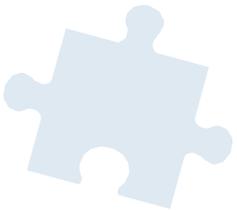


# European project **MICROBOL**

## Micro-credentials linked to the Bologna Key Commitments



Common Framework for Micro-credentials in the EHEA

March 2022





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## Introduction

Micro-credentials are **an emerging topic** in higher education at the national and European level, as well as globally. The topic is closely linked to a wider discussion on how to make lifelong learning opportunities more available, accessible and flexible in order to respond to societal challenges and keep pace with social, economic, and technological changes. The COVID-19 pandemic has made the question even more urgent.

Over the past two years, the MICROBOL project has engaged ministries and stakeholders involved in the Bologna Follow-up Group to explore whether and how the existing European Higher Education Area (EHEA) tools can be used and/or need to be adapted to be applicable to micro-credentials. The aim is to support knowledge about and enhance awareness of the importance of a common European format to document micro-credentials, create consensus about them, contribute to their implementation, and develop good practices. This is in line with the mandate of the Ministers who, in the Rome communiqué (2020), asked “to explore how and to what extent these smaller, flexible units, including those leading to micro-credentials, can be defined, developed, implemented and recognised by our institutions using EHEA tools”.

In the framework of the project, three working groups have been established to address the three Bologna key commitments: quality assurance, recognition, and qualification frameworks & ECTS. EHEA countries have nominated representatives to take part in these working groups. The three working groups had three meetings each. The findings, conclusions and recommendations resulting from these meetings fed into three documents. Subsequently, a joint document gathering the recommendations of the three groups was submitted as a response to the European Commission's public consultation on “Micro-credentials – broadening learning opportunities for lifelong learning and employability”.

The current document marks the culmination of this project. Based on the observations, understandings and insights gained by the project partners and experts, this framework aims to provide higher education institutions, governments and other stakeholders with a concise and clear view on how micro-credentials can fit into the European Higher Education Area.



## Common definition

*A micro-credential is a certified small volume of learning.*

The success of a European approach to micro-credentials depends on its common understanding throughout the European Higher Education Area. Therefore, we must agree on the purpose, use and certain constitutive elements in the certification itself to assure fair and transparent recognition and permeability between national systems, higher education institutions and the labour market.

## Purpose

*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 referred to as a way to increase and diversify **lifelong learning provision** to support individual learning pathways and widen access to higher education. Micro-credentials should not be seen as a new phenomenon. Provision of lifelong learning opportunities, through units smaller than full degrees, such as courses, modules, diplomas, parts of degrees, in-service training, etc., is an area where higher education institutions (HEIs) have long been active. Private companies and third sector actors also provide learning which fits the concept of micro-credentials. By including the diversified learning provision that already exists in the discussion, we can **re-conceptualise** this diversity putting the various experiences and concepts together into a coherent and more understandable and verifiable whole.

Micro-credentials provide a timely and relevant response to **learners' and labour market needs**. Micro-credentials have the potential of improving lifelong learning participation. HEIs may offer micro-credentials for various reasons. But to a large extent, offering them is a way to respond to the needs of society and thus part of an institution's societal mission. Other motivations for offering micro-credentials include increasing the institution's visibility and reputation by widening geographical reach and attracting more diverse groups of students; increasing their responsiveness to students' and labour markets' demands and experimenting with new pedagogies and technologies.

An important aspect regarding the provision of micro-credentials is **collaboration**. Often, HEIs collaborate with other HEIs, employers, learners, NGOs and public authorities when developing micro-credentials. This ensures that micro-credentials are relevant for the learners and the labour market. At international level, alliances of higher education institutions are also making use of micro-credentials to expand their learning offer for different target groups.



Successful implementation of micro-credentials is facilitated by the organisation of technology-supported platforms for stakeholders in education and business to organise, collaborate and jointly organise offerings.

