with high purchasing power from the business world with new offers. The reasons given for this are, for example, that the new microcredentials – in contrast to full degrees or complex certificates – can be acquired in a much shorter time frame and therefore seem perfectly suited to meeting current vocational training needs or individual continuing education and training desires quickly and in a non-bureaucratic manner. Increasing numbers of microdegrees can also already be “stacked” (“stackability”) to create complete qualifications which would therefore make them, so to speak, attractive for stakeholders with higher level and more wide ranging training goals.

Flasdick et al. (cf. *ibid.*) highlight that, in the international market for digital learning in particular, microcredentials and microdegrees are increasingly playing an important role, especially when appealing to target groups with high purchasing power from business. While the courses themselves are still free of charge in some cases – which is entirely in line with the free MOOC

culture from which most providers originate – fees are charged for the examinations and certificates. However, the trend towards commercialisation is on the rise. Learners are increasingly having to pay to access the relevant courses themselves. There are now more than 1,500 training offers certified with microcredentials on international digital learning platforms (cf. FLASDICK et al. 2022). Some of these microcredentials can be stacked into more complex microdegrees and are playing an increasingly important role in the development of the learning platform business models.

Although simply transferring the applications of microcredentials from higher education into VET is difficult, it must be assumed that the trends described will also gradually begin to take effect in VET.

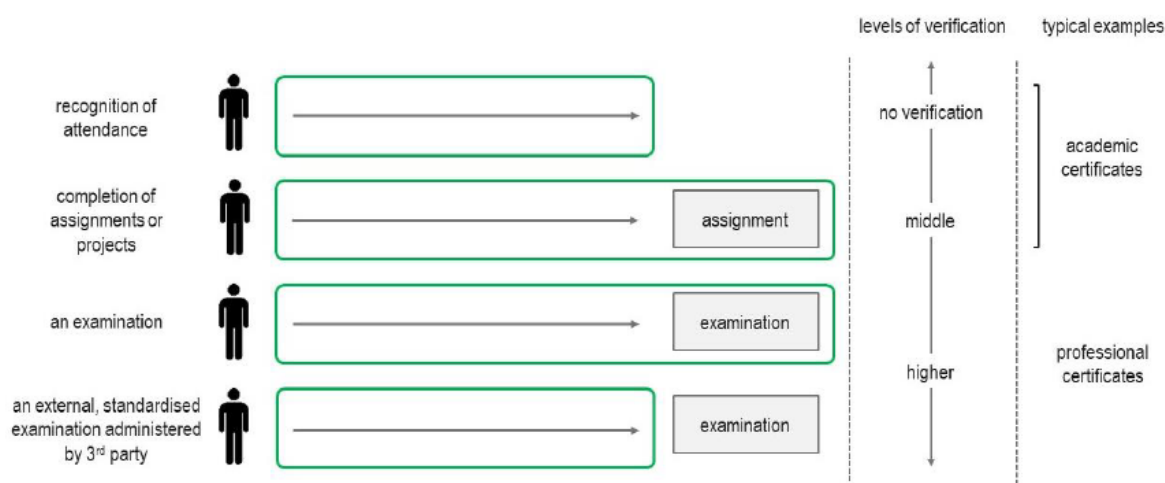
4.2 OECD positions

“Alternative Credentials”

In an OECD working paper, Kato, Galan-Muros and Weko (2020) analyse the emergence of alternative credentials. The authors note that this term, which also includes microcredentials, is relatively recent and not yet in widespread use. They also note that, so far, no generally accepted definition exists. The study shows that the term “alternative credentials” was first popularised in the United States to draw a contrast with higher education qualifications. The authors refer in particular to increasing demand for upskilling and reskilling and to a sharp reduction in the unit cost provision made possible by digitalisation as a reason for the increasing emergence in recent times of alternative credentials. Higher education institutions, businesses and other institutions are actively offering alternative qualifications that help learners acquire new skills, update their existing skills and document the competencies they already have.

The OECD working paper (cf. KATO, GALAN-MUROS AND WEKO 2020) defines the term “alternative credentials” as follows: they are credentials that are not recognised as standalone formal educational qualifications by relevant national education authorities (cf. *ibid.*, p. 8). The skills and all knowledge acquired in alternative qualification programmes can, in accordance with the analysis, be validated and certified in different modes as shown in individual steps for different levels in Figure 2.

Figure 2: Validation modes in the context of verification and certification



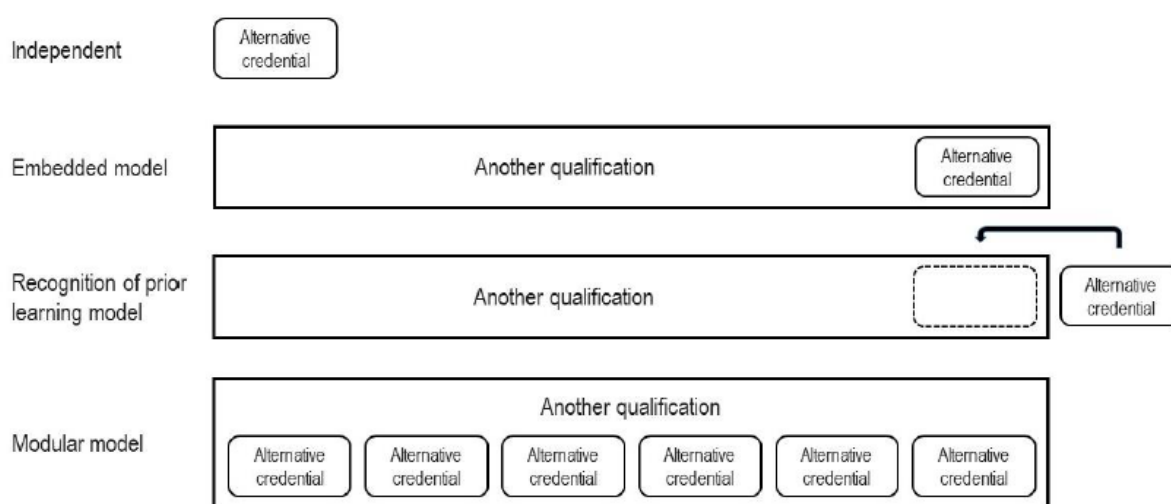
Source: KATO/GALAN-MUROS/WEKO 2020

The research findings (cf. KATO/GALAN-MUROS/WEKO 2020) emphasise that the content and priorities in programmes leading to alternative credentials may be very diverse, ranging from the delivery of general to specialised skills and knowledge, and from cognitive to non-cognitive skills. The studies identify a similar diversity in relation to the integration possibilities of the relevant programmes. These are offered as independent/stand-alone qualifications or integrated into other qualifications. Three basic integration models were identified in the research by Kato, Galan-Muros, Weko (2020) (see Figure 3):

- an embedded model,
- a recognition of prior learning model and
- a modular model

In the case of the embedded model, alternative credentials may be integrated in advance into another qualification programme, with course content and assessments for the alternative credentials used in lieu of locally developed content and assessments. Alternatively, qualification awarding bodies may take alternative qualifications into account retrospectively in the recognition of prior learning in other qualification programmes. In other cases, learners may acquire alternative credentials as modules (which may also be independent credentials) and, after completing several alternative credentials, be able to show they have a further qualification.

Figure 3: Integration models of alternative credentials



Source: KATO/GALAN-MUROS/WEKO 2020

Stakeholder perspectives on alternative credentials

Technology companies are involved to a significant extent in partnerships with higher education institutions and offer courses using (digital) learning platforms such as Coursera, edX, FutureLearn, Udacity, XuetangX etc. (cf. KATO/GALAN-MUROS/WEKO 2020). These include training programmes and examinations for a wider public. Amazon, Cisco, Google, IBM, Microsoft and other technology companies are actively providing alternative qualification programmes focusing on information technology (IT). Existing forms of assessment for these range from professional certificates and “digital badges” through to microcredentials. Kato, Galan-Muros and Weko (cf. *ibid.*) identify that skills acquired in the context of alternative credentials can certainly have an impact on the labour market. On the other hand, they note that it may also be possible for skills described by credentials to be

perceived in a better way by employers and interpreted as a signal of quality. Nonetheless, according to the authors (cf. KATO/GALAN-MUROS/WEKO 2020) constraints can be identified that appear to limit the economic impact of these credentials:

- unfamiliarity with the new credentials,
- confusing signals,
- lack of standardized validation procedures; and relative quality of these credentials as a signal.

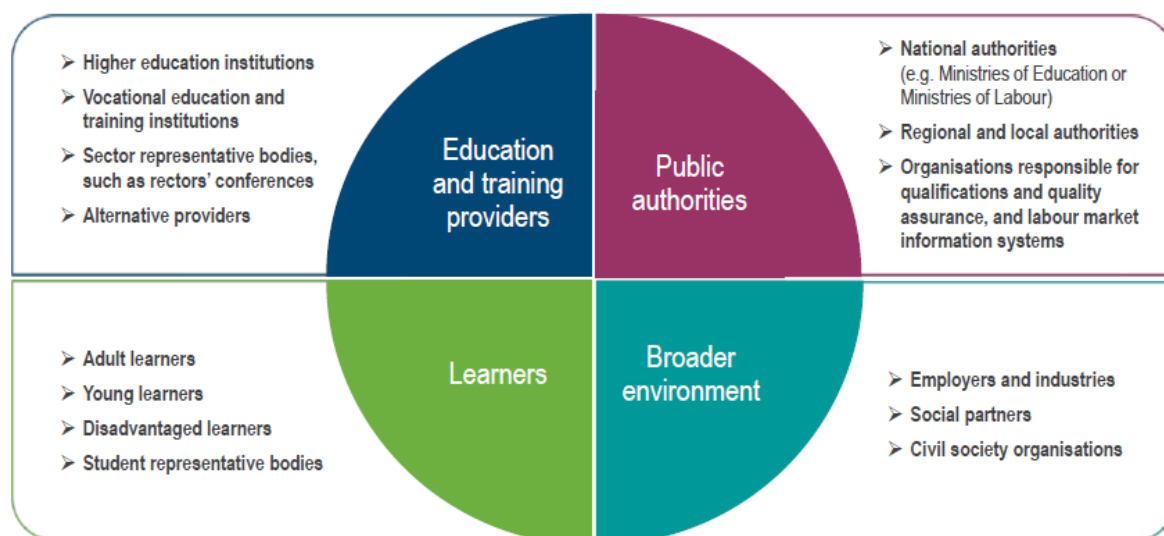
Employers do not yet seem to view alternative credentials as substitutes for formal qualifications, but more as complements to formal qualifications. Although different views exist on the labour market relevance of formal qualifications, a formal qualification appears to still function as a signal of an individual's skills and knowledge.

In “Public policies for effective micro-credential learning”, the OECD (2023a) analyses the effective utilisation of microcredentials for lifelong learning, upskilling, and reskilling. According to this publication, many of the challenges associated with microcredentials are deeply rooted in the existing structures of education and training systems. The case is therefore made for the development of a well-functioning microcredential ecosystem in order that learners as well as employers are able to develop a good understanding of the wide range of programmes offered by different providers. The paper explains that quality assurance would have to adhere to a common framework that ensures that credentials meet specific educational standards. This would also facilitate mutual recognition of these qualifications across providers and borders, explain the OECD (cf. OECD 2023a). According to the OECD, the creation of a robust microcredential ecosystem can be achieved through the combination of two strategies:

- the development of public policies that are supportive of providers and learners, as well as an integration of microcredentials into wider education, training and labour market systems; and
- co-operation among a wide range of relevant stakeholders, including education and training providers, public authorities and employers and industry.

According to the OECD (cf. *ibid.*), public authorities can contribute to the establishment of a well-functioning ecosystem by laying the foundation, through supportive policy infrastructure. While education and training providers can develop and offer microcredentials without having a policy framework in place, this may not adequately address key issues such as transparency, equity, and quality. This highlights the indispensable role of public policies. Regulatory frameworks and guidelines, for instance, can offer a common ground upon which providers can operate, while public funding can incentivise both the development and take-up of microcredentials and ensure these programmes remain accessible to all learners. Comprehensive public information systems could also assist learners and employers in understanding the forms and large number of microcredential offerings. In addition, the efficacy of the microcredential ecosystem can be further enhanced by its integration into educational, training and labour market systems. For example, microcredentials could be aligned with existing educational policy tools, such as national qualifications frameworks, quality assurance procedures and academic credit systems, explains the OECD publication (cf. OECD 2023a). In line with this approach, a robust microcredential ecosystem would ensure the involvement of a wide range of relevant stakeholders, including education and training providers, public authorities, employers, industry partners and others (see Figure 4).

Figure 4: Participants in a microcredential ecosystem



Source: OECD 2023a

According to the OECD (2023a), while it is possible for a single entity to offer microcredentials on its own, collective efforts are essential to fully unlock the potential of microcredentials. To support the purpose of upskilling and reskilling, the engagement of employers, industry and social partners is crucial for ensuring the relevance of microcredentials. In addition – explains the OECD – to be an instrument for academic advancement, different types of education and training providers and public authorities would have to come together to facilitate the recognition of microcredentials and make stacking possible. Finally, the paper explains that coherence across different initiatives is important for enabling clear communication with learners and employers and achieving desired outcomes. The OECD (2032a) refers to two basic potential approaches as a guide for the implementation of public policy initiatives: the softer, steering and exploratory approach and the harder and more direct political approach (cf. Figure 5).

Figure 5: Options for mechanisms to support the implementation of policy initiatives for establishing microcredential ecosystems

Softer/steering/exploratory approach	Harder/more direct policy approaches
Regulations and guidelines	
➤ Create a framework that providers can follow when offering and recognising microcredentials ➤ Support providers’ efforts to agree on formats	➤ Enforce or make changes to legislation under which providers operate
Public funding	
➤ Use targeted funding	➤ Include in core public funding and/or extend student loan schemes
Quality assurance mechanisms	
➤ Experiment with quality assurance through a pilot	➤ Integrate microcredentials in an existing quality assurance system ➤ Develop a quality assurance mechanism for microcredentials
Information systems	
➤ Create an information portal among a smaller group of stakeholders	➤ Create a nationwide information portal

Source: OECD 2023a

In the assessment of the OECD (2023a), optimal initial approaches to the implementation of the policy instruments would look different across countries depending on the national context and culture accepted by stakeholders. For example, in the case of Australia, national reasons are provided for not including microcredentials in the qualification framework (AQF):

- Shorter credentials vary widely in their scope and level of complexity and so cannot be allocated as a qualification type to any one AQF level.

- For regulators and providers, there is potential for an increased administrative burden and cost in regard to complying with the regulatory requirements associated with an AQF qualification for many microcredentials.
- The requirement to meet the regulatory or other requirements of an AQF certificate may delay the speed to market of microcredentials or stifle innovation, negating the benefit and promise of these credentials.
- There is also potential for confusion in the market as to which credentials are included in the AQF and which are not if inclusion in the AQF is voluntary. Shorter form credentials of uncertain quality could undermine the AQF and could be open to exploitation by unscrupulous providers.
- At the international level, there are possible unintended reputational concerns relating to perceptions of diminished standards should short courses be included in the AQF in the same way as full qualifications.

Quality assurance

According to the OECD (2023a), microcredentials are offered by a wide range of education and training providers. These include private entities, who often fall beyond the purview of public quality assurance agencies. The paper explains that, in order to fully unlock the potential of microcredentials, information about the quality of provision is essential for a range of stakeholders. According to OECD research (cf. *ibid.*), an emerging strategy is to enable institutions to take responsibility for microcredential programmes, rather than undertaking programme-level review. However, this hands-off approach is generally not extended to providers for which regulatory bodies often maintain a closer oversight, such as private institutions and institutions which are not universities.

In a further study, the OECD analysed the evidence base on the (propagated) potential of microcredentials (cf. see OECD 2023b). This focussed on specific questions relating to whether microcredentials can contribute to:

- a. enhancing employability, labour market participation and outcomes among people completing such a programme,
- b. widening pathways from upper secondary, including VET, to higher education and improving completion of higher education; and
- c. promoting social inclusion among disadvantaged learners and workers.

According to the OECD (2023b), proponents of microcredentials in the areas of the aspects named under a to c above envision them as an innovation with a multitude of potential uses and benefits – a sort of all-purpose solution for the problems confronting education and training systems. The effects and potential are attributed to microcredentials, for example in the following areas:

- Upskilling and reskilling
- Employability skills
- Lifelong learning
- More flexible learner-centred education
- Access to education and training
- Student international mobility
- Social inclusion

According to the study referred to (cf. OECD 2023b), while the potential of microcredentials to improve employability and labour market participation has been widely discussed in recent years, evidence of their impact remains scarce. Targeted and short-term qualifications could be of value for the labour market, but this depends on programme and learner profiles, and on how labour market impact is defined and measured. More broader learning using microcredentials can be effective in improving learners' employment quality, i.e. they can allow learners to access better-paid positions with higher qualifications. On the other hand, existing findings strongly suggest that only some targeted short-term credentials result in a significant increase in employment or wages.