## Use

*Credentials are owned by the learner, are portable and may be combined into larger credentials or qualifications.*

Micro-credentials can be earned **before, during and after higher education degree programmes** and as a new way to **certify competences acquired earlier in life**.

At the heart of micro-credentials are **learners** – individuals in search of a first experience of higher education or who wish to reskill, update, enhance or seek acknowledgement of their knowledge, skills and competences after a period in or out of the workforce. Micro-credentials are not a goal in themselves, but are at the service of the educational and professional development of individuals. This learner-centred approach should be at their core, and in this sense the Bologna tools are now as always levers for the training and development of individuals.

**Catalogues** of existing micro-credentials, offered by registered providers, can be an important source of information for learners, and can help them navigate the diverse offer across Europe. These should be understood as repositories of data and information on existing micro-credentials. Catalogues could aggregate information from providers at different levels – regional, national, European, sectoral, etc. – and could also include information on the accumulation of credentials.

**Certificates** for micro-credentials can be awarded in many formats. Digital and digitally signed credentials<sup>1</sup> can facilitate portability, transparency, reliability of information and verification of authenticity, and as such support a fast and fair recognition process and facilitate stackability. Micro-credentials should ideally be provided in digital format, according to linked open data and interoperability best practices, and in line with international standard for privacy and data protection, ensuring that the learner has control over what they wish to share and for how long.

Different micro-credentials can be combined into a degree or other type of certification. Programme developers should consider the **stackability** of a micro-credential and how they might fit in the wider offer of the HEI, when designing the content and structure of a micro-credential programme.

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<sup>1</sup> In the future, most credentials are likely to be digitally awarded, stored in digital ‘wallets’ on personal computers and on servers of providers, national student data depositories, EUROPASS, EBSI and others, and connected with ‘Individual Learning Accounts’.



It will be necessary to consider the costs of developing and delivering micro-credentials across different disciplines and how they are linked to higher education funding structures. The **funding mechanisms** differ greatly from system to system and LLL provision is – at least in part – financed differently than other learning provisions. Appropriate incentivisation of micro-credentials will be important for their broader take-up.

Another interesting aspect is **the potential link between education and research**: micro-credentials can facilitate smooth knowledge transfer, translating the latest research results quickly into learning opportunities for the benefit of society. They can furthermore enhance citizen science and the dialogue between the teacher, learner and science.

In this regard, micro-credentials can be seen as a way to **tailor the learning offer** to the needs of working and family life, and also as a means to make visible the knowledge, skills and competences acquired.

## Constitutive elements

A **common format** is necessary for providers to document the micro-credentials and their value. The constitutive elements for issuing micro-credentials are the following:

- **Information on the learner:** identification of the learner
- **Information on the provider:** information on the provider, including country; information on the awarding body or institution, including country (if different), including a signature or seal of the provider and/or awarding body or institution
- **Information on the micro-credential:** title, date of issuance or date of assessment, verification of authenticity<sup>2</sup>
- **Information on the learning experience:** learning outcomes, workload (in ECTS, when possible), assessment and form of quality assurance
- **Information on the QF level:** NQF level (when possible), QF-EHEA and EQF level (if self-certified/referenced), ISCED level & subject area code, SQF level (if needed)
- **Form of participation** in the learning activity
- **Access requirements**

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<sup>2</sup> In some cases or study fields it may be necessary to include an expiration date.



## Quality assurance in line with the ESG<sup>3</sup>

The degree of implementation of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) varies among different countries, agencies and institutions, depending on how they are interpreted and applied. The primary responsibility for the **quality of provision lies with the higher education institutions**, while the quality assurance agencies' role is to support HEIs in developing policies and processes for quality assurance and to ensure the public and stakeholders about their effectiveness.

This division of tasks firmly places responsibility for assuring the quality of provision of micro-credentials with the education providers. They are expected to put in place explicit QA policies and processes corresponding to the expectations laid down in Part 1 of the ESG, provide transparent information about these and include learners in all steps of development, implementation and evaluation of micro-credentials.

**The ESG apply to all higher education offered in the EHEA, in whatever format, duration or mode of delivery.** Hence, they can be used by HEIs and alternative providers alike, in case they deliver micro-credentials on higher education level. Alternative providers can also establish internal QA arrangements that are compatible with the ESG in order to align themselves with the European framework for micro-credentials.

To be fit-for-purpose and to avoid overburdening the institutions unnecessarily, the focus of **external QA** should be on the **institutional approach** to micro-credentials and their explicit inclusion in existing or new processes. The external QA should ensure that the HEIs offering micro-credentials have a reliable and well-built system to monitor their quality internally. As the procedures for programme level external evaluation are extensive, it would not be suitable to apply them to micro-credentials in the same way as to study programmes, given that micro-credentials are much smaller volumes of learning and expected to be updated frequently to respond to societal needs.

**A register of trustworthy providers** could be a useful tool for supporting acceptance and recognition of micro-credentials. A register should include alternative providers that are evaluated by an EQAR-registered QA agency. At national and regional level, existing registers could be extended or new registers established, if needed. At European level, DEQAR could serve that purpose since its scope is to cover all providers and provision aligned with the ESG. Being listed in the register could become a de-facto 'label' of adherence to the ESG and the European framework for micro-credentials.

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<sup>3</sup> I.e. based on clear and measurable objectives, standards and guidelines as provided in the ESG and Annex IV 'Quality assurance principles' of the 2017 EU Council Recommendation on the EQF.



## Recognition

Micro-credentials can be offered by higher education institutions or recognised by these using recognition procedures in line with the Lisbon Recognition Convention or recognition of prior learning, where applicable.

Recognition of micro-credentials, awarded by HEIs and by other providers, is already possible using existing recognition instruments, and it can play a key role in enhancing inclusion in higher education.

Transparency of information is key for fair assessment of micro-credentials. This is crucial at all levels: institutional (i.e. the institution offers accurate and reliable information on micro-credentials, including the ones not awarded anymore), national (for example within a national catalogue/register) and international.

If all the constitutive elements are properly displayed, it is possible for HEIs or other entities within or outside of the higher education sector to assess such micro-credentials in line with the Lisbon Recognition Convention principles. It would hence be relevant to streamline the recognition procedure of micro-credentials in line with the LRC principles and have a flexible approach.

If these elements are not transparently recorded in the micro-credential, i.e. the credential itself does not provide enough information to be a guarantee of the learning outcomes acquired, recognition is still possible, by using a RPL-procedure (recognition of prior learning and validation of non-formal and informal learning). This procedure should be fit-for-purpose and appropriate for higher education institutions and learners. In this case the output of the validation process could be in the form of a micro-credential, giving visibility according to a defined standard to the learner's competences. Recognition of prior learning and experience can be conducted by HEIs following the procedures of the ECTS Users' Guide. According to the quality and quantity of information provided in the micro-credentials, the E-evaluate methodology<sup>4</sup> may also provide guidance for recognition.

Digitalization of credentials supports recognition, as it enables portability, transparency and reliability of information and verification of authenticity.

The main objective would be to work towards recognition of micro-credentials that is as "automatic" as possible, starting from cases where all the elements and information are available to conduct a fair assessment.

There are a number of initiatives in the field in the framework of the ENIC-NARIC networks that could constitute a background for recognition of micro-credentials, and that could be looked at to explore synergies and integration, or take inspiration from principles and practices already used. ENIC-NARIC networks and the LRC Committee, in line with Lisbon Recognition

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<sup>4</sup> The [E-evaluate project](#) (2018-2020) provided an approach for the recognition of new forms of online learning in the EHEA.



Convention, can support transparent information provision and fair recognition of micro-credentials.