The following is identified with respect to the impact of microcredentials (see OECD 2023b):

- The longer the programme, the better the outcomes (cf. *ibid.*, p. 6).
- Programmes that are specifically linked to in-demand or growing industries show better outcomes. In certain industries or occupations, where the content of credentialled learning is closely linked to professional qualification requirements – or where qualifications have been developed by industries or businesses themselves – there can be substantial benefits (cf. *ibid.*, p. 7).
- Completion rates and outcomes vary between different types of providers. There is also a link between providers and employment outcomes. Research from the United States points to weaker employment outcomes for learners who obtain qualifications from for-profit private institutions than is the case for certificates issued by public institutions (cf. *ibid.*, p. 8).
- Those with no previous work experience or a long history of unemployment are less likely to earn specific, short-term credentials and appear to benefit less from them, needing additional specific support. Outside of targeted programmes aimed at reducing unemployment, individuals who have been unemployed for long periods typically have some of the lowest rates of participation in microcredentials (cf. *ibid.*, p. 10).
- There is very little evidence on the outcomes of microcredentials between different age groups. The evidence which does exist implies that outcomes on the labour market for learners under 45 are better than those for learners who are over 45 (cf. *ibid.*, p. 10).

According to the OECD (2023b), the key features of short programmes that enhance employability, labour market participation and outcomes among completers are:

- Embedding of industry collaboration into the development and accreditation of microcredentials.
- Combining with work experience placements. Work placements which are embedded as a compulsory element of a credential are highly valued, both by learners and potential employers, as they allow learners to gain practical experience in their chosen field. However, work placements should be carefully designed to be practical and appropriate for learners.

The paper also considers questions regarding the benefits of microcredentials for improving the transition from upper secondary to higher education and for supporting the social integration of learners from disadvantaged backgrounds (cf. OECD 2023b). In this respect, the OECD publication assumes that microcredentials can play a role in providing alternative pathways to higher education, improving links between higher education programmes and in the modularisation of formal education and training programmes. With regard to the impact of microcredentials on the social integration of disadvantaged learners, it is noted that disadvantaged learners and workers are often not engaged in

lifelong learning and seem less likely to complete their training than their peers (cf. OECD 2023b). Among those who complete microcredentials, similar economic outcomes appear to be achieved in terms of employment and economic success by learners who are disadvantaged and those who are not.

An analysis of the OECD positions with regard to the applicability of microcredentials in dual VET systems allows the following conclusions to be drawn:

- Increasing demand for upskilling and reskilling could also become drivers for shorter qualifications in dual VET systems. Qualifications acquired in this way could also include those which are not recognised by competent national educational authorities as formal educational training qualifications and therefore do not correspond to the definition of microcredentials used by the OECD.
- The different methods identified in the OECD analyses for validating and certifying learning outcomes of microcredential programmes can, in principle, also be used in the usual formats for providing training in initial VET and in particular in continuing education.
- To ensure contributions to enhancing the employability provided by programmes which lead to microcredentials, integrating collaboration with industry is necessary in design accreditation and implementation of these programmes.
- In particular, a combination with work experience placements as a mandatory component of microcredential programmes should be recommended in order to allow learners to gain practical experience in their chosen field and to acquire professional employability skills.
- With regard to the criterion “length of training programmes” (as per the EU Commission's definition of microcredentials), the finding from the OECD analyses should be noted: the longer the programme, the greater its efficacy in terms of employability.

4.3 Discussion at World Bank, UNESCO and ILO

In publications from relevant international stakeholders such as the World Bank, UNESCO and the ILO, microcredentials are classified within the framework of strategic development guidance, which has been published in a joint document entitled “Building Better Formal TVET Systems: Principles and Practice in Low- and Middle-Income Countries” (cf. THE WORLD BANK/UNESCO/ILO 2023).

Contexts in which microcredentials are discussed by the stakeholders referred to above as part of broad-based considerations on the reform of VET systems include “[Promote] an integrated ecosystem with flexible pathways between TVET and general education, hands-on approaches including work-based learning, and quality inputs, including teachers, resources, and infrastructure”. (THE WORLD BANK/UNESCO/ILO 2023, p. 23).

The World Bank, UNESCO and ILO state the following with reference to microcredentials:

- A more modular approach to TVET can allow providers to cater to learners who may be under pressure to combine school with work. Some countries are starting to experiment with the introduction of microcredentials that give credit for smaller learning blocks, and that can be “stacked” into aggregated certifications and qualifications but that do not need to be done immediately one after the other. These are still largely untested, but more modular programmes could help reduce the inefficiency of early dropouts from longer programmes.
- Remove obstacles when accessing VET and when establishing educational equality.

- The development of microcredentials is further ahead in advanced economies. In the United States, for example, close to 20 states have allocated funding for community colleges to develop stackable credential pathways, and many states have already implemented them.
- Microcredentials can also be digital, with digital badges indicating the skill content of the certification and the certifying authority and that can be posted on job platforms or on social networks.
- In the context of potential areas of application for IT, microcredentials are positioned in connection with accreditation and quality assurance.

Reference is made in the joint document (cf. THE WORLD BANK/UNESCO/ILO 2023) to the fact that microcredentials require complex processes with regard to quality assurance in terms of defining and ensuring the quality of providers.

The ILO has not yet undertaken any of its own identifiable analytical studies on the matter of microcredentials, but its strategies essentially appear to fall into line with the general trend. For example, in “The ILO strategy on skills and lifelong learning 2030”, microcredentials are mentioned under Pillar 3: “Innovative and flexible learning programmes and pathways delivered”: *“Developing robust systems for validation of skills and competencies (including micro-credentials and recognition of prior learning) and career guidance, with the involvement of social partners, to create lifelong learning pathways, enable the portability of skills, and facilitate labour, social and geographical mobility”*. (ILO 2023, p. 6).

UNESCO (2022) recently addressed the fact that the position expressed in the international discussion on microcredentials is generally presented as diffuse, ranging from clear approval to reservations, scepticism and doubt. In this context, UNESCO (cf. *ibid.*) identifies that the acceptance and recognition of microcredentials by employers and policy-makers is hampered because, among other challenges, there is no universally recognised definition that, in particular, clearly communicates what microcredentials are to learners and employers. In recent years – explain UNESCO – policy decision-makers, scholars and educators have produced their own definitions, advancing scholarship in the area, but as a consequence causing confusion due to the range of definitions (cf. *ibid.*). According to UNESCO (cf. *ibid.*), further challenges include:

- Determining whether microcredentials complement or replace qualifications, or both.
- The dizzying array of providers and partnerships in the provision of microcredentials.
- The need for robust quality assurance and the issues of how this should be implemented when providers operate outside of the regulated education sector.
- The lack of research and compelling evidence of microcredentials’ efficacy so far, and the risk of unintended consequences if funding is diverted away from formal systems.

The stated goal is to address the above challenges and to come to a consensus on a proposed definition.

4.4 National Vocational Qualifications (NVQs) and microcredentials

National Vocational Qualifications (NVQs) were introduced in England, Wales and Northern Ireland in 1986. The aim behind NVQs favoured a work-based approach to developing the practical skills of trainees. NVQs were created as competency-based qualifications with a focus on learning outcomes. Five levels were defined for grading purposes. However, the NVQ standards were

withdrawn in 2015 and replaced by the Regulated Qualifications Framework (RQF). The introduction of the NVQs was heavily influenced by the Thatcher administration and was primarily focused on introducing an employer-led and market-led VET concept. Such training focussed on workplace-focussed competencies aimed at equipping the economy for the 20th century. The fact that competencies were defined in a very compartmentalised manner and that levels were placed in a cognitive hierarchy led to contradictions regarding whether the NVQs should primarily promote higher competencies or meet the requirements of jobs in the real world. In addition there was the fact that no tight link had been achieved between the concept of competence and that of learning outcomes. As a result, detailed learning outcomes were certified which had no link to the competence profiles developed. This means that the learning outcomes did not necessarily provide training for the tasks to be performed. Because there are important considerations in the design of microcredentials that were also relevant for the NVQs, it is advisable to examine the precise reasons for the withdrawal of the NVQs. In this regard, Winch (2021) has produced an informative analysis of educational policy. This review might enable knowledge to be gained which could significantly influence the ongoing work on microcredentials.

4.5 European Union (EU) positions

The 2021 EU Council Recommendation was supported by the European agencies responsible for VET, such as the ETF and Cedefop, in the form of specific contributions. It should be noted that, in the EU Council Recommendation, the positive expectations associated with the development and implementation of microcredentials are shared, and specific potential risks are discussed on a selective basis only.

Positions of Cedefop and ETF

In the information dossier “Are microcredentials becoming a big deal?”, Cedefop (2022a) concisely sets out the main intentions behind the European Commission's proposal for a European approach to the development and implementation of microcredentials. This is firmly set in the context of attempts at legitimising such an approach, linked in particular to references to dynamic market changes and technological changes as part of the fourth industrial revolution. There is an emphasis on the potential advantages of microcredentials in supporting the EU's transition to a green and digital economy and the relevant new qualifications required for this. The development of common European standards for preserving the attractiveness of microcredentials is described as a challenge. Over-formulation should not result in limitations. The dossier explains that it is thus of central importance to find an appropriate balance between fostering trust and transparency as part of a common approach without compromising the flexibility of microcredentials.

In the publication “Microcredentials for labour market education and training: First look at mapping micro-credentials in European labour-market-related education, training and learning” (cf. CEDEFOP 2022b), Cedefop examines structural scenarios of microcredentials relevant to labour-market-related education and training in Europe. The following aspects are the key statements in the Cedefop research paper (cf. CEDEFOP 2022b):

- In the overview, significant differences in the different European countries, in some cases, were identified in terms of positions and approaches to the use of microcredentials. One position identified where broad consensus exists is that microcredentials should not be identified as deconstructed qualifications but as something supplementary to existing formal education and training systems.

- According to stakeholders, the learning activities that lead to microcredentials should be independently designed and standalone. One conclusion drawn from Cedefop's investigations focuses on the fact that, in many cases, microcredentials represent a new form of recognition of learning outcomes acquired both inside and outside education institutions.

The research paper entitled “Microcredentials for labour market education and training: Microcredentials and evolving qualifications systems” (cf. CEDEFOP 2023a) outlines the expectation that the promotion of microcredentials and the aspects linked to them (such as increased flexibility, portability and stackability) can lead to new processes and developments that have an impact on the overall qualifications and certification system in a country. In this context, a reduction in the role of traditional qualifications is assumed. The Cedefop research findings (cf. *ibid.*) confirm that the perceived value and trust in microcredentials on the labour market are determined by socio-economic factors and an individual's own work and learning pathways. The European VET systems are configured and managed in different ways. A detailed discussion follows of the measures needed to support different groups of microcredential end-users in different labour market contexts. Since microcredentials are perceived by many users as a “currency” for new competencies, the transparency of microcredentials is critical in determining their comparability and value in terms of transferability. The Cedefop study (cf. CEDEFOP 2023a) identifies that microcredentials cannot yet be exploited – potentially due to the novelty and their range. However, it is assumed that they may be a potential instrument for achieving the objectives with which they are associated.

The research also shows that the added value of microcredentials is often very limited if their provision is not underpinned by supporting structures and tools and by valid labour market information; existing inequalities may even be exacerbated. In the course of the research, concerns were identified that microcredentials might result in an unbundling of qualifications. The study shows that most learners and employers regard microcredentials as an opportunity to develop skills and to have skills certified in addition to a qualification. This target offer may be of benefit to learners who have solid foundational knowledge. The study emphasises that microcredentials are based on different conceptualisations of “being qualified”. The term is used to describe short courses focused on occupationally specific, business-related competencies. In this respect, they relate to narrowly defined tasks that often only have limited transferability on the labour market. On the other hand, microcredentials are seen as the result of sectoral, inter-sectoral or cluster-based partnership approaches to support upskilling and reskilling.

The Cedefop findings (cf. CEDEFOP 2023a) confirm that microcredentials are not intended to replace full qualifications or to radically change qualification systems. It is also noted that there continues to be uncertainty in terms of the scenarios for microcredentials on European labour markets. There is a recommendation for further experiments and for knowledge sharing in the context of the many initiatives being developed. This would aim to support member states in their research efforts with regard to developing the role of microcredentials in national competency development systems. Considerations in a current information dossier (cf. CEDEFOP 2024a) focus on the development of a European qualifications map, the aim of which is to build on the National Qualifications Framework. Although subtle, the focus of this information dossier is on incorporating microcredentials – in this case under the banner of “inclusivity” – as an element in national qualification frameworks.

Despite critical positions in the Cedefop studies on the ongoing expansion of microcredentials within the EU member states, the European Training Foundation (ETF) published a “Guide to Design, Issue and Recognise Micro-Credentials” in 2023 (cf. ETF 2023). This guide is aimed at all individuals who are in a position to develop, administer and provide microcredentials and/or facilitate the recognition of microcredentials at the provider, system or regional level.

In connection with one of the key findings in the Commission's working document (cf. EUROPEAN COMMISSION 2024) on the evaluation of the Council Recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning, the integration of microcredentials into national and European qualifications frameworks is recommended. This is justified by the need to be able to respond to new requirements from practice and be integrated into other contexts, such as the opening up of National Qualification Frameworks to qualifications acquired in non-formal and informal settings and an alignment of international qualifications.

European Credit System for Vocational Education and Training (ECVET) and microcredentials

ECVET, the “European Credit System for Vocational Education and Training”, is one of the European transparency instruments promoted as part of the Copenhagen Process. Piloted in 2009 based on a European Recommendation of the European Parliament and the Council for trialling in member states (cf. RAT DER EUROPÄISCHEN UNION 2009), it was understood as an instrument intended

- to contribute towards the structuring of training courses on the basis of a learning outcomes focus via the development of small, contained units (qualitative dimension) and
- to contribute to the accumulation of modules towards an overall qualification in VET by means of “assigning credits” to the individual learning outcome units (quantitative dimension).

In the national and international debate, there was scepticism from various parties regarding the ECVET initiative in VET. In a BIBB discussion paper (cf. EBERHARDT/ANNEN 2013), the assumption is made, based on ECVET projects which have been implemented, that the use of ECVET is critically dependent on the respective context and the challenges associated with this. This therefore excludes universal use. The “national practices” (cf. *ibid.*, p. 59 ff.) to which reference is made in the recommendation on the establishment of a European credit system for VET are, in Germany, unlike in many other EU member states, based on the basic principles of dual training, i.e. the concept of the regulated occupation (“Berufskonzept”) and the acquisition of employability skills. Here key differences can be identified compared to the ECVET-related concepts of learning outcome units acquired independently of the learning location, which are outcome-led, individually assessed and certified. Over several years of ECVET piloting, it has been shown that it is suited to, and is successful at, improving periods spent abroad in VET. As regards the instrument’s accumulation effect, this has remained far below expectations.

In an analysis of the repeal of the recommendations on ECVET and EQAVET (European Quality Assurance in Vocational Education and Training) in 2020 (cf. AUZINGER/LUOMI-MESSERER 2021), the following findings were identified:

- The implementation of ECVET was mainly focused on mobility and to a very limited extent on lifelong learning and permeability between VET and higher education.

- ECVET did not lead to the creation of a European credit system for VET. There was no particular relevance of, or demand for, credits. Some countries regarded credits as incompatible with their education systems.

ECVET was not used as a European “credit system”, but rather as a framework to support flexibility of vocational training offers. According to the authors (cf. AUZINGER/LUOMI-MESSERER 2021), the limitations described are a result of the member states taking different approaches when implementing ECVET. This is mainly due to different qualification/VET systems and regulations (for instance, related to the use of learning outcomes, the possibilities for validation of non-formal and informal learning, and the existence of credits) but also their different national needs and priorities (geographical mobility, lifelong learning). ECVET was designed as a voluntary initiative intended to provide the possibility for accommodating the characteristics of different systems in the European countries, and integrating existing credit systems and arrangements. However, the different approaches taken and different objectives in relation to the implementation of ECVET also presented significant challenges for the success of this European initiative. For some systems, due to their conceptual characteristics, it has been easier to implement ECVET technical specifications than for others. Surprisingly, despite the causes for not achieving the desired outcomes identified in the context of the ECVET initiative, the case is made for continuing to work in a similar direction in current ECVET development processes (such as the EU Skills Agenda, the development of European Vocational Core Profiles etc.). The recommendation for establishing microcredentials is explicitly mentioned in this context.

European Skills, Competences, Qualifications and Occupations (ESCO) and microcredentials

ESCO originates from the EU's “New Skills for new Jobs” initiative and its “Europe 2020” strategy. Microcredentials and ESCO are aimed at similar areas and have similar potential. Both instruments are assumed to have an effect and to improve individual employability and, on the basis of having more compartmentalized competency areas, are assessed positively regarding the potential for responding to dynamically changing qualification and competency requirements. Similarities between microcredentials and ESCO can be found in assumptions with respect to their potential for improving mobility in employment markets, facilitating (individualised) flexibilisation of learning pathways and improving connections between the world of work and the world of training and education. For both microcredentials as well as ESCO it is implied in particular that access to training – in relation, for example to the validation and recognition of competencies acquired via informal non-formal learning – can be made easier for non-traditional target groups. Last but not least, the assumption is made for both proposals that traditional formal qualifications can be expanded – in particular in the context of reskilling and advanced and continuing education and training. A common feature between microcredentials and ESCO is that in both cases competencies and learning outcomes play an important role in the relevant processes in each case. Learning outcomes, for example, are standard elements of microcredentials (in line with the Commission proposal) while within ESCO they are classified under the ESCO skills pillar and play a role in the competencies described.