## Learning outcomes and ECTS credits<sup>5</sup>

The use of ECTS should be in accordance with the 2015 version of the Users' Guide a key commitment in the EHEA. The central purpose of ECTS is to describe a piece of learning in a form that is transparent and understandable for others. **ECTS<sup>6</sup> can support the development and description of micro-credentials.** The expression of micro-credentials in ECTS provides a recognisable system – as this is a basic tool of the Bologna Process – which clearly reflects their smaller volume compared to a full degree.

**To achieve this, however, ECTS needs to be understood and implemented correctly.** It is particularly important to clarify that ECTS credits comprise two elements: **learning outcomes**, which are verifiable descriptions of the competences the learner will be able to demonstrate at the end of a learning experience, and **volume of learning**, understood as the amount of time in general a learner would employ in order to form those competences.

## Qualifications framework level<sup>7</sup>

Micro-credentials should be **included in the NQF**, whenever possible. The decision on including micro-credentials within national frameworks is to be made at national level. If the national decision is to include micro-credentials in the NQF, **the criteria for inclusion** should be decided. These criteria might include for example the size, naming, value/relevance and quality assurance of the micro-credentials.

A **learning outcomes approach** to developing micro-credentials is necessary for the inclusion of micro-credentials in QFs. The descriptors of the NQF as well as the QF-EHEA can be used as a basis for determining the level of the learning outcomes<sup>8</sup> provided by the micro-credential.

The level at which micro-credentials are included within the NQF in principle also indicates the **QF-EHEA level** as well as the EQF level of the micro-credential, as per self-certification and referencing. As QF-EHEA descriptors as well as EQF descriptors describe qualifications that mark the completion of each cycle/level, to avoid confusion, micro-credentials must be clearly distinguished from other types of qualifications included within the same NQF level.

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<sup>5</sup> The possible credit range for a micro-credential is between 1 and 59. In practice, however, it is expected that most micro-credentials will have a volume of 1 to 15 credits.

<sup>6</sup> ECTS Users' Guide 2015: <https://op.europa.eu/en/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1>

<sup>7</sup> QF-EHEA, EQF, National Qualifications Frameworks (NQF), Sectoral Qualifications Frameworks (SQF) where applicable.

<sup>8</sup> Assigning the level of the learning outcomes should be consistent with the Bologna tools.



## Assessment of learning outcomes/achievements

A micro-credential can only be recognized on the basis of a proof of the learning outcomes achieved by a learner, according to transparent requirements and after assessment.

The assessment is performed by nationally recognized higher education institutions or other recognized assessment providers as part of its national quality assurance framework.

The assessment must be reliable, regardless of the assessment method used (computer-based, teacher-based, mixed).

The assessment must be fairly applied to all students and carried out in accordance with the stated procedures. It needs to be valid and allow students to demonstrate the extent to which the micro-credential intended learning outcomes and competences have been achieved.



## Conclusions

This framework represents the consensus on micro-credentials reached to this point. One main conclusion is that **Bologna tools are applicable** to micro-credentials.

Micro-credentials can even give a new boost to the full implementation of the Bologna tools and principles, for example regarding recognition of prior learning, a learner centred approach, etc.

During the MICROBOL project it became clear that there is the need for further discussion, peer support and collaboration on this topic. Therefore it is important that this framework be further taken up within the **Bologna process** and more specifically through **the Bologna Thematic Peer Groups** in their working programmes for the period 2021-2024.

To be able to fully implement the Bologna tools in the case of micro-credentials however, we might have to elaborate **guiding documents** for the different actors involved. We might have to give more explanation on how to use the existing tools. Several specific actors can be involved in the provision or awarding of micro-credentials. This includes not only higher education institutions, public authorities and recognition bodies, but also employers, students, trade unions and assessment providers, to name a few. These actors all have a role to develop, adopt, assess, award and recognize micro-credentials. Not only do they have responsibilities to advance the uptake of micro-credentials, they can also derive benefits from working with micro-credentials. Micro-credentials can allow teachers and researchers to share their expertise with a much wider audience. From an employer's point of view, micro-credentials can play a big part in the competence development of current and future staff.