With regard to potential overlap between (micro)credentials and ESCO, the following findings seem relevant:

- According to the ESCO Secretariat, credentials have a pivotal role to play in the validation and recognition of skills and qualifications, and are therefore crucially important in terms of the understanding ESCO integration and its impact. The portal

explains that the use of ESCO in credential metadata may foster cross-border recognition and collaboration.

- With regard to microcredentials, there are statements on the ESCO portal relating to the expected role of AI in shaping the future of microcredentials. In relation to this, the ESCO Secretariat emphasises the ESCO's analytical approach which uses statistical analysis, data science and machine learning to optimise classification maintenance, expand ESCO and to make ESCO easier to use for diverse implementers.

There is likely to be a conflict of objectives between ESCO and microcredentials in terms of the intended response to dynamically changing requirements for qualifications and competencies. While, according to the available analysis findings, specific training courses aimed at company-based requirements should and can be developed and implemented in microcredential approaches, the experience to date with ESCO shows that the updating processes required take a long time. This aspect runs counter to the ability to respond quickly to the dynamics of changing labour market requirements in terms of competencies and qualifications.

There is also doubt surrounding the claim that microcredentials or ESCO will ease access to training for non-traditional target groups. It is, as yet, unclear whether competencies acquired in connection with validation and recognition of informal and non-formal learning will become integrated within the concepts of microcredentials and ESCO. At least, the reality at present is such that employers are reliant on transparent, meaningful and established professional titles, certificates and performance assessments when appointing employees and regard the qualification framework as an important instrument.

In light of the aspects described above, it is currently not possible to identify potential for strengthening employability by combining systems such as ESCO with microcredentials. It must also be noted that, following the Council recommendation for establishing microcredentials, there is currently still a significant lack of clarity and uncertainty, as well as positions held ranging from contentious to critical, on the part of member states, employers, social partners and various end users.

5 Microcredentials and the debate in Germany

Despite still not currently being in widespread use, microcredentials are discussed by a range of interest groups primarily from the higher education sector (cf. CEDEFOP 2024a). In VET and in advanced and continuing VET, approaches can be found in isolated cases showing how, and the purpose for which, microcredentials can be used. As yet, viable approaches or approaches becoming more widely accepted cannot be identified.

The use of microcredentials at universities is focused primarily on complementary teaching provision and key qualifications. In universities, the established European Credit Transfer and Accumulation System (ECTS) and workload are generally used for the assessment. Consideration of other assessments and credit systems is therefore unnecessary. From an administration perspective, there are significant benefits to using the same assessment concepts for both regular courses and complementary microcredentials. However, what is important to note is that this does not answer the recognition questions any more than was previously the case. Microcredentials do not provide an answer to the question of recognition. The question of recognition and equivalence of workload accrued based on microcredentials must be resolved and assessed depending on the

relevant outcome, although requirements within higher education must not be disregarded in the process. The application of a microcredential concept will have little to no direct influence on an assessment concept for recognition and equivalence. Instead, what may occur is that qualifications previously not recorded from non-formal and informal sectors may be made visible and microcredentials may be applied to these. If such qualifications not only become visible with the help of microcredentials but are also defined and validated as an outcome, then the prerequisites would be put in place for resolving the issue of recognition and equivalence. However, this approach would also mean there is still no clarification of the academic and practical relevance of microcredentials to the higher education sector.

Stakeholders in VET are so far reluctant to use micro credentials. This applies both to Germany as well as to numerous other European countries. The German Bundesrat (Federal Council) has set out a strong position on the approach of the European Commission to the use of microcredentials. This emphasises above all the need for a focus on activity-based learning and the need to shape learning as a process which views the person as a whole. The Bundesrat excludes the use of microcredentials for all regulated forms of initial VET and for initial and continuing VET. This means only peripheral areas remain where microcredentials can be trialled (see also section 5.2). It should also be noted that microcredentials are not mentioned in the “Osnabrück Declaration” of the ministers in charge of VET in the EU, even though they were being discussed at this time (cf. OSNABRÜCKER ERKLÄRUNG 2020).

5.1 Positions from the higher education sector

Microcredentials and microdegrees (a term used primarily by universities) are increasingly part of the discussion relating to all areas of education. They are also increasingly being discussed as flexible forms of training delivered via additional qualifications (cf. EUROPEAN COMMISSION 2020, p. 4; HOCHSCHULREKTORENKONFERENZ 2020; FLASDICK et al. 2022; CEDEFOP 2024a). However, in this context, the term additional qualifications is neither specified nor defined, and no link is made to a role forming a component of regulatory instruments. Discussion of complementary courses for existing standard curricular is generally non-specific, both in initial and continuing VET and in university education. However, here too there is no clear link to specific, real curricula. For example, in political circles, the introduction of microdegrees to support continuing academic education and training is discussed from the perspective of a range of different interests (cf. SPD/BÜNDNIS 90/DIE GRÜNEN/FDP 2021). Discussion however is yet to develop beyond basic considerations relating to interpretation of the term and concerning recognition and credit transfer. A uniform understanding of the term and common standards for recognising and crediting microcredentials have not yet been defined. The potential provided by microcredentials and microdegrees has not yet been clearly set out and is assessed as being of little help by individual institutions (cf. CEDEFOP 2024b). The term itself appears to encourage broad and diverse usage without the need to have to define more precisely how learning related to this should and can be organised.

Work is being carried out at project level on shaping microcredential approaches with the help of funding from the Federal Ministry of Education and Research (BMBF)³ and using European funding (for example in Erasmus projects). The AI Campus should be mentioned in this context by way of

³ Since May 2025 Federal Ministry of Research, Technology and Space (BMFTR).

example. The AI Campus *“aims to play an active role in helping to shape national and European discussion on microcredentials and micro-degrees. The development of micro-degree programmes on the AI Campus is based on initial groundwork. Linked to this is the ongoing development and use of overarching concepts supporting digital training certificates, a framework comprising clear criteria for micro-degrees and their quality assurance both for and on the AI Campus. The aim is also to run an application-focussed trial of AI Campus micro-degrees for advanced and continuing education and training, for the key competency area at universities, for areas of specialisation at universities and for lifelong learning”* (FLASDICK et al. 2022, p. 19). Considerations also include modules firmly based in terms of content in VET.

5.2 Bundesrat position on microcredentials

In its official document from 14/1/22, the Bundesrat (2022) comments on the „Vorschlag für eine Empfehlung des Rates über einen europäischen Ansatz für Microcredentials für lebenslanges Lernen und Beschäftigungsfähigkeit [Council recommendations on a European approach to microcredentials for lifelong learning and employability]. It *“acknowledges the aim of the recognition proposal to provide a common European approach for micro-credentials in the EU which sets out both a definition as well as a guideline for the organisation, issuing and description of micro-credentials”* (BUNDESRAT 2022, p. 1). In the view of the Bundesrat, microcredentials can *“be part of lifelong learning and of continuing education and training as well as tools for supporting career advancement and adaptation to a constantly changing labour market”* (BUNDESRAT 2022, p. 1 f.). In this way they can also contribute to learners’ competency acquisition in all phases of life. It is assumed that, above all, groups in need of protection will have easier access to training provision. Overall the Bundesrat certainly sees some benefits in the microcredentials concept, however, it also points out that

- the European proposals still contain scope for interpretation,
- countries need to be proactively involved in shaping microcredentials,
- involvement in quality assurance is necessary,
- the quality of qualifications as well as of courses and training courses which are holistic in nature is being devalued, and
- the observation contained within the recommendation stating that IVET, university-level education and training, initial and continuing VET and traditional qualifications must neither be weakened or replaced, is vital,
- Also in the future, learning processes and the relevant qualifications *“[must] be holistically designed, structured and organised. This principle must not be replaced by the accumulation of small and micro learning units”* (BUNDESRAT 2022, p. 2).

The Bundesrat underlines its position further by pointing out that the intended ability to combine and stack microcredentials could lead to an unstructured mixing of provision from different areas of education and training, from different education training providers – for example in a public or private context – or from different training structures such as formal, informal or non-formal education and training: *“It must be ensured, where necessary, that the specific general conditions and structures of the different training provision are maintained and that this does not result in a lack of transparency and incompatibility in certification or a loss of quality as a result of a lack of coherence in terms of content or an overarching concept behind the training provision being combined. [...] The proposed free stackability of small learning units into complete qualifications is*

therefore rejected insofar as this does not fall in line with the regulations of national education systems” (BUNDESRAT 2022, p. 2 f.).

Due to the increase in informal and non-formal learning, the Bundesrat certainly sees benefits in *“making learning outcomes achieved in this way more visible”* (BUNDESRAT 2022, p. 3) by means of validation procedures. However, it explains that the relevance of formal degrees and qualifications must not be impaired as a result. The Bundesrat explicitly points out *“[...] that exclusive responsibility for the setting up and development of national procedures for the recognition of validation of qualifications rests with member states”* (BUNDESRAT 2022, p. 3).

The position of the Bundesrat can be summarised in eight points:

1. The long-standing cooperation between the EU member states is characterised as valuable.
2. The rights of universities to shape and organise courses and to regulate procedures for the recognition of educational achievements must not be affected.
3. The intention to remove obstacles to mobility and to cooperate voluntarily across borders in educational institutions is supported.
4. The European approach to microcredentials can only be implemented within the set legal, structural and financial framework conditions of member states.
5. The development of micro credentials should be undertaken outside of formal initial and continuing VET.
6. The *“system of regulated multi-year dual training on the basis of integrated vocational occupational competence should not be supplemented or replaced in whole or in part by compartmentalized micro-credentials and therefore must explicitly not replace an examination with respect to a vocational qualification being acquired.”* (BUNDESRAT 2022, p. 4)
7. The partial qualifications replace neither a degree nor an examination and exist as modular training provision providing preparation for a vocational qualification with the result that no other instruments are required (cf. *ibid.*, p. 4).
8. The increased modularisation of training offers proposed by the Commission and the intended introduction of microcredentials in the area of basic VET is viewed critically.

The Bundesrat is very clear in urging caution with respect to the European approach to microcredentials as regards implementation issues. The use for training courses under the dual system and also for partial qualifications is rejected. The breaking up of courses of study in order to structure these as microcredentials is also rejected. In particular, the autonomy of higher education in all decisions relating to courses of study is reinforced. The Bundesrat only sees potential use in specific cases of non-formal and informal learning provided no existing regulations or relevant exam regulations prevent this. It is noted that the topic concerns issues of domestic legislative powers relating to general and vocational education and training. *“This covers the structuring of training courses and training qualifications as well as issues relating to validation and recognition of qualifications and learning periods abroad”* (BUNDESRAT 2022, p. 9), which is certainly a responsibility of the member states. The position taken by the Bundesrat is undeniably interesting and there is no evidence of this having been discussed or commented on publicly by the federal government. This suggests that the positions are generally accepted as federal government representatives are keeping to the existing regulatory structures of the VET system. The position expressed to date by social partners with regard to microcredentials is either guarded or critical.

5.3 Contexts of German vocational education training and positions on microcredentials

BIBB authors have analysed the proposals and recommendations of the EU commission on microcredentials and vocational education and training (cf. HIPBACH-SCHNEIDER/LE MOUILLLOUR 2022, p. 36 f.). They make reference to the fact that criteria for microcredentials and their objectives as proposed by the EU Commission certainly allow training formats to be identified in Germany which could be described as microcredentials (cf. *ibid.*, p. 36). Examples include:

- The opportunity for job seekers and adults to acquire partial qualifications which has been in place since 2013. This applies to adults over the age of 25 and occurs in more than 30 occupations (with an industrial/technical, commercial and service focus). Training is undertaken module by module with a certificate awarded in each case leading up to the vocational qualification. *“Once all modules have been passed, the qualification for the full training occupation can be acquired via the external examination (Section 45 (2) BBiG)”* (HIPBACH-SCHNEIDER/LE MOUILLLOUR 2022, p. 36). This approach is supported by the employer initiative TQ (Teilqualifizierung) [partial qualification] (cf. www.nachqualifizierung.de) and a project funded by the BMBF since 2019 (set to run until September 2026) known as ETAPP (Etablierung eines Teilqualifizierungsstandards für An- und Ungelernte Erwachsene über 25 unter Praxisrelevanten und Pädagogischen Anforderungen [Establishing a part qualification standard for unskilled and semi-skilled adults over the age of 25 subject to requirements relevant to practice and educational requirements]). ETAPP aims to develop uniform standards in part qualifications nationally. The intention is to present standards that are recognised by all stakeholders involved in education policy-making and therefore to enable training in the partial qualifications within a common structure (cf. www.etapp-teilqualifizierung.de).
- Additional qualifications were introduced with the 2005 revision of the Vocational Training Act (BBiG). These made it possible to build and supplement the professional portfolio for a training occupation (cf. GUTSCHOW/LORIG 2022, p. 27 ff.). Additional qualifications can help to adapt the competency profile during the training to the latest technological developments or other changed competency requirements.
- Elective qualifications are another model which creates defined bundles of specific qualifications as regards both content and timing in order to help reflect changes and at the same time create different specialisation profiles in a VET course. In 1998, elective qualifications were used for the first time as a flexibilisation instrument in the revision of training regulations for the training occupation of “digital and print media designer” (cf. JACOB/KRÄMER 2022, p. 31 ff.).
- In addition to advanced VET which is regulated nationally, numerous Chamber regulations introduce flexible opportunities focused on regional requirements for acquiring further professional competencies (cf. EBERHARDT/ANNEN 2013, p. 59 ff.). This learning is also certified, legally regulated, established and recognised on the employment market. A learning process of 200 hours is assumed to be the average for the exam preparation. There is no plan to enable accumulation of these qualifications in terms of a vocational qualification – in common with the additional qualifications or the planned ECVET – and this is not legally possible. Compensation measures (e.g. adaptation period, aptitude or knowledge tests) in the context of the recognition of foreign qualifications also have features of microcredentials. Adaptation periods can be used to close skills gaps when compared with a German reference occupation. This means that, following completion of the adaptation period, the foreign professional qualification has

full equivalence with a German reference occupation.

- Certificate courses at universities, institutes, from private providers such as in the IT sector, from trade unions and employers' organisations are generally either certified or have assessment instruments to ensure information is provided on the value of such training measures.
- Besides formal education pathways, there are other opportunities for acquiring the certificate. For example, validation procedures exist (e.g. as developed in the ValiKom Transfer project, <https://www.validierungsverfahren.de/>) supporting recognition of competencies in an informal or non-formal manner. In connection with a validation of competencies in the context of an external assessment, missing competencies can be acquired in a targeted manner in order to ultimately receive full equivalence with a reference occupation via the issuing of a validation certificate. Validations are generally carried out by the competent bodies. The lower age limit is 25.

Hippach-Schneider and Le Mouillour (2022) point out, with reference to the Bundesrat position, the federal government's (as well as the French government's) refusal to integrate microcredentials within the existing qualifications framework. The authors justify this refusal on the basis of the concern that incorporating microcredentials within national qualification frameworks could undermine the credibility and trust in the respective qualification framework. Furthermore, the question is posed regarding the adaptation of a microcredentials concept to the range of sectors, regions, businesses and participants on continuing education and training measures. The fact that the introduction of microcredentials could involve a significant workload in terms of bureaucracy and that a specific financial burden cannot be ruled out is also viewed critically. There is also the risk of developing parallel structures and of potentially disruptive impacts from microcredentials on the German qualification system. According to the authors, this critical position is shared by the Confederation of German Employers' Associations (BDA) and the German Trade Union Federation (DGB).

It is evident that experience with the European ECVET instrument has had an impact on engagement with the subject of microcredentials. In the 2009 recommendation (now repealed) on the establishment of a European credit system for VET, the focus was on borderless lifelong learning, recognition, transfer, flexibilisation and permeability. The position of the Bundesrat and other critical positions of German institutions have the ECVET discussion in mind when commenting on microcredentials. This impression was conveyed in multiple discussions between the authors of this report and representatives of the VET system.

5.4 Interest group positions on microcredentials

The text of the EU Council recommendation on microcredentials of December 2021 suggests that, for the proponents, the main focus is on using microcredentials to strengthen the role of higher education and VET in the process of life-long learning by offering more flexible and modular learning opportunities and more integrated learning pathways. It is also implied that microcredentials have the potential to expand the target audience for continuing education and training and, in this way, they will appeal to, or be able to appeal to, difficult to reach groups and groups threatened by poverty such as the long-term unemployed, lower earners and low-skilled individuals. There is a stated expectation that those interested in continuing education and training can be qualified in a needs-based, accessible and flexible way, and that existing skills gaps can be closed. In this sense, microcredentials will help achieve the European goal of 60 percent of adults completing at least one advanced training course per year by 2030 (cf. SABBAGH 2022, p. 11).

A notable feature in the explanations of the Council recommendation on microcredentials of 2021 is the varied references to the fact that microcredentials can be developed and offered by a wide range of stakeholders, education and training institutions, social partner organisations, state and civil society organisations and others in order to promote both formal, non-formal and informal learning. The aim is to facilitate a large number of different learning pathways using a range of learning settings (cf. SABBAGH 2022, p. 12). This is therefore concerned with an active, dynamic and well-structured learning offer which is transferable to and can be combined with a very wide range of existing measures. In the final analysis it is about *“storing micro-credentials in a system of one's own choice, sending these to a party of one's own choice (regardless of whether the system concerned is a national or transnational system) and that all parties involved in the exchange are able to understand the content of what's reported and check its authenticity”* (SABBAGH 2022, p. 12). The stackability of microcredentials and combining these to create a larger certificate is also not ruled out (EUROPEAN COMMISSION 2021, p. 2, 15). Parallels with the earlier discussion about ECVET can certainly be identified here!

According to the German Chamber of Commerce and Industry (DIHK), there is a risk that *“[...] the integrated goal of being able to transfer and combine proven competency acquisition will be a cause of irritation not least for those states with a dual system of training”* (DIHK 2021, p. 3) if too many basic questions in connection with the introduction of microcredentials are not clarified. The reason for such concerns is evident in the fact that it remains unclear what the impact of such goals will be on the quality of the training for microdegree holders. One of the main questions from countries with a dual system is whether harmonisation structures in VET in Europe are to be established in a more abstract way with the help of the microcredentials concept. In 2021, the BDA therefore called for employees in the changing world of work to be supported by continuing education and training and lifelong learning in order to develop *“trust in micro-credentials”* (BDA 2021, p. 4). Whether the BDA was seeking to indicate by this that a harmonisation process was possible was unclear.

For the higher education sector, the report from the “enquiry committee on vocational education in the digital world” states that by *“[...] introducing micro-degrees, [...] barriers to access to continuing academic education are lowered and permeability between vocational and university education and training is ensured by the fact that multiple shorter or smaller complementary modules, or modules that build on one another, can be accumulated into a certificate, the credit for which can be transferred to subsequent continuing education and training courses.”* (ENQUETE-KOMMISSION BERUFLICHE BILDUNG IN DER DIGITALEN ARBEITSWELT 2021, p. 311 f.). This position is in line with the assessments of the German Rectors' Conference (cf. HOCHSCHULREKTORENKONFERENZ 2020; 2023) and the German Science and Humanities Council (cf. WISSENSCHAFTSRAT 2022). However, this does not apply to the area of VET. Here the formats developed remain based on long-established education and training structures, even if they are not integrated into these. Aspects pointing in the direction of stackability and accumulation are prioritised below the principle of “Beruflichkeit” (alignment of training with state-recognised skilled occupations leading to comprehensive occupational competency) and the concept of a career path (cf. SABBAGH 2022, p. 13). The classification of microcredentials within the European Qualifications Framework (EQF) is also viewed critically in view of the Commission's expert hearings (cf. HIPACH-SCHNEIDER/LE MOUILLOUR 2022). Such classification is regarded as an attempt to see qualifications recognised by the state compete with an additional qualification system. The Commission, on the other hand, argues that microcredentials *“are not intended to replace formal qualification systems”* (EUROPEAN COMMISSION

2021, p. 1, 3). The issue of what the relationship of microcredentials should be with respect to national education and training systems remains unresolved.

As explained in the above sections, positions on microcredentials differ depending on whether the focus is on use in higher education or in VET. Microcredentials are viewed by universities as an instrument which can be applied flexibly, and which can be used for managing course elements. Their assessment is that this is something structurally new and they welcome the introduction. The opposing standpoint is taken by VET, primarily with regard to use in initial VET. They make reference in particular to the specific relevance of holistic learning processes, which cannot be organised using microcredentials. Assessments of the use of microcredentials in advanced and continuing VET are less clear. On the one hand, microcredentials are regarded as being advantageous when it comes to making existing concepts more flexible, while on the other hand concerns are expressed regarding the organisational effort involved in administering microcredentials.

A number of positions held by representatives from universities and companies have been selected and are summarised below:

Elke Katharina Wittich, member of the Leibniz AI Academy at Leibniz University Hannover and the Zukunftswerkstatt Microcredentials [Microcredentials Future Workshop] of the German Rectors' Conference (HRK):

“When briefly considering the world of practical implementation at universities in Germany, it rapidly becomes clear that the greatest advantage of micro credentials – their flexibility – would involve major challenges in terms of implementation in existing structures. Micro-credentials cannot be effortlessly integrated into constantly recurring linear processes with long term planability, as required by courses of study within university administration. Instead, as flexible study formats, micro-credentials impose additional demands on administration in particular in the areas of planning, documentation, review and quality assurance as well as recognition and credit transfer” (WITTICH 2024, n. pag.).

Emily Rauch, expert interview with Ulf-Daniel Ehlers as part of a Cedefop scoping workshop:

“The degree qualification or the specific vocational education training is no longer the currency – the currency is continuing education and training over the course of professional career development. In terms of recruiting by major companies, the effect of this is that they are less focused on looking for specific vocational qualifications or degrees. Qualifications are merely a prerequisite for being able to apply for the job in the first place. [...] The qualification is no guarantee for the business that you actually have the competencies needed. These businesses are now looking for documented professional experience and work experience” (RAUCH 2022, n. pag.).

“So what's needed is the opportunity to make competencies visible, in a practical way via micro-credentials? That is the idea. At an educational science level, only limited certification of competencies is possible, however attempts are still being made to address the issue. To date we have only been able to certify qualifications, not the competencies.” (RAUCH 2022, n. pag.).

German Association for University Continuing Education and Distance Education e.V. (DGWF)

“Micro credentials enable those interested in continuing education and training to acquire concise knowledge on a specific subject as part of a course or module. The German Rectors' Conference explains the idea behind micro-credentials to be that course content can be broken down into the smallest possible parts and also reassembled for the purpose of achieving maximum possible modularisation and ability to aggregate. When implemented in practice, this would enable students to acquire credits for their degree while employees could acquire new ‘future skills’ alongside their work or as part of company-based continuing education training offers. This would also provide low-threshold access to education for job seekers, low-skilled people or disadvantaged groups in the population. [...] The DGWF follows a transparency grid developed by the Baden-Württemberg regional group when classifying qualifications. [...] In the context of the DGWF transparency grid, individual modules or continuing education and training courses could therefore be micro-credentials. The DGWF is to provide a position on this. The transparency grid is also being adapted and expanded accordingly.” (DGWF 2023, n. pag.)

Miriam Mesenholl, FIBAA – Foundation for International Business Administration Accreditation, idw – Scientific Information Service:

“The FIBAA (Foundation for International Business Administration Accreditation) is a European quality assurance agency for the higher education sector and for continuing education and training programmes. The FIBAA was founded in 1994 and is registered as an accreditation agency in Germany, Austria, Switzerland, the Netherlands, Türkiye, Kazakhstan, Indonesia, Vietnam and Ukraine. The FIBAA is also a member of the European quality network ENQA (European Association for Quality Assurance in Higher Education) and is registered with EQAR (European Quality Assurance Register for Higher Education).” (MESENHOLL 2024, n. pag.)

“With a workload of between 100 and 240 hours, each of the certified courses corresponds to an ECTS equivalent of four to nine ECTS credits. The courses are therefore referred to as micro-credentials as defined by the EU Commission. According to the definition, a micro-credential is proof of the learning achievements which a learner has acquired following a short learning experience. These learning outcomes are assessed based on transparent standards.” (MESENHOLL 2024, n. pag.)

“Micro-credentials from business provide people from different backgrounds with a clear pathway to future employability during their careers. The FIBAA certification gives participants the certainty that each of the named ‘professional certificates’ is a quality-assured initial and continuing education and training programme” explains Diane Freiberger, Managing Director at the FIBAA. “This certification simplifies the transfer of ECTS credits for higher education institutions, increases employers’ confidence in the abilities of applicants and provides learners with the certainty that their investment in education will be recognised.” (MESENHOLL 2024, n. pag.)

“The stated aim of Coursera is to enable access to a qualified learning offer for all. Today, Coursera is one of the largest online learning platforms in the world with 129 million registered learners. Coursera works with over 300 universities and companies to offer a wide range of content and

qualifications, including training and courses, specialisations, professional certificates, guided projects and bachelor's and master's degree courses.” (MESENHOLL 2024, n. pag.)

Nathalie Schäfer, “Die deutsche Zerstückelung des Studiums – von Microcredentials und Smaller Units” [Degree fragmentation in Germany – a tale of microcredentials and smaller units], Bundesausschuss GEW⁴ Studierende (BAGS) [Federal student committee of the German Education Union]:

“However, the push for smaller units continues. Universities are being called upon to shift their focus from comprehensive, complete courses of study towards smaller units of learning content. Learning pathways, in particular, become more fragmented as a result. In the most problematic of cases, micro-credentials or smaller units even result in teaching becoming outsourced into pay-as-you-go study units. Summer schools are an example of this. These are one-to-two-week holiday academies for which students are often required to pay a great deal of money. Liberal education is not only changing, but the intentions behind the political governance are also becoming clear. The purpose of the small learning units in particular is to meet the requirement for continuing vocational education and training. This requirement is justified and has its place in continuing professional education, but not at universities.

Furthermore, smaller study units must not, firstly, recreate new obstacles of a financial nature or with respect to their disproportionate workload. Secondly, the Lisbon Convention on the Recognition of Qualifications concerning Higher Education from 1997 must be implemented in full as this not only concerns the recognition of qualifications, but also learning content and skills acquired outside the course of study. The removal of obstacles can actually be guaranteed via recognition of prior learning. For as long as these two prerequisites are not met, micro-credentials, smaller units and short cycles will create even greater obstacles. [...] The solutions to problems envisaged by politicians, such as micro-credentials, smaller units and short cycles, miss the point of a good degree. A good degree is different. Both personal background as well as the individual’s approach to learning are significant factors in sharpening an individual’s degree.” (SCHÄFER 2020)

DGB, in the context of the public consultation by the European Commission on the initiative “Micro-Credentials– broadening learning opportunities for lifelong learning and employability”:

“It can be assumed that micro-degrees do not meet the requirements of a vocational activity. Positive aspects are that micro-degrees can contribute to greater permeability and are suited to giving new impetus to the learner-centred concept and to enabling greater flexibility. For example, by being able to make additional qualification offers via digital provision or by being able to incorporate additional elective elements in study opportunities.

At best, micro-degrees are able to complement professional, occupation-related and academic competence, however due to their compartmentalised structure and curriculum customisation, they

⁴ German Education Union.

can only incorporate the focus on application and practice to a limited extent. This means that they are largely unable to help enhance personal competencies and contribute to all-round personal development.” (DGB 2021, n. pag.).

With regard to microdegrees/microcredentials, the following aspects are key for the DGB and its member unions (cf. DGB 2021):

- A common understanding of the nature and impact of micro degrees is needed as well as differentiation from related formats such as MOOC's, Digital Badges etc.
- Respect for the full qualification or full curricula must be ensured. Microdegrees can be a meaningful addition to curriculum offers from universities or to company-based and individual continuing VET. Under no circumstances must they replace formal qualifications.
- Microdegrees must be subject to the same requirements in terms of quality assurance as is accepted for existing courses in the relevant training sectors.
- Clear rules are required in vocational and university-level education and training regarding credit transfer and recognition of competencies acquired via microcredentials. These include, for example, questions relating to delivery, quality assurance of providers, procedures for assessing and identifying learning outcomes, transparency and reference to formal qualifications, the duration (workload) and minimum scope.

Access to higher education microcredentials should be free and also possible for interested parties without the higher education entrance qualification.

“In the view of the trade unions, linking microcredentials with EQVET [ECVET] will not be so effective as there is the risk of an impasse EQVET [ECVET] has failed. In our view, linking to the EQF will also achieve very little. The EQF compares full qualifications and integrated training qualifications. By their nature, microcredentials however are not classifiable substantial qualifications.” (DGB 2021, n. pag.).

The above extracts reinforce the positions of the individual parties and can be summarised as follows:

- Representatives from universities see suitable potential in microcredentials and microdegrees for their use as part of courses of study and within the ECTS. This is viewed primarily as an opportunity to incorporate newly emerging content within courses of study through the provision of microcredentials. In more far-reaching positions, there is a clear acknowledgement of the economic benefit of the microcredential approach to create digital artefacts via the accumulation of “batches” which aim to reflect a profile based on what has been learned.
- Continuing education training providers both in the higher education sector as well as in VET assess the microcredentials instrument very positively and regard it as an opportunity for enabling a range of target groups to access continuing vocational and academic education and training in a flexible and mobile form via certified modules with an incremental design. Established continuing education and training providers are already offering highly differentiated professional certificates to interested parties subject to a fee and with the help of platforms. They assume that the certification will make the credit transfer to ECTS credits easier for higher education institutions and that employer confidence in the abilities of training graduates will be strengthened.

- Trade union organisations and trade union representatives adopt an entirely ambivalent position on microcredentials. They see no development prospects for VET and make reference to earlier ECVET approaches which endeavoured to introduce a credit concept in VET. These approaches failed. Trade union representatives certainly see opportunities for the use of microcredentials in the higher education sector, however, they call for two conditions to be met:
 - Microcredentials and microdegrees must meet quality standards.
 - Fragmentation of the degree using these types of instruments must be prevented.
 On the other hand, there is a consensus that microcredentials and microdegrees are instruments which can be used in vocational and company-based continuing education and training to support course programme organisation.

5.5 Reflections on the benefits of microcredentials in initial, advanced and continuing vocational education and training

State-regulated procedures focussed on holistic learning processes form the basis of dual VET in Germany. These aim to develop skills in a comprehensive manner involving both occupational competencies relevant to vocational tasks as well as the undertaking of organisational tasks in the workplace and in society. The basic principle behind dual VET is therefore not the flexible acquisition and accumulation of learning outcomes demonstrated via accumulated credits. Instead, the aim is to deliver training to ensure conduct in the workplace and in the context of social responsibilities which is both comprehensive and competent. Worth noting in particular in the case of dual VET is that the competent bodies have powers conferred by public law. These apply in their implementation and monitoring role for initial vocational VET. They have the right to set examinations and are responsible for final examinations, proof of competence and the awarding of the journeyman certificate/vocational qualification. These tasks, responsibilities and powers distinguish the entire spectrum of VET from formats in the higher education sector where certification procedures are carried out by an institution legitimised by the Accreditation Council (cf. STAATSVETRAG 2017).

The comprehensive training in the dual system based on regulated, organisational structures and responsibilities contrasts with concepts of microcredentials and microdegrees. A move to a comprehensive concept which includes microcredentials would only be possible if a fundamental system change was brought about in a way that would readdress and clarify issues regarding responsibility. This comes with the risk that employers would relinquish responsibility for VET. Effecting such a system change is therefore not recommended. The use of microcredentials to support sector-related approaches which would ultimately put the dual system of vocational education in competition with a concept of microcredentials is also advised against. The basic understanding of holistic, initial and continuing VET with a professional qualification leading to an occupation and to occupational competency should not be tampered with.

Establishing an additional microcredential concept in VET must be discouraged as this would use up unnecessary resources and would result in increased bureaucracy in terms of the administration of microcredentials and additional assessment. Proponents of the solution anticipate flexibility in approaches; however the opposite is more likely to occur – quite apart from the issue of who is responsible and who might dominate the “microcredentials market” should the situation arise.

Alternative decisions could be made for the continuing education and training sector. Based on pre-existing regulations which stipulate, for example, that an external examination is not possible until the age of 25 and that this approach has also been used for other continuing education training initiatives, it would appear sensible to check whether the introduction of microcredentials in the continuing education and training sector is appropriate and can help to make the confusing structure of numerous continuing education and training concepts and advanced education and training offers more transparent. One of the most important requirements would be to formulate uniform national standards for continuing education and training and to subject these to an accreditation procedure. Based on the standards to be developed, it would make sense to create a concept for microcredentials and use it in different locations, provided accreditation has taken place. In order to make the concept manageable, it is logical to develop it on a sector-related basis and to have social partners involved in a responsible role. This is intended to ensure that the desired standards as well as the microcredentials are organised in such a way that workplace needs are supported. This step is relevant in terms of structural issues in initial, advanced and continuing VET and must therefore be clarified at the level of the individual member states.

5.6 Summary assessment

The authors of this report start from the premise that the use of microcredentials in Germany in initial VET is not a sensible step. In terms of interest in the use of microcredentials, a clear divide exists between the vocational training sector (dual initial VET, regulated special measures in connection with initial VET, training related to external examinations and vocational training based on validation concepts) and higher education.