Furthermore, many aspects still remain unaddressed. Among others, these include:

- to what extent is the offer of small units of learning and flexible pathways desirable in higher education;
- how can alternative providers be included within QA systems and possible lists of trusted providers;
- how to simplify recognition of micro-credentials offered outside Europe with the use of the EHEA tools within a European Framework;
- guidelines for inclusion of micro-credentials in qualifications frameworks;
- the role of private micro-credential platforms, and their certification and quality assurance requirements, in the overall micro-credential ecosystem.

Hence, the current framework shows the applicability of the Bologna key commitments to micro-credentials. They are fit-for-purpose. However, to advance the effective implementation and uptake of micro-credentials in European higher education, further dialogue will be necessary. This dialogue should include all actors involved in the provision, assessment and awarding of micro-credentials at national, EHEA and global level.



## Glossary

### *Assessment*

'Assessment' means the process or method used to evaluate, measure and eventually describe the skills of individuals acquired through formal, nonformal or informal settings. Assessment can be certified by a third party, the learner him- or herself (self-assessment), or both.<sup>9</sup>

### *Awarder*

The 'awarder' is understood as the body that certifies the micro-credential. The awarding body may differ from the provider, e.g. in the case of partnerships, franchise.

### *Learner*

By 'learners', the authors of this document understand any person enrolled in a micro-credential. These may be both traditional and non-traditional students. The authors opted for the use of the word learner (rather than student) for reasons of inclusion, clarity and readability. When the term 'student' is used in this document, it follows the same definition as in the 2015 ECTS Users' Guide to encompass "all learners in higher education institutions (whether full-time or part-time, engaged in distance, on-campus or work-based learning, pursuing a qualification or following stand-alone educational units or courses)."<sup>10</sup>

### *Learning - formal, informal non-formal*

Learning can be delivered as formal, informal or non-formal learning. 'Formal learning' takes place in an organized and structured environment and typically leads to the award of a qualification. 'Non-formal learning' takes place outside of formal education and training through planned activities in terms of learning objectives and learning time and includes some form of learning support. 'Informal learning' results from daily activities and experiences that are not organized or structured in terms of objectives, time or learning support, and may be unintentional from the learner's perspective.<sup>11</sup>

### *Portability*

'Portability' means the ability for a credential-holder to store their micro-credential in a system of their choice, to share the credential with a party of their choice (whether national or transnational) and for all parties in the exchange to be able to understand the content of and verify the authenticity of the credential.<sup>12</sup>

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<sup>9</sup> Taken from the definition in European Commission Proposal for a Council Recommendation on micro-credentials, based on the Regulation (2021) establishing the Erasmus+ programme.

<sup>10</sup> ECTS users' guide. (2015), European Commission Directorate-General for Education, Youth, Sport and Culture. p. 7. <https://op.europa.eu/en/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1>

<sup>11</sup> Taken from the definition in European Commission Proposal for a Council Recommendation on micro-credentials, based on the Regulation (2021) establishing the Erasmus+ programme.

<sup>12</sup> Taken from the definition in European Commission Proposal for a Council Recommendation on micro-credentials, based on the Regulation (2021) establishing the Erasmus+ programme.



### *Provider*

A 'provider' can be any actor that provides micro-credentials in terms of teaching, classes, learning materials, etc. This may include higher education institutions (public, private, academic, professional, preparatory, initial, continuing, adult, local, foreign, cross-border, European or international), as well as alternative providers, including employers, companies, social partners, NGOs, public authorities and others. Micro-credentials may be provided through a cooperation of different providers.

### *Stackability*

'Stackability' means the possibility to combine different micro-credentials and build them logically upon each other.<sup>13</sup>

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<sup>13</sup> Taken from the definition in European Commission Proposal for a Council Recommendation on micro-credentials, based on the Regulation (2021) establishing the Erasmus+ programme.