The main reason for this is that dual training structures exist which are jointly supported by social partners and for which companies are responsible. From a company perspective, there is generally demand for vocationally trained skilled workers able to carry out holistic tasks. This results in a minimal level of division of work, meaning Taylorist structures of work organisation can be avoided. These facts can not only be proven by a large number of studies but also by VET largely taking place in three-year occupations and being regulated using training regulations on the company-based side and framework curricular on the school-based side. Training is generally focused on ensuring accessibility of company-based work tasks (and not of systematic bodies of knowledge as is usually the case at universities) which are connected via work processes and which cannot form a training focus in isolation. The regulatory instruments are designed by social partners, agreed by consensus and issued by the responsible ministry in each case. On this basis it should be noted that regulation of personalised VET – which is the aim of the microcredentials concept – is currently not required. The introduction of microcredentials in addition to existing instruments or as a parallel concept would offer no advantages of any kind and it must be anticipated that such a step would end in “administrative disaster”. The heterogeneity between VET and academic education cannot be overcome with the help of microcredentials. Microcredentials are not appropriate as a response to issues regarding equivalence and recognition between academic and VET. Other approaches are needed to achieve this.

All published statements from stakeholders involved in VET in the context of the discussion on microcredentials indicate that – in comparison to existing regulatory mechanisms, work with regulatory instruments and the regulated examination system – no advantage of any kind can be expected from microcredentials for initial VET, i.e. for regulated vocational training in the dual system and training approaches based on this. The Bundesrat (2022) is also very much against the

use of microcredentials in initial VET and continuing education and training up to the age of 25. This is justified, in the main, by the primary purpose of education being to train young people holistically and comprehensively in order that they can bring the required competence to effect change to the workplace. This position also excludes using microcredentials when, for example, under-25s participate in training processes with the help of partial qualifications. In this case, the objective is that individuals experience a vocational qualification via training with a flexible time frame on the basis of modules. The individual modules of the partial qualification stages are taken from the occupational profiles and lead to a professional qualification. At the end, a validation concept (or an external examination) is used to determine whether a professional qualification has been achieved which is equivalent to a reference occupation.

The following are answers to questions set out in the commission for the report:

Importance of microcredentials to the continuing education and training market and to certification: It is conceivable that microcredentials have a role to play in unregulated continuing education and training. However, this should not occur without certification of the continuing education and training programme in question. To ensure that certificates acquired via continuing education and training are able to provide a guide for participants and the labour market as to the level of competency achieved, the priority must be the development of a continuing education and training microcredential standard at a national and transnational level. It is recommended that the ECTS is taken as the basis for this.

Applicability of microcredentials for the awarding of certificates: The issuing of certificates on the basis of microcredentials is regarded as technically feasible. This requires that the value of microcredentials is specified and that there is clarification regarding which types of certificates exist for which value. Workload could serve as the “value” following the ECTS model, or an alternative concept yet to be developed, for example using competency assessments.

Using microcredentials to compensate for skills gaps (e.g. recognition of foreign competencies versus full profiles): Skills gaps can be closed by means of qualification processes. On this basis, a decision can be made on whether to award microcredentials. This requires the development of an assessment concept (for example a competency assessment procedure) using microcredentials which is then applied.

Microcredentials and certification of competencies acquired via informal and non-formal routes (e.g. Chamber validation procedures): In this case, a check should first of all be made to establish whether validation and certification procedures exist. If such procedures exist, their quality must be checked. If this check arrives at a positive outcome, then clarification as to whether this procedure should continue to be used would be required. Alternatively, the development of a certification concept on the basis of microcredentials would be conceivable. If possible, transnational standards should be used for this. However, in this case clarification would be required regarding who defines and who is responsible for the standards and who authorises confirmation of the standards achieved.

Use of microcredentials for the external examination (Section 45 (2) of the Vocational Training Act, BBiG) Since the purpose of the external examination is to promote “Beruflichkeit” (occupational competency) and because examination procedures supporting this have already been established based on the Vocational Training Act (BBiG), the replacement of existing external

examination procedures with microcredentials is discouraged. The existing procedures determine whether the competencies relevant for an occupation can be identified in the person concerned.

Applicability of microcredentials in fragmented qualifications (e.g. initiatives such as AGITQ, ETAPP etc.): In the various partial qualification initiatives, the overarching goal is the acquisition of professional competencies. For these measures it makes sense to use competency assessment procedures which comply with the examination system in terms of how the measures are defined in the training regulations for individual occupations. In the examples above, it is not assumed that microcredentials serve as a kind of “universal instrument” for the mutual recognition of learning outcomes, qualifications and of homogeneous learning approaches or that their purpose is to overcome differences between vocational training and academic education by generating reciprocal trust and confidence. If the microcredential approach is to achieve what is intended by it, then in the assessment of the authors of this report it would be necessary to plan training courses in accordance with agreed concepts and theoretical approaches and to award microcredentials to these in line with shared principles. This approach, however, is not in sight and its implementation is likely to be almost impossible due to significant structural differences mainly in terms of initial and continuing VET in the different European countries.

6 Mutual recognition of competencies and transferability of microcredentials

Credentials, certificates and diplomas awarded for general education and for initial and continuing VET play a key role in modern societies. They are a statement of the qualification acquired which is needed for finding a job and for practising and occupation.

Over recent years, new records of achievement have increasingly been developed in order to facilitate recognition when changing country or employer. These include badges, microcredentials, small learning units and others. Whether or not microcredentials can support mutual recognition and transferability is examined in more detail below.

6.1 Terminological and conceptual variances in the design, assessment and recognition of microcredentials

The use of learning outcomes is increasingly influencing the “[...] *design and delivery of vocational education and training (VET), focusing on what a learner is expected to know, be able to do, and understand at the end of a learning process. The shared focus on outcomes facilitates the dialogue between education and training and labour market actors, as well as across different education and training sub-systems. Similarly, the increased transparency offered by learning outcomes acts as an important reference point for several stakeholders: policy-makers, labour market actors and teachers [...]*” (<https://www.cedefop.europa.eu/en/themes/delivering-vet-qualifications>). The general conclusion is that the focus on learning outcomes facilitates the systematic analysis and comparison of content and quality of qualifications and therefore makes it easier to establish a “balance” between general knowledge and occupation-specific qualifications and competencies (cf. *ibid.*).

“Learning outcomes act as a common language regarding the content and profile of VET programmes and qualifications enabling dialogue among stakeholders in the labour market and education and training as well as society at large.” (*ibid.*). The Council of the European Union defines microcredentials as the record of learning outcomes that a learner has acquired following

a small volume of learning (cf. RAT DER EUROPÄISCHEN UNION 2022, p. 13). A characteristic of microcredentials is that they generally involve completed learning units, evidence of which is provided on digital learning platforms. Microcredentials can also be modified on these platforms. The provision of the learning units themselves can be both analogue as well as digital. A widely held understanding is that microcredentials represent a new form of record of qualifications for small learning units. However, in terms of scope, there is still no standardisation of any kind. Instead, a range of terminology is used such as nanodegrees, micromasters, microdegrees or digital badges. This tends to lead to confusion and widely differing concepts of microcredentials. The result is that the added value for the labour market is still unclear. The simple reason for this is that the differing understanding in terms of terminology results in a wide variance in the design of learning units and their assessment. Requirements are therefore not put in place for transferability and for the mutual recognition of competencies developed. Instead, more confusion is created.

The common design of learning pathways and mutual permeability of academic education and of initial and continuing VET are suggested in the context of microcredentials. *“Micro-credentials are a compact and thematically focused training provision with a final, verified assessed element (Rentzsch 2023, p. 2) and are seen as an opportunity for meeting the challenges using common training provision across all areas of training” (SWEERS 2024, p. 33).* The focus here is consistently on recognition and/or the crediting of previous experience. *“Recognition relates to learning and examination performance demonstrated. If specific requirements are met, this also includes performance from continuing (academic) education and training offers, i.e. from micro-credentials also offered in this sector, where applicable. Credit transfer, on the other hand, is concerned with learning acquired away from education, whether in formal, non-formal or informal settings. Besides prior achievements, for example from vocational education and training (formal) or from the competencies acquired on-the-job (informal), this also includes all types of non-formal training provision from non-university providers” (RENTZSCH 2023, p. 25).* The basis of both recognition and credit transfer initially involves comparing what has already been learned elsewhere and which is intended to be credited and recognised. Cedefop, for example, start from the premise that university education and VET are increasingly convergent and complementary and that microcredentials or microcredential programmes could play a “bridge building” role as part of this (cf. CEDEFOP 2023b, p. 7). This is also the position of AI Campus Berlin (cf. FLASDICK et al. 2022) which primarily addresses major non-university training providers who are concerned with a focus on learning outcomes, workload and higher-education forms of examination for microdegrees.

The analysis by Flasdick et al. (2022) from the AI Campus shows that, in principle, the awarding of ECTS points for microcredentials would make their credit transfer in the university sector easier. However, it would require compliance of courses with the ECTS standards. The view of the authors is that this requirement is, however, not met by the provision on numerous learning platforms. They identify that *“[...] most large digital learning platforms such as edX, FutureLearn, and Coursera each have a few micro-credentials or micro-degrees in their portfolio for which credit points are awarded by the participating universities and then can be credited to full MBA programmes or master’s degree programmes, for example. In the German education market, too, the few academic providers seem to focus quite consistently on creating options with their micro-degrees, at least within their own educational pathways. This also makes their provision more attractive as the providers usually offer qualified certificates with ECTS credit points that can then be counted towards complex study or continuing-education formats. For example, as part of the RWTH Aachen University cooperation operation with edX, multiple micro-degrees can be accumulated into a full MicroMaster, and the private AKAD University credits a successfully completed nano-degree on the topic of ‘Digital transformation’*

to a bachelor's degree as a module or to one of their more wide ranging continuing education and training courses" (FLASDICK et al. 2022, p. 9). Using "Modulhüllen" [module shells—a form of container module] (*"low threshold recognition and crediting of formal and potentially also of prior experience (heterogeneous in terms of content) which lead in different ways to the competences to be acquired according to the curriculum"*, RENTZCH 2023, p. 30), the aim is to enable the inclusion of acquired non-formal competencies. These considerations are aimed at higher education processes and are less concerned with establishing a link into VET.

6.2 Approaches to recognition and transferability in vocational education and training.

If we turn our attention to initial and continuing VET, it is evident that discussion concerning microcredentials is primarily conducted by non-formal education providers and private universities (cf. RENTZSCH 2023, p. 40). The interrelationship between microcredentials and initial VET were examined for Germany on behalf of Cedefop by Haseloff as part of a case study in 2023. The case study was integrated in the project "Mapping Microcredentials in European Labour Market Education, Training and Learning". The main findings from the case study are summarised below.

- *"Microcredentials hardly play a role compared to vocational education qualifications in the regular VET system (dual system) in Germany. This is because the latter causes a real upgrade in the qualification level and microcredentials are recognized as a vocational education and training supplement"* (HASELOFF 2023, p. 8). This assessment of the situation is certainly applicable in Germany. The reference to Section 69 of the Vocational Training Act (BBiG) is also important, this states: *"Basic skills required for the acquisition of occupational competence may be imparted in particular through discrete learning units of specific scope and duration which have been developed from the content of recognised training occupations (qualification modules)."* (Section 69 of the Vocational Training Act [BBiG]). The specific procedures for the qualification modules are also subject to statutory regulations.
- The key message from the author is summarised in the following quote: *"Germany has a quite well-functioning system of vocational education and training and further education in which microcredentials hardly play a role. The holistic, regular dual training can be prepared and supplemented by microcredentials, but it cannot be replaced by them. Modularisation is accepted. But the modules themselves have to be shaping- and work-oriented and the curriculum must combine it sensibly. It has to follow an action and competence-oriented VET approach. A VET concept that is composed of different modules without an overarching occupation-related context offered by various sources contradicts the German VET approach. In the area of further education, micro-credentials can play a more important role in Germany. The attempt at a cross European standardisation of microcredentials – with a view to Europe-wide vocational education and further education activities – raises many questions."* (HASELOFF 2023, p. 5 f.). Here it is underlined, as it is above, that Germany's VET system is not only designed with organisational considerations in mind but also didactic considerations, and follows a holistic, action-oriented and development-oriented approach. This approach also includes assessment mechanisms that cannot be replaced arbitrarily. The holistic approach is underpinned by the German Qualifications Framework (GQF) concept, whose structural elements are shown in Figure 6. The competence dimensions illustrate the comprehensive approach, including both professional and personal competencies as a basis for the development of knowledge,

skills and abilities via the action orientation. Fulfilling this requirement by means of narrowly defined microcredentials is not feasible in practice as these comprehensive competencies must be developed in context and in an integrated manner.

Figure 6: Competence dimensions of the German qualifications framework (GQF) and occupational competence.

Competence Dimensions of the GQF			
Professional Competence		Personal Competence	
Knowledge	Skills	Sozial Competence	Autonomy
Depth and width insights	Instrumental and systemic skills, ability to judge	Team-/Leadership skills, Co-shaping and communication	Self-reliance, Responsibility, Reflexivity and Learning Competence
Skills, knowledge and capabilities			
Professional ability to act according to standards Professional competence includes, in particular, the ability to plan, implement, and monitor tasks independently			

Source: BIBB-HAUPTAUSSCHUSS 2016 (original in German, translation through authors)

In every case, there are clear content-related, formal and legal limits to a microcredentials approach in initial VET. Above all, the dominant argument that small learning units, i.e. microcredentials, can be used flexibly and can be organised in a way which has particular relevance to the labour market conflicts with the vocational education training system in Germany which is structured based on learning and educational theory. Even training using qualification modules, which have a certain similarity to microcredentials, is focused on implementing the pedagogical approach in training and ultimately on acquisition of a professional qualification. The BMBF notes the following in this respect: *“Germany emphasises that attention must be paid in further consideration of modularisation of learning programmes and micro-credentials to ensure that such learning experiences will not conflict with the acquisition of academic or vocational qualifications as regulated by the Member states and that they cannot replace these. Thus, further options are provided in Germany under its VET Act to acquire a vocational qualification through upskilling. For example, learners can participate in an upskilling or reskilling course to acquire a full vocational qualification through the acquisition of partial qualifications which build on existing skills and the successful completion of the final examination”* (BMBF 2021, p. 3, cited from Haseloff 2023, p. 32).

According to Section 69 of the Vocational Training Act (BBiG), additional qualifications which are entirely equivalent to microcredentials can be recognised. However, these additional qualifications (or short courses) cannot be pieced together to form standalone full occupations. The Haseloff case study confirms this: *“Some vocational academies award a ‘diploma supplement,’ in which credit points are shown according to the European Credit Transfer System [...]. If the apprentices*

have passed the (recognised) certificates for short courses (micro-credentials), they can combine several certified courses. But a whole apprenticeship as such cannot be pieced together.” (HASELOFF 2023, p. 32) On the basis of the interviews conducted, the author also identifies the following: *“The overwhelming majority of those questioned said that micro-credentials do not represent any benefit for the regular German system of vocational education and training. The acceptance of micro-credentials, which have been largely unknown up to now, is seen above all as a concession to European (and international) developments. All respondents see no need for the introduction of new forms of vocational education and training. The instruments that are on the market in Germany for vocational education and training and further education were seen as sufficient”* (HASELOFF 2023, p. 41). This statement clearly indicates that, due to the differentiated VET system in Germany, no benefits can be seen in a format such as microcredentials. While its introduction in Europe is not rejected, the transfer of format over to the German system is regarded as unnecessary. This is also likely to be one reason why no experiments have been undertaken in initial VET using the ECTS concept from the universities.

6.3 Compatibility of microcredentials with the structures of dual vocational education and training

From a federal-state-wide perspective, a huge variety of training systems and concepts exists. The criterion of responsibility for governance is often used for the structuring and classification of national VET system concepts. According to Greinert (1999; 2005), who applied responsibility for governance as an analytical category, the three ideal types of (1) market control, (2) state control and (3) cooperative control can be distinguished. The key characteristics of the respective models are as follows:

(1) Market control

- Supply of VET is regulated by the market.
- Offers are made either directly by companies or via private-sector providers.
- Training activities are primarily focused on directly meeting companies’ needs.
- There are no overarching training standards as such, and no generally recognised examinations and certificates
- Costs are borne by the market entities – companies and employees.
- General education and VET remain strictly separated.

This model is primarily found in English-speaking countries (e.g., the United States, Canada, the United Kingdom, Australia and New Zealand).

(2) State control (school model)

- Training is provided through (mostly state-run) vocational schools.
- The curriculum is primarily geared toward teaching the theory relevant within a given vocational area, with reference to practical work contexts often remaining marginal.
- Training is based on a curriculum and ends with trainees receiving defined qualifications.
- Vocational education and training is funded by the state.
- These school-based qualifications are often associated with general education or university courses of study.

France and Sweden are seen as examples of this model.

(3) Cooperative control

- Training is anchored both in companies and in vocational schools, supplemented if necessary by inter-company vocational training centres as an additional learning site.
- The training company is the primary learning environment; it makes decisions on which trainees to accept and enters into training contracts with them.
- The training provided in the various learning environments combines general and vocational content, and is intended to develop a set of skills that goes beyond the training company's specific needs.
- Training is underpinned by a broader understanding of "education" and "occupation" which is intended to give graduates flexibility and mobility in the labour market.
- The curricula are developed jointly by the state and the social partners.
- Funding is provided on a partnership basis between the state (primarily expenses for vocational schools) and business (primarily expenses for company-based training and for training remuneration).
- Qualifications are recognised by the state.

Besides the German-speaking countries of Germany, Switzerland and Austria; the Netherlands and Denmark are also cited as examples of this model. Greinert (1999; 2005) emphasises that dual model structures, as found in VET, are not found in other approaches and concepts. As regards microcredential approaches, it can be determined that the characteristics of dual models as listed under (3) are generally not to be found in microcredentials

A further model involves "Inselmodelle" [island models] (cf. Table 1) which are generally created as discrete units by companies to provide continuing education and training for their own skilled employees and make them fit to perform tasks in their own company (cf. SPÖTTL 2008).

With regard to the variety of existing national and international training systems and concepts, Euler (2023) assumes that the ideal types named can be further differentiated but can also be assigned a legal status. Table 1 shows an expanded differentiation based on Euler (cf. *ibid.*). In his considerations, Euler is less concerned with a categorisation and is instead more focused on the different levels in the implementation. He positions a "compromise model" between the school model and the dual model, which he describes as a "dualised model". These models are neither a traditional school model nor a typical dual model. The compromise models are common and are generally summarised under the umbrella term of "dualised training". They are viewed as possible transitions and paths of development towards a dual model. They cover the numerous implementation variants where the focus is on practical and theoretical learning phases within the framework of "work-related learning".

Table 1: Vocational education and training models with transitions

School model	Differentiated school model	Dual model	Market model	Island model
	Dualised vocational education and training			
School-based VET	- School-based VET with school-based practical phases - School-based VET with company placements	- Dual vocational education and training - Informal company-based training	On-the-job training	Company-specific concepts
	School-based VET with company-based training phases			
	Status of learners: pupils/students	Status of learners: employees		

Source: own representation.

Principles and key aspects of dual and dualised vocational education and training systems

A dual VET system forms a coherent and permeable overall system with fluid transitions between VET, continuing education and training, and university-level education and training. A key instrument in comparing the different VET systems internationally is the recently developed National Qualifications Frameworks (NQF), which correlate in the EU with the European Qualifications Framework (EQF). The German Qualifications Framework (GQF) contains eight levels which have a uniform structure. At each level, a distinction is made between the two overarching competence dimensions of professional competence and personal competence. Professional competence is in turn subdivided into the competence dimensions of knowledge and skills, while personal competence is subdivided into the competence dimensions of social competence and autonomy. The GQF is focussed on competence and is compatible with the understanding of competence in the individual educational sectors such as secondary education, VET and higher education (cf. DEHNBOSTEL/LINDEMANN 2015, p. 1). In order to examine the question of the extent to which microcredentials may be compatible with dual and dualised VET systems, it makes sense to go beyond the GQF and consider the defining principles of the dual system. The German Bundestag (2013, p. 3) has described five core principles relating to this which are explained below:

1. Cooperation between social partners, business organisations and the state

The joint responsibility for the coordinated and pluralistic control of dual VET ensures that the key stakeholders are involved in a binding manner in the planning, implementation and assessment of VET measures at local, regional and national level. The state, social partners and business organisations together ensure the framework conditions are in place for VET: from shared funding

to the development and ongoing updating of curricula and their implementation, and the examination, recognition and certification of competencies acquired.

2. Learning within the work process

Vocational education and training in Germany is based on the development of comprehensive occupational competence by means of learning in occupational structures and in the process of work. Work experience reflected upon in schools and in education and training organisations forms a key basis of professional learning and is accompanied by comprehensive company-based work experience. Learning in a real-life work situation combined with formal learning in education and training organisations is the best way to develop professional, social, human and personal competence. The organisational and institutional basis for this is provided by VET planning across learning locations involving initial and continuing education and training regulations and framework curricula – both being coordinated with one another.

3. Acceptance of national standards

Inter-company and uniform occupational, training and examination standards guarantee the quality of the qualification and the quality of “Beruflichkeit” (occupational competency). Comparable VET qualifications and certificates provide the basis for employability, mobility, social acceptance and promote lifelong learning. The Vocational Training Act (BBiG), the Crafts and Trades Regulation Code (HwO) and other laws governing authorisation to practise a profession regulate all key issues relating to VET.

4. Qualified education and training staff

A VET concept integrated in companies requires trainers in companies and teachers, with both having professional and educational competency. Qualified education and training staff ensure quality and initiate change processes.

5. Institutionalised VET research and guidance

VET and labour market research are an essential basis for ensuring the ongoing adaptation of VET to technical, economic and social developments. Occupational information and careers guidance systems are an important source of help when preparing to make decisions regarding career choice and when setting training goals. They therefore promote mobility and long-term employability.

When examining the compatibility of the microcredentials approach with a dual or dualised VET system or concept, further key aspects, or design elements, must be included such as

- Existing regulation processes
- Level of information, awareness, acceptance
- Quality assurance and development
- Validation and recognition of learning outcomes and competencies (including informally acquired competencies).

In Table 2, a comparative examination of the characteristics of dual and dualised VET systems and concepts, and the microcredential approach, is carried out. The principles explained above, the German Qualification Framework (GQF) and various other design criteria are available as an “information repository”. Any conclusions regarding potential compatibility will be generated from

the examination based on the table. The statements on microcredentials are taken from analyses in the previous sections. The comparison of dual and dualised VET against microcredentials is justified as the intention is to implement the underlying concept behind microcredentials in VET. The focus is therefore on comparing organised system structures at a conceptual level.

Table 2: Comparative examination of the characteristics of dual/dualised VET and of microcredentials in VET

Criterion	Dual VET	Dualised VET	Microcredentials
Partnership structure: Cooperation by stakeholders from the state and business	Legally regulated cooperation between the state, social partners and business organisations	Limited cooperation structures between education and training organisations and companies.	Minimal or no regulated cooperation mechanisms between stakeholders from the state and from business
Learning locations	Company and school (supplemented in some cases by inter-company training organisations)	Company and school (with school being the dominant learning location)	Mainly education and training providers (public and private), predominantly private-sector providers
Target competence profile	Complex occupational competence	Predominantly professional competence	Predominantly professional competence and learning outcomes
Funding	Funding on a partnership basis by state and companies	Predominantly state funding	Predominantly funding by learners
Development and updating of curricular	Cooperation between stakeholders from the state and business	Predominantly stakeholders from the state	Predominantly education and training providers
Modes of provision	Predominantly in person; increasingly supplemented by online/blended learning formats	Predominantly in person; supplemented in some cases by online/blended learning formats	Predominantly online formats; also blended learning with in-person provision in some cases
Providers	Vocational schools in cooperation with training companies	Schools Companies (from placements to company-based training phases)	Private-sector and in some cases public-sector education and training providers, and cooperation with a range of organisations
Assessment and certification of competencies acquired	Regulated validation procedures	Regulated validation procedures	Minimal standardized validation procedures
Recognition of qualifications	Recognition valid at a national level	Recognition valid at a national or regional level	Limited recognition of qualifications

Criterion	Dual VET	Dualised VET	Microcredentials
Learning processes	Activity-based learning focused on work processes and “Beruflichkeit” (occupational competency)	Predominantly: professional knowledge, in some cases supplemented by acquisition of professional skills	Predominantly: Professional knowledge; in most cases very narrow in terms of content
Standards	Nationally regulated standards (cooperation between employer and employee)	Regulated standards in most cases	No uniform standards
(Vocational) education and training staff	School-based and company-based education and training staff have professional and educational competencies based on national standards.	School-based education and training staff have professional and educational competencies of a differing nature/degree Company-based education and training staff frequently lack skills in the educational areas.	No uniform standards for education and training staff
Status of learners	Employees (based on a training contract)	Pupils	Pupils, tend to be of any type and lifelong learners
Duration/training workload	Multi-year training	Extended training (depending on design variant)	Shorter duration
Quality assurance and development.	Established instruments, processes and procedures at a national level	Established instruments, processes and procedures in some cases.	There is no quality framework aligned with training standards
Awareness, acceptance among employers and pupils/students	Wide-spread awareness and acceptance nationally	Relatively good awareness and acceptance among employers and pupils/students	Limited awareness and acceptance

Source: own representation.

Implications

It can be concluded from the above comparative examination that the microcredential approach is not compatible with the characteristics of a dual or dualised VET system. The structural differences are significant. The school model, the market model and the island model focus, on the one hand, on school-based training and, on the other, primarily on the short-term requirements of businesses and the economy. The market and island models in particular are mainly supported by companies and oriented towards training processes which can be utilised directly in companies. It would be possible in the case of these models to work with small learning units and to assess in

accordance with an assessment grid developed for this purpose. One major hurdle in this step, however, is that interest in training processes is generally on an individual company basis, making it practically impossible to formulate standards for the design of small learning units. It is equally difficult to define standardized and inter-company assessment grids in accordance with uniform standards.

The structures of school models and of the dual training model are in no way geared towards micro-learning units but instead towards holistic and comprehensive training models. In the case of microcredential approaches, there are barely any established partnership structures and regulated forms of collaboration between stakeholders from the respective learning locations – from the state and from business. Training focussed at its core on the development of occupational competencies – with a prominent focus on work processes and the company as a learning location – is therefore virtually impossible to implement using microcredential approaches. Existing standardised regulatory instruments within the structures of school models and the dual VET system (e.g. curricula, training regulations and examination regulations) which are geared towards achieving the goal of occupational competence are similarly not to be found in microcredential approaches.

When referring back to the five core principles of the German Bundestag (see above), it becomes very clear that microcredential approaches are a very long way from being compatible with dual or dualised VET models. For example, the issue of the funding of microcredentials leading to qualifications largely transfers across to learners, while dual or dualised vocational education training models are generally funded on a partnership basis by the state and by business. Training remuneration – which in dual models is based on a training contract between the learner and the company providing training – is not to be found in microcredential approaches. Besides the lack of training standards referred to in the case of microcredentials, there are also shortcomings regarding standards pertaining to education and training staff as well as in terms of quality assurance and quality development standards. The limited acceptance and recognition of microcredential qualifications which results from these issues would appear, in addition to the limited awareness, understandable.

6.4 Summary

The analysis of the sources in this section allows the following conclusions to be drawn:

- The microcredentials format is being experimented with in universities and a range of approaches to implementation in regular courses of study have so far been developed – for complementary modules and for continuing education and training in universities. The concepts trialled differ greatly from one another and reflect different use cases. University-wide standardisation is not in sight.
- According to the survey conducted by Haseloff, VET representatives reject microcredentials as part of initial VET (cf. HASELOFF 2023, p. 46). This also applies to regulated continuing education and training. The reason for this can be seen in the pursuit of a holistic approach with a focus on action. This conflicts with other approaches and, above all, is reliant on a close link between theory and practice. In terms of the non-regulated sector of continuing VET, positions with respect to the microcredentials format still vary widely. To date, future trends in this regard are barely discernible.

- Significant structural differences exist between microcredentials and dual or dualised VET models. The fact that microcredential approaches are generally not geared towards the development of holistic occupational competencies but are essentially more focused on limited competency areas is seen as a key deficit in microcredential approaches when compared to dual VET models. Furthermore, it must be stated that the lack of standards in relation to multiple dimensions of education and training processes is a shortcoming of microcredential approaches. This is subsequently associated with limitations in terms of acceptance (“trust”) of qualifications and in terms of their recognition by companies and by the labour market.
- In the view the authors of this report, microcredential approaches are therefore not compatible with dual or dualised VET models – in particular in initial VET.

7 Conclusions

7.1 Effects of microcredentials in terms of strengthening employability are not evident

The Commission proposal for an European approach to micro-credentials for lifelong learning and employability (cf. COM 2021a) start from the premise that the use of microcredentials will have an effect in terms of strengthening employment. However, according to a study by the OECD (2023b), no valid proof can currently be found either in the United States or in EU member states that microcredentials are actually developing the potential to enhance employability and labour market participation. Instead, study findings indicate that only some short-term credentials result in a significant increase in employment. The relevant analyses arrive at the following conclusion:

- Programmes that are specifically linked to in-demand or growing industries show better outcomes. In certain industries or occupations, where the content of learning organised using microcredentials is closely linked to vocational qualification requirements – or where qualifications have been developed by industries or companies themselves – substantial benefits can occur (cf. OECD 2023b, p. 7).
- Completion rates and outcomes vary between different types of providers. There is a link between providers and employment outcomes. Research from the United States points to weaker employment outcomes for learners who obtain qualifications from for-profit private institutions than is the case for certificates issued by public institutions (cf. *ibid.*, p. 8).
- Those with no previous work experience or a long history of unemployment are less likely to earn targeted, short-time credentials and appear to benefit less from them, needing additional specific support. Individuals who have been unemployed for long periods typically have some of the lowest rates of participation in microcredential programmes for reducing unemployment (cf. *ibid.*, p. 10).

7.2 The design of microcredentials conflicts with the promotion of occupational competence

A feature of work processes is generally that teams work collaboratively on products and services (cf. PAEBENS/WINTHER 2023). In order to acquire occupational competence in a fully differentiated way for this type of work, the development of vocational competencies is key. These include cognitive and social competencies, professional and complex professional competencies,

methodological competencies, transversal competencies, collaborative competencies and others. The goal is to use the competencies required in work processes and the related problem-solving processes. Paeßens und Winther (2023, p. 19) establish, based on empirical experiments, that *“collaborative competencies must be delivered in an integrated way along with professional competency acquisition”* because they have *“positive effects on occupational competence”*. The specific situation in which the activity takes place is therefore highly relevant in the development of competency, and this applies not only to collaboration but also to all competencies in question.

In order to achieve this, their development is necessary. This requires the inclusion of appropriate work processes and the design of adequate problem-solving processes to support the competency development. The pedagogical starting point for this is learning settings geared towards competency development. In terms of methodology, this can occur using experimental, video-based, instruction-led or other types of learning. Holistic requirements from the respective work process make it critically important in terms of learning that the competency development does not take place in an isolated way on an individual competency basis but must instead occur in connection with the professional – or ideally – occupational competence. In this case, learning units, which are to be designed in accordance with pedagogical design criteria, can generally be described as micro learning units (microcredentials: for example short duration of around 3 to 15 minutes, clearly structured) (cf. PAEBENS/WINTHER 2023, p. 19). However, it is also possible to structure the learning units in a more varied way so that accessing these becomes more challenging in terms of learning theory and takes more time but also demands multiple competency dimensions in terms of vocational competence.

This is where a key conflict becomes clear. If the focus is on individual competencies, then small learning units lend themselves as the basis for the delivery – this is the assumption. However, this ignores the fact that occupational competence requires all “competency elements” to be used and developed simultaneously, which is why these also need to be structured and developed in the context of the appropriate learning settings. The isolated development of individual “competency elements” is counter-productive and does not promote occupational competence. Learning settings in the context of microcredentials are focused on developing competency elements and therefore prevent the development of occupational competence. It would be a huge misjudgement to evaluate and to assume that learners themselves will assemble the individual competencies into an occupational competence.

If Germany is therefore to retain occupational competence as called for by respondents in the Cedefop case study (cf. HASELOFF 2023), then operating with small learning units, with microcredentials, and concentrating on individual competencies is out of the question.

7.3 Microcredentials are not compatible with the dual system.

The microcredentials approach is not compatible with the characteristics of a dual or dualised VET system. The structural differences are significant. In dual systems, it would certainly be possible to work with small learning units and assess in accordance with an assessment grid developed for this purpose, however a major hurdle is that, in most cases, interest in training processes is predominantly from individual companies. This makes it hard to formulate standards for the design of small learning units. It is equally difficult to define standardized and inter-company assessment grids in accordance with a uniform framework.

The dual training model is not focused on micro-learning units, but on holistic and comprehensive training models. Training geared at its core to the development of occupational competencies – with a prominent focus on work processes and the company as a learning location – is therefore virtually impossible to implement using microcredential approaches. Existing standardized regulatory instruments within the dual VET system (e.g. curricula, training regulations and examination regulations) which are geared towards achieving the goal of occupational competence are not to be found in microcredential approaches.

If we focus on the German Bundestag's five core principles of the dual system, it becomes very clear that microcredential approaches are a very long way from being compatible with dual or dualised VET models. For example, the issue of the funding of microcredentials leading to qualifications largely transfers across to learners, while dual or dualised vocational education training models are generally funded on a partnership basis by the state and by business. Training remuneration – which in dual models is based on a training contract between the learner and the company providing training – is not to be found in microcredential approaches. Besides the lack of training standards referred to in the case of microcredentials, there are also shortcomings regarding standards pertaining to education and training staff as well as in terms of quality assurance and quality development standards. The limited acceptance and recognition of microcredential qualifications which results from these issues would appear, in addition to the limited awareness, understandable.

The fact that microcredential approaches are generally not geared towards the development of holistic occupational competencies but are more focused on limited competency areas is seen as a key deficit in microcredential approaches when compared to dual VET models. Furthermore, it must be stated that the lack of standards in relation to multiple dimensions of education and training processes is a shortcoming of microcredential approaches. This is subsequently associated with limitations in terms of acceptance (“trust”) and recognition by companies and by the labour market.

In the view the authors of this report, microcredential approaches are not compatible with dual or dualised vocational education training models – in particular in initial VET.

7.4 The terminology surrounding microcredentials is confusing

A large number of different terms are used in the discussion surrounding microcredentials, particularly in the higher-education sector. These include “short learning” “programmes”, “microdegrees”, “future learning”, “digital learning”, “small competence units”, “nanodegrees”, “digital badges” and others (cf. HUDAK/CAMILLERI 2018). Rarely is there any clarification on how these terms are to be interpreted in relation to microcredentials and whether, in each case, specific approaches or requirements are associated with the terms. The terms generally come with their own definitions which are rarely coordinated across individual locations. The background to the often confusing definitions and discussions is that while the term “microcredentials” is new, the underlying concept of modularity, which has always existed, is not. In other words, that microcredentials have attributes, such as “brevity”, which have long existed in other concepts. This is also in line with European policy under which the idea has always been that refresher training can be managed using short courses. The “Microcredential Users’ Guide” (cf. HUDAK/CAMILLERI 2018), which was produced in an Erasmus project by universities, dual universities and training providers, shows numerous similarities conceptually with the credit concepts at universities. Because university programmes are generally concerned with

content over which there is broad consensus regarding the problems addressed, the question must be asked as to why there should be an additional concept which has a greater differentiation in terms of credits but which, following accumulation, is likely to be identical again to the ECTS. In this case, the only argument still remaining is that microcredentials supposedly have greater labour-market relevance because, in their design, they are able to respond more dynamically to the labour market. However, it is evident currently that a large number of microcredentials are being developed with differing structures. This undermines the Commission's argument that microcredentials create greater transparency and increase quality, and there is no evidence of the anticipated "education and labour market policy-making momentum". The question remains unresolved as to whether all issues discussed in the context of microcredentials, particularly in university-level education and training, can be clarified, as following the prevailing approach (namely that of ECTS) would seem logical. In this case, the discussion surrounding microcredentials would be a minor side issue.

So far, the terms referred to above have had little or no role to play in VET. Their use would result in significant chaos in terms of terminology because different terms would be used in the regulatory instruments which show no connection to definitions in the context of microcredentials. These include terms such as additional qualifications, partial qualifications, core qualifications, fields of use, areas of use, sub-modules and others. The assignment of a function to these which is appropriate for microcredentials would be tantamount to destroying the conceptual and content-related structures of vocational education training.

7.5 Various national and European stakeholders are advocating the integration of the microcredentials concept into VET systems.

Microcredentials are seen as small learning units (cf. COM 2021a, p. 15) geared towards delivering partial qualifications and partial competences when compared to "full qualifications". In line with this view, certificate courses, additional qualifications and "module certificates" already exist in various national education and training systems and contribute to developing appropriate competency profiles for the world of work. As explained in the Cedefop studies (cf. CEDEFOP 2023b, p. 41), microcredential approaches are assessed as appropriate for ensuring higher-level training and upskilling. The reasoning provided emphasises in particular that microcredential concepts provide broader target groups with opportunities for learning. On the basis of this assessment, the study determines that microcredentials should be integrated into national qualification systems even if these differ between individual countries. Fully developed reasons for this step, which involves significant effort, are not provided. Reference is made to increased flexibility, access to broad target groups, the potential for shaping career pathways on an individual basis, potential for self-management and diversity of qualifications. Industry might also recognise quality-assured microcredentials.

There is an absence of a compelling reason why microcredential concepts should supplement or potentially even supersede the prevailing training and qualification concepts. Reference to flexibility and greater independent learning is not sufficient when the focus is a matter of such significance within VET systems. The fact that all arguments relating to implementation of microcredential approaches are primarily made from an organisational perspective and that content-related, learning and educational and training considerations are omitted, should also be criticised.

7.6 Establishing microcredentials as an additional instrument alongside existing modularisation concepts and systems is not a sensible step.

Modularisation frequently has a key role to play in discussions relating to microcredentials. It is assumed that microcredentials can be integrated into modularised qualification systems. As a justification for this, Cedefop studies (cf. CEDEFOP 2023b, p. 78) are referred to demonstrating that national stakeholders in 22 member states of the EU believe it is possible to combine microcredentials with modules. The assumption in such cases is often that microcredentials can be used to successfully overcome the very heterogeneous qualification systems and concepts in European countries and to create coherence. However, little or no detailed thought is given to whether an instrument such as microcredentials is in a position – even in a rudimentary way – to manage the culturally influenced differences in the qualification systems. The potential combination is justified in Cedefop studies, primarily using the examples of supposed microcredentials and how these are already being used in continuing education and training. In many cases, however, these are examples which could just as easily be seen as sub-modules, learning modules, courses and similar in other training concepts. Compelling empirical evidence of a successful combination of module and microcredentials is yet to be seen.

It is doubtful whether evidence can even be provided, as in this case clarification is needed regarding organisational issues relating to integration in particular. These issues pose the risk that smaller learning units will involve increased organisational effort without this leading to an improvement in the quality of competencies developed (learning outcomes). Since modules can also already be organised as small learning units, there is also the question as to whether it is appropriate to have an additional instrument alongside established concepts and systems. The answer this question is a definite no.

7.7 It remains to be seen whether microcredentials can help in supporting the Europeanisation of national VET concept

In the 2023 study, Cedefop refers to changing qualifications systems in Europe in order to ensure greater flexibility in learning (cf. CEDEFOP 2023b). To achieve this, it should be made possible to learn in a range of different settings and to accumulate learning outcomes.

The creation of greater flexibility in learning is supported by previous steps with a focus on learning outcomes, the introduction of national qualification frameworks and the European Qualification Framework, arrangements for the validation of non-formal and informal learning and the orientation towards qualification systems with a greater focus on requirements with more opportunities for individual and experience-led learning. However, the various initiatives involve a large number of regulatory mechanisms, which could result in creative and flexible behaviour being prevented. The following quote refers to a key step in this context: *“The ideal set out in the Council Recommendation meets some of the genuine concerns in adult education and training: learners should also receive visible recognition for smaller learning units, and the assembling of micro-credentials into a larger qualification or training unit should have a motivating effect and also facilitate international recognition. [...] Adult education and training offers are typically designed as small learning units such as these. Lifelong learning can become more attractive if even small units have some visible value. It will promote their usability if these can be combined together with other units in a “stackable” way. The defined standards for micro-credentials also support a targeted and competency-oriented focus in training provision.”* (ASCHEMANN 2023, n. pag.)

This line of reasoning very much assumes that individuals are self-directed in the organisation of competency development. However, this itself is likely to be very much a false assumption if the primary focus is qualification processes aligned with business. Training decisions in this context will not be able to take place without businesses.

7.8 The introduction of microcredentials has so far been insufficiently focused on the realities and challenges of education and training systems.

The introduction of microcredentials is no longer just a fad or a passing distraction. The topic is now discussed and pursued seriously by university and VET bodies. For both sectors, there is also a range of suggestions as to how the topic can be utilised for new digital learning formats and what the benefits are associated with this. In discussions in both university-level education and training and also VET, a distinction is made between small flexible learning units which can be used at any location and complex, compact, less flexible learning units. The firm belief is that quick training should have priority over the acquisition of qualifications such as bachelor's or master's degrees which take longer. Bachelor's and master's degrees are indeed challenged in these discussions as having a focus which is far too cognitive. Further discussion threads see the need for universities essentially to have to transform into "multiversities" (BROWN et al. 2021), i.e. in a direction which pursues a less cognitively focused specialisation and is instead broad based, admits all age groups and individuals with vocational training, and is very much applied in the way it operates; in other words, a pluralistic institution with a multi-universe focus, and not specialising in excellence. This scenario calls for the "status quo" and not the excellence of universities. This scenario offers many situations in which microcredentials and/or microdegrees could be developed.

7.9 An improved link to labour market requirements is not anticipated from the use of microcredentials.

The main features of microcredentials are short programmes aiming to improve employability, labour market participation and graduate outcomes. It cannot be shown in the findings available from international studies that this aim has been achieved.

According to the OECD (2023b), the following is recommended for achieving these goals.

- Embedding industry collaboration in the development and accreditation of microcredentials.
- A combination with work experience placements. Work placements which are incorporated as a compulsory element of a credential, allowing learners to gain practical experience in their chosen field. However, work placements should be carefully designed to be practical and appropriate for learners.

To be able to achieve the claimed labour market effects with the help of microcredentials, approaches need to be developed, trialled and validated, which – by more closely reflecting the realities – can help contribute to developing appropriate competencies.

7.10 Shortcomings in the quality assurance of microcredentials make it harder to ensure transparency and recognition of the competencies delivered.

Key to achieving the objectives linked to microcredentials are issues of acceptance and trust in the relevant qualifications. Quality assurance measures provide a basis for this. The following unresolved issues need to be clarified as a priority in this regard (cf. SABBAGH 2022):

- Which Europe-wide recognised standards should the microcredentials training format comply with?
- Who certifies microcredentials?
- Which additional, certification and accreditation processes should be provided to support the development market presence and implementation of microcredentials?

Guidelines are also needed for recognition procedures with respect to the examination, recognition and transferability of learning units which may lead to micro credentials.

Cedefop (2022a) explains that approaches and policy developments regarding previously acquired competencies differ significantly from one another in individual European countries.

The increasing emergence of microcredentials has brought with it different forms, sizes, names, durations, assessment methods and provision modes in terms of recognition. For employers and individuals, the lack of transparency can make it difficult to understand the quality and value of the learning experience compared to formal qualifications. Because the large scale and rapid spread of microcredentials at national and international level has largely taken place outside of the formal education sector, there are growing concerns regarding quality, transparency of provision and interoperability within the sector.

If the intention is to introduce microcredentials and to provide a solution for the issues outlined above, then quality assurance must be established based on generally accepted standards and must be viewed as a key area in supporting the acceptance and transparency of microcredentials. In this context, close cooperation in the development of processes, procedures, guidelines and regulatory instruments is advised between stakeholders from the state, education and business.

In order to establish microcredentials, a similar level of effort is likely to be needed as was required for establishing previous concepts and qualification of approaches. This additional effort for microcredentials can only be justified if the concept results in better outcomes than is currently the case. Implementing both approaches in parallel will lead to a reckless doubling of effort.

7.11 There is no clarification of the potential for accumulating and combining microcredentials in terms of “modules”.

The question is still discussed regarding whether microcredentials can be used as modules so that they can be combined with qualifications and credentials from other institutions and sectors in order that learners at every age and in different situations can be supported. Advocates of microcredential approaches anticipate that including micro-qualifications in national qualification frameworks will enhance their general transparency and the relationship with respect to formal qualifications will be clarified. The purpose of this is to provide learners with a greater variety of learning pathways which can be used more effectively for lifelong learning and professional development. The analysis shows that discussion on this topic is still at the initial stages in most countries and in some cases is not without controversy. Modularisation is frequently a beneficial factor when it comes to microcredentials. It was also noted that microcredentials might possibly

play a key role in supporting recognition of prior knowledge. However, approaches and political developments vary significantly in the individual European countries. So far, the parties concerned have not had an instrument and a mechanism for establishing the comparability of “modules” acquired in order to then recognize and credit these modules. Significant research efforts would be necessary in order to achieve this. If comparability can be achieved, then equal access to university-level education and training, ongoing modular developments, transferability and labour market mobility could currently be supported.

7.12 Microcredentials cannot be regarded as problem-solvers for education and training systems and for employability

Microcredentials are perceived by many users as a “currency” for new competencies, the transparency of which is critical in determining their comparability and value in terms of transferability. A Cedefop study (cf. CEDEFOP 2023a) identifies that microcredentials cannot currently be utilised, for example, in career guidance contexts – potentially due to their novelty and variety. It is nevertheless assumed that they may provide potential instrument to support this. The research also shows that the added value of microcredentials is often very limited if their provision is not underpinned by supporting structures and instruments and by valid labour market information.

Existing inequalities may even be exacerbated.

In the course of the studies, it was identified that microcredentials might result in an unbundling of qualifications. The Cedefop study referred to (cf. *ibid.*) shows that most learners and employers regard microcredentials as an opportunity to develop skills and to have skills certified in addition to a qualification. A targeted offer may be of benefit to learners who have solid foundational knowledge. The study emphasises that microcredentials are based on different conceptualisations of “being qualified”. In companies, the term is generally used to describe short courses focused on occupationally specific and business-related competencies. In this respect, they relate to narrowly defined tasks that often only have limited transferability on the labour market. On the other hand, microcredentials are seen as the result of sectoral, inter-sectoral or cluster-based partnership approaches to support upskilling and reskilling.

7.13 Doubts are justified as to whether effects can be achieved with microcredentials that have not been seen with ECVET and ESCO

ECVET and ESCO (and also microcredentials) gave rise to expectations that there would be improvements in individual employability, the potential to respond to dynamically changing qualification and competency requirements, the flexibilisation of individual learning pathways, links between the world of work and the world of education and training and in worker mobility. More compartmentalised competency areas formed the focus of considerations.

It should be noted with regard to ECVET that the intended Europe-wide introduction of a credit system in VET has failed. This is mainly due to the diversity of qualification and VET systems existing in member states and formal regulations (for instance, related to the use of learning outcomes, the possibilities for validation of non-formal and informal learning, and the existence of credits) but also their different national needs and priorities (geographical mobility, lifelong learning). ECVET was designed as a voluntary initiative for accommodating the characteristics of different systems in the European

countries, and integrating existing credit systems and arrangements. However, the different approaches taken and different objectives in relation to the implementation of ECVET were also a barrier to the success of this European initiative.

In the case of ESCO, learning outcomes are classified under the ESCO skills pillar and play an important role in the competencies described. However, experiences with ESCO show that the updating processes required take a long time. This aspect runs counter to the ability to respond quickly to the dynamics of changing labour market requirements in terms of competencies and qualifications. At the present time, the link originally intended between (national) qualifications and ESCO skills and ESCO occupations does not exist. A planned automated linking of learning outcomes in national qualifications with ESCO skills is therefore not effective at a functional level. If we compare the objectives, processes and instruments of ECVET and ESCO with the definition and the principles for the design and issuance of microcredentials published by the Council (RAT DER EUROPÄISCHEN UNION 2022), the impression is given that the proposal for microcredentials could involve, in particular, a modified variant of the ECVET concept.

Dual VET systems in particular are characterised by a focus on the occupational concept and the acquisition of complex occupational competence. This is consistent with the realities in the labour market. Employers base their recruitment procedures on transparent, meaningful and proven occupational titles, certificates and performance assessments, as well as on the Qualifications Framework as an important reference tool.

7.14 The potential advantages of microcredentials are assessed very differently

The positions on microcredentials differ depending on the classification within individual education and training systems in a country. This is best exemplified by the statement that universities do not, in any way, view the microcredentials instrument as something structurally new, but instead as an instrument that can be applied flexibly for managing course elements. The opposing position is represented in VET, in particular initial VET. Here, specific reference is made to holistic learning processes which cannot be organised using microcredentials.

Widely varying positions are to be found in relation to advanced and continuing VET. On the one hand, microcredentials are regarded as being advantageous when it comes to making the existing concepts more flexible, while on the other hand concerns are expressed regarding the organisational effort involved in administering microcredentials and even the risk of formal qualifications becoming devalued.

7.15 The holistic approach of the dual system leads to employability and should not be challenged by compartmentalised approaches

The comprehensive and holistically focussed training in the German dual system combined with regulated organisational structures and responsibilities contrasts with concepts such as the microcredentials and microdegrees approach. A move to a microcredentials concept could only take place by effecting a fundamental system change which would clearly address and clarify issues regarding responsibility. Since this comes with the risk of employers relinquishing responsibility for VET, effecting such a system change is not recommended. Supporting sector-related approaches using microcredentials is also advised against. In the case of such approaches, the dual system of VET and a microcredentials concept would ultimately be in competition. The basic understanding

of holistic initial and continuing VET which leads to comprehensive occupational competency should not be tampered with.

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Appendix

Appendix 1, section 1 (extracts from COM 2021a)

The EU Council Recommendation explains which EU standard elements microcredentials should contain.

Transparency is described as the basis for trust in microcredentials. Microcredentials should be clearly labelled as such and should contain elements which enable learners, education and training institutions, quality assurance agencies and employers to understand and compare the value and content of microcredentials. The European approach to microcredentials proposes a list of critical information elements which microcredentials should observe.

Principles for the design and issuance of microcredentials

Quality

Microcredentials should be subject to internal and external quality assurance by the system from which they originate (e.g. the education, training or labour market context in which the microcredential is developed and delivered). Quality assurance processes should be fit-for-purpose, clearly documented and accessible and meet the needs of learners and stakeholders. External quality assurance should be based primarily on the assessment of providers (rather than individual courses) and the effectiveness of their internal quality assurance procedures.

The *external quality assurance* is to be conducted in accordance 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 VET (where applicable)
- other quality assurance instruments, including registries, to build public trust in microcredentials

Providers should make sure that internal quality assurance covers all the following elements:

- the overall quality of the microcredential itself, based on the standards referred to below
- the quality of the course, where applicable, leading to the microcredential
- learners' feedback on the learning experience leading to the microcredential, and
- feedback from colleagues, including other providers and stakeholders, on the learning experience.

Transparency

Microcredentials should be 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 ECTS and comply with the principles in Annex V to the EQF Recommendation, wherever possible, to demonstrate the notional workload needed to achieve the learning outcomes of the microcredential.
- Providers which do not use the ECTS may use other systems or types of information which can effectively describe learning outcomes and workload, in compliance with the principles in Annex V to the EQF Recommendation.

Qualifications framework/systems

- It should be possible to include microcredentials in national qualifications frameworks/systems, where relevant, and in line with national priorities and decisions. National qualifications frameworks/ systems refer to the European qualifications framework and, for higher education qualifications, are self-certified to the qualifications framework of the European Higher Education Area, which can further support the transparency of, and trust in, microcredentials.

Information on the offer of microcredentials

- Systems for microcredentials should provide transparent and clear information to make guidance systems for learners available in line with national practices and stakeholders needs
- Information on providers of microcredentials should be published in registers or included 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 microcredentials should be accessible and easily exchanged through relevant platforms, including Europass (cf. EUROPASS 2023)

Relevance

- Microcredentials should be designed as distinct, targeted learning achievements and the 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 microcredentials should be encouraged to increase the relevance of the microcredentials for the labour market.

Valid assessment

- Microcredential learning outcomes should be assessed against transparent criteria.
 - **Learning pathways**
Microcredentials should support flexible learning pathways, including the possibility to “stack”, validate, recognise microcredentials from different systems.
 - **Recognition**
Recognition has a clear signalling value for learning outcomes and is attributed with the ability to pave the way for a wider offer of such learning experiences in a comparable way across the EU. When microcredentials are issued by formal education providers, they should be

used for academic or vocational purposes based on standard recognition procedures used in recognising foreign qualifications and learning periods abroad.

- **Portable**
Microcredentials are owned by the certificate-holder (the learner) and can be stored and shared easily by the certificate-holder, including through secure digital wallets (e.g. Europass), in line with the General Data Protection Regulation. The infrastructure for storing data should be based on open standards and data models. This would ensure interoperability and the seamless exchange of data, and allow for smooth checks of data authenticity.
- **Learner-centred**
Microcredentials should be tailored to meet the needs of the target group of learners. Learners should be involved in the internal and external quality assurance processes and their feedback should be taken into account as part of the continuous improvement of the microcredential.
- **Authentic**
Microcredentials should contain sufficient information to check the identity of the certificate-holder (learner), the legal identity of the issuer and the date and place of issuance of the microcredential.
- **Information and guidance**
Information and advice on microcredentials 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.

Positions of the Bundesrat on microcredentials

(cf. BUNDESRAT 2020)

The communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions relating to the “Europäische Kompetenzagenda für nachhaltige Wettbewerbsfähigkeit, soziale Gerechtigkeit und Resilienz” [European Skills Agenda for sustainable competitiveness, social fairness and resilience] (COM (2020) 274 final) – which also includes the proposal for the development of micro credentials within it – was discussed by the relevant Bundesrat committees in September 2020 and recommendations relating to this were drafted for the Bundesrat (cf. *ibid.*):

With reference to articles 165 and 166 of the Treaty on the Functioning of the European Union (TFEU), the Bundesrat makes critical reference to the national competence and responsibility of member states for the area of general and vocational education and training including university-level education and training. This covers, among other things, the establishing of binding rules and standards, but also issues relating to syllabus and curriculum design, performance assessment and the initial, advanced and continuing education and training of teaching staff; the validation and recognition of qualifications and the setting of financial and structural framework conditions for education and training institutions (cf. *ibid.*, p. 3).

The Bundesrat also noted that the Skills Agenda – within which microcredentials play a role as an element in relation to other aspects – seeks to achieve greater integration and cooperation of the education and training sector with other areas of EU activity, such as employment or research

policy. However, the Bundesrat demands that this must not lead to a surrender or blurring of the specific framework conditions and legal bases established in EU treaties for the policy-making areas involved. It also explicitly warns against, for example, using increased integration of EU education and training cooperation with EU employment policy to extend the more extensive EU competencies of the latter into the training sector (cf. BUNDESRAT 2020, p. 3-4). The Bundesrat points out that education and training is not simply an instrument for achieving growth and employability. Instead, explains the Bundesrat, a clearly more comprehensive and holistic educational purpose must be pursued, the aim of which is the personal, cognitive and social education of the individual, and which is therefore focused on social and political participation and on developing the whole personality of the individual. In view of this, the Bundesrat is critical of the fact that the objectives in this communication are focused mainly on labour market policy-making constraints, despite various references for example to the development of competencies to support the ecological and digital transformation. In this context, the Bundesrat refers explicitly to opportunities provided by non-formal and informal education and training (cf. BUNDESRAT 2020, p. 4).

With regard to the key sections of the Commission Communication on the European Skills Agenda (which have direct and indirect references to the recommended approach for establishing microcredentials), critical comments from the Bundesrat include the following.

Pact for Skills

- A European pact of this type must take into account the specific legal and structural framework conditions and provision in the education and training systems of member states as well as the different roles and interests of all stakeholders – which can be very different in nature from member state to member state – and must not adversely affect these. When developing the pact, it must therefore be ensured that no parallel systems and structures are created or supported which conflict with the framework conditions and structures of national education and training systems and which would ultimately be in a position to undermine national education and training systems and policies. (cf. *ibid.*, p. 5).
- Participation in the proposed Pact for Skills must remain voluntary and its planned function as a single-entry point at EU level and the easing of access to information about EU funding instruments for competencies associated with this must not become an indirect mandatory instrument for potential participants. If the single-entry point were also to be entrusted with determining occupational profiles or initial, advanced and continuing education and training programmes with binding effect, then this would have to be rejected as an encroachment in member state competences (cf. *ibid.*)

Creation of European competence frameworks and core profiles

- It is pointed out that the education and training systems in the member states are extremely varied and different and, in light of this, the added value for Europe in creating uniform frameworks in the training sector is generally challenged (cf. BUNDESRAT 2020, p. 7).
- Reference is made to the fact that the envisaged development of competence frameworks and core profiles must not encroach upon the responsibility of member states for training content and for the design of teaching, and must not involve their harmonisation by the EU. The Commission's approach is therefore rejected, particularly as a result of favouring

the development of common syllabuses, qualifications and **microcredentials** by creating European core profiles in the area of VET (cf. BUNDESRAT 2020)

Modularisation of training provision

- It is emphasised that the introduction of modular offers must simply complement existing structures of education and training systems in member states and under no circumstances replace them. The successful linking of theoretical and practical VET in the Federal Republic of Germany is based on a holistic understanding of education and training and of occupations, and is aligned with occupational profiles. This may be adversely affected by a focus on modules and partial qualifications. Modularisation implemented to an excessive level which fails to take into account specific circumstances as well as the associated fragmentation of learning experiences in terms of timing and location will prove to be counter-productive in this context if this extends beyond purely advanced and continuing education and training offers. On this basis, the proposed increased modularisation of training provision and the intended introduction of **microcredentials** must be viewed critically (cf. *ibid.*, p. 8).

Mobility, recognition and validation

- EU measures promoting cross-border mobility are welcomed and supported in principle. It is also emphasized that no obligations should be put in place in this regard; an obligatory stipulation of mobility as a regular component, in particular of initial, advanced and continuing VET, is not necessary in this respect. (cf. *ibid.*, p. 9).
- An essential prerequisite for the attractiveness of learning visits abroad is also the straightforward and, where possible, full recognition of learning periods and qualifications. More comprehensive automation of recognition however is neither feasible nor desirable in view of the diversity of qualifications and the education and training systems in member states. The member states must always retain the option of an equivalence check (cf. *ibid.*, p. 9).
- Given the increasing significance of non-formal and informal learning, the Bundesrat recognises in principle that the use of appropriate validation procedures to make outcomes acquired in this way visible may yield positive effects for individuals, for society and for business, provided these learning experiences are of relevance to the labour market. As part of this, however, a focus on the overriding importance and value of formal qualifications must be maintained. (cf. *ibid.*, p. 10).

Collection and analysis of education and training data

- The coordinated collection and analysis of education and training data not only requires potential analysis technologies to be identified, but in particular also requires a transparent definition of the intended purposes of the analysis.
- The Bundesrat also points out in connection with the Europass platform that Europe-wide online offers and platforms providing tailored information on skills trends and skills requirements as well as offers of help and vacancies for people planning their professional careers are to be welcomed in principle. However, these must not be developed into European instruments for the recognition and validation of professional qualifications which encroach upon the responsibilities of member states for this area. (cf. *ibid.*, p. 11).

Benchmarks and indicators

- The Bundesrat points out that, in principle, quantitative or qualitative benchmarks and indicators for reviewing the education and training systems of member states should only ever be determined in cooperation with the member states. They also require extremely careful checking with respect to the anticipated European added value in each case, with respect to their relevance, their specific measurability and the comparability of data in terms of the diversity of member state education and training systems. They also require a cost-benefit analysis specifically taking into account the associated administrative workload for member states. (cf. BUNDESRAT 2020, p. 12).

Implementation of the Agenda

- The Bundesrat points out that it is not the task of the EU in the area of European education and training cooperation to set direct or indirect requirements for national budgets. This also applies to targets to be met solely via national funding obligations and which are subject to monitoring and control at European level via the European Semester and the potential implications of this for EU funding instruments, and which, as a result, at least effectively lose the character of being a recommendation which can be implemented on a voluntary basis. Participation in voluntary measures in the training sector must not be made into a precondition for the awarding of general EU funding and thus become an indirect obligation. (cf. *ibid.*, p. 13).
- The Bundesrat acknowledges the Commission's thinking in seeking to drive forward implementation of the Skills Agenda and separate governance of EU policy for initial, advanced and continuing VET with the help of expert groups plus advisory bodies as well as by means of increased direct collaboration with stakeholders. However, the Bundesrat also underlines the specific role of the Council's Education Committee and of the EU Council of Education Ministers as formal decision-making bodies and points out that Commission planning must not result in parallel structures which would lead to a weakening of the role of advisory bodies and of member states. The Bundesrat therefore calls for the active involvement of the relevant bodies of the Council and of Member States in every phase. (cf. *ibid.* 2020, p. 14).
- The Bundesrat points out as a matter of principle that structural issues relating to education and training systems including initial and continuing VET are the responsibility of member states. The measures proposed must take into account and be mindful of the diversity of systems as well as the legal and structural framework conditions. For example, the arrangement of public-private partnerships, the idea of hybrid teaching staff or the demand for appropriate autonomy, support and funding for providers of initial and continuing VET must only ever be realised within the
- structural and financial framework conditions set by the member states and the defined quality standards of national education and training systems. (cf. *ibid.*, p. 15).
- In this context the Bundesrat emphasises that the proposed measures only have the status of recommendations and that the "if" and "how" decisions in terms of implementation are in the hands of member states. If the Commission offers its own support measures such as support for structural reforms or the expansion of support services, these must not be developed into an indirect obligatory and harmonization instrument at European level. (cf. *ibid.*, p. 15).

- The Bundesrat points out that this recommendation proposal emphasises, in a one-sided way, the expansion and development of initial and continuing VET at a higher level of qualification (EQF levels 5 to 8). The Bundesrat notes this because individuals with qualifications at EQF levels 1 to 4 in particular also make a key contribution to the environmental and digital transformation and must be supported accordingly within the framework of initial and continuing VET (cf. BUNDESRAT 2020, p. 15).
- The Bundesrat also welcomes the basic aim of extending work-based learning as a fundamental structural feature of VET processes into the proposed system of benchmarks and indicators. On the basis of dual VET in Germany, the Bundesrat points out that school-based training periods, which are closely linked to training in the actual workplace in terms of timing and structure, should also be included in the measurement (cf. *ibid.*, p. 16).
- The Bundesrat is opposed to the inclusion of a blanket and general call for the Commission to ensure qualitative and quantitative monitoring in the training sector, including the further use of the data obtained in other European monitoring frameworks. Data availability at European level must not become condensed into a European steering competence via targets, indicators and benchmarks which would undermine the subsidiarity principle and ultimately render Articles 165 and 166 of the Treaty on the Functioning of the European Union (TFEU) ineffective. (cf. *ibid.*, p. 17).
- The Bundesrat notes that, in essence, these proposals address issues concerning mainly legislative powers of countries at domestic level in the areas of general and VET including university-level education and training. This applies, for example, to the proposed measures for establishing competence frameworks and core profiles but also to syllabus and curriculum design, initial, advanced and continuing education and training of teaching staff and to the validation and recognition of qualifications. The Bundesrat therefore points out that its statement must be considered in this respect in accordance with Section 5 (2) of the Act on Cooperation between the Federal Government and the German Bundestag in Matters concerning the European Union [Gesetz über die Zusammenarbeit von Bund und Ländern in Angelegenheiten der Europäischen Union, EUZBLG].

Criticism consistently identified in these recommendations on the part of the Bundesrat relates to the fact that some of the proposals contained in the Commission's communication on the Skills Agenda have the potential for unjustified intervention in member states' national competencies as defined according to EU treaties.

Appendix 2, section 2 and 4 (extracts from BUNDESRAT 2022)

Implementing the European Commission's agenda

- The Bundesrat points out that it is not the task of the EU in the area of European education and training cooperation to set direct or indirect requirements for national budgets. This also applies to targets to be met solely via national funding obligations and the potential implications associated with this for EU funding instruments. Participation in voluntary measures in the training sector must not be made into a precondition for the awarding of general EU funding and thus become an indirect obligation (cf. *ibid.*, p. 12)
- The Bundesrat acknowledges the Commission's thinking in seeking to drive forward implementation of the Skills Agenda and separate governance of EU policy for initial, advanced and continuing VET with the help of expert groups plus advisory bodies as well as by means of increased direct collaboration with stakeholders. However, the Bundesrat

also underlines the specific role of the Council's Education Committee and of the EU Council of Education Ministers as formal decision-making bodies and points out that Commission planning must not result in parallel structures which would lead to a weakening of the role of advisory bodies and of member states. The Bundesrat therefore calls for the active involvement of the relevant bodies of the Council and of member states in every phase. (cf. BUNDESRAT 2020, p. 13).

- The Bundesrat points out as a matter of principle that structural issues relating to education and training systems including initial and continuing VET are the responsibility of member states. The measures proposed must take into account and be mindful of the diversity of systems as well as the legal and structural framework conditions. For example, the arrangement of public-private partnerships, the idea of hybrid teaching staff or the demand for appropriate autonomy, support and funding for providers of initial and continuing VET most only ever be realised within the structural and financial framework conditions set by the member states and the defined quality standards of national education and training systems (cf. *ibid.*, p. 14).
- In this context the Bundesrat emphasises that the proposed measures only have the status of recommendations and that the “if” and “how” decisions in terms of implementation are in the hands of member states. If the Commission offers its own support measures such as support for structural reforms or the expansion of support services, these must not be developed into an indirect obligatory and harmonization instrument at European level (cf. *ibid.*, p. 14).
- The Bundesrat points out that this recommendation proposal emphasises, in a one-sided way, the expansion and development of initial and continuing VET at a higher level of qualification (EQF levels 5 to 8). The Bundesrat notes this because individuals with qualifications at EQF levels 1 to 4 in particular also make a key contribution to the environmental and digital transformation and must be supported accordingly within the framework of initial and continuing VET (cf. *ibid.*, p. 15).
- The Bundesrat also welcomes the basic aim of extending work-based learning as a fundamental structural feature of VET processes. In connection with the proposed system of benchmarks and indicators, it should be considered, according to the Bundesrat, that following training many graduates continue on to advanced training or further study and therefore not immediately into gainful employment. On the basis of dual VET in Germany, the Bundesrat points out that school-based training periods, which are closely linked to training in the actual workplace in terms of timing and structure, should also be included in the considerations (cf. *ibid.*, p. 15-16).
- The Bundesrat is opposed to the inclusion of a blanket and general call for the Commission to ensure qualitative and quantitative monitoring in the training sector, including the further use of the data obtained in another European framework for monitoring purposes. Data availability at European level must not become condensed into a European competence for steering policy via targets, indicators and benchmarks which would undermine the subsidiarity principle and ultimately render Articles 165 and 166 of the Treaty on the Functioning of the European Union (TFEU) ineffective (cf. BUNDESRAT 2020, p. 16).
- The Bundesrat notes that, in essence, these proposals address issues concerning mainly legislative powers of countries at domestic level in the areas of general and VET including university-level education and training. This applies, for example, to the proposed

measures for establishing competence frameworks and core profiles but also to syllabus and curriculum design, initial, advanced and continuing education and training of teaching staff and to the validation and recognition of qualifications. The Bundesrat therefore points out that its statement must be considered in this respect in accordance with Section 5 (2) of the Act on Cooperation between the Federal Government and the German Bundestag in Matters concerning the European Union [Gesetz über die Zusammenarbeit von von Bund und Ländern in Angelegenheiten der Europäischen Union, EUZBLG] (cf. *ibid.*, p. 17-18).