



European project MICROBOL

Micro-credentials linked to the Bologna Key Commitments

EU Public consultation on “Micro-credentials – broadening learning opportunities for lifelong learning and employability”

Recommendations from the MICROBOL project
for the European Commission’s proposal for a Council recommendation
on micro-credentials for lifelong learning and employability

July 2021



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Overview of the MICROBOL recommendations

This overview lists the recommendations by the MICROBOL project for the EU Council recommendation on micro-credentials. The reader is invited to consult the following pages of this document for further explanations and background information on the reasoning behind these recommendations.

Transversal themes

An opportunity to rethink higher education's role in lifelong learning

1. Facilitate the exploration of the concept of micro-credentials to support engagement of higher education institutions in lifelong learning by reaching out and providing access to education to diverse learners before, during and after studies that lead to a degree.
2. Support a learner-centred approach and foster various forms of collaboration in developing micro-credentials with relevant stakeholders. Collaboration of HEIs with other providers or employers should be encouraged, as this may increase the relevance of the micro-credentials for the labour market.
3. Explore the usefulness of micro-credentials in evidencing knowledge, skills and competences acquired at work, alongside Recognition of Prior Learning (RPL).
4. Explore the potential of micro-credentials in facilitating the transfer of latest findings from research quickly in learning opportunities, also in the context of lifelong learning and diverse learners.

Awareness of and common agreement on what a micro-credential is

5. Support the development of a shared vision of what a micro-credential is, enhance awareness of the importance the European standard may have for the quality of micro-credentials, contribute to micro-credential implementation and develop good practices in cooperation with different stakeholders at national and European level.

A common format

6. Support knowledge and enhance awareness of the importance of the common European format to document micro-credentials, create consensus on them, contribute to their implementation and develop good practices.

Legislation

7. National governments should explore whether a change in legislation is needed, and if this is the case, plan the relevant changes, exchange information with other countries and explore good practices and experiences at international level while providing support to higher education institutions, encourage the development of micro-credentials and consider institutional autonomy to allow for diversity and creativity.

8. Explore the possibility to have a public overview table where countries can share where they are in terms of legislation, to have an overview of the state of play in the EHEA.

Digitalisation

9. Encourage digitally awarded and user-controlled credentials, as a means to support portability, transparency and reliability of information and verification of authenticity.
10. Explore if and how additional aspects need to be considered in the quality assurance of digitally delivered micro-credentials.

Bologna Key Commitments

Quality Assurance

Internal and external quality assurance

11. All micro-credentials should be subject to internal QA, independently of the external QA approach. However, the application of programme level evaluation procedures should not be encouraged for each micro-credential course, as these procedures are too elaborate for small volumes of learning like micro-credentials. The institutional evaluation approach is better fit to cover also micro-credentials.
12. Design a set of "key considerations" for (internal) QA of micro-credentials in collaboration with various stakeholders and providers.
13. Explore in collaboration with alternative providers (including companies) if and how QA procedures should be adapted for the provision of micro-credentials in partnerships.

Learner involvement in quality assurance

14. Include learners in all steps of development and implementation of micro-credentials. When designing a micro-credential, learners should be involved and the needs of the target group of learners need to be considered. Furthermore, learners should be involved in the quality assurance processes and the feedback of alumni should be taken into account as part of the continuous improvement plan of the micro-credential.

Transparency of information

15. HEIs should provide information on the quality assurance mechanism for awarded micro-credentials. In particular, this should be included on the HEIs' websites and in the micro-credential.





Register and catalogues of providers and micro-credentials

16. Develop official registers of micro-credential providers at national/regional levels, or incorporate them into existing registers.
17. Ensure the inclusion of micro-credential providers in DEQAR, based on quality assurance in line with the ESG.
18. Promote the development of clear and transparent catalogues of existing micro-credentials, offered by registered providers.

Recognition

Coverage/link with Lisbon Recognition Convention

19. Make explicit to what extent micro-credentials can fall within the scope of the Lisbon Recognition Convention, clarify what could be legal ground for the academic recognition of micro-credentials and explore the need for a subsidiary text to the LRC to support their fast and fair recognition.
20. Explore the possibility of recognition agreements on micro-credentials among education providers, at regional and cross-regional level.
21. Consider the possibility to include a chapter on micro-credentials in the revised version of the [European Area of Recognition \(EAR\) manual](#) and of the [EAR HEI manual](#), to support the development of day-to-day recognition practices.

Recognition of Prior Learning

22. Use validation of learning outcomes from non-formal and informal learning only in cases where a formal (micro-)credential is absent or it does not provide enough, reliable evidence on the learning outcomes.
23. Develop procedures for the validation of learning outcomes from non-formal and informal learning that are fit-for-purpose and appropriate for higher education institutions and learners.
24. Explore the possibility of defining opportunities for training and experience sharing on the recognition of non-formal and informal qualifications validation of learning outcomes from non-formal and informal learning.

Qualifications framework & ECTS

Qualifications framework & ECTS

25. The European discussion and national solutions should be taken forward simultaneously. The European

discussion on micro-credentials can have an impact on national solutions. At the same time, it is important that the national solutions and their consequences be considered and discussed at European level.

26. Micro-credentials should be included in the NQF, when possible. The decision on including the micro-credentials within the national frameworks is to be made at national level. Micro-credentials as qualifications are included within an NQF which is then self-certified as compatible with the QF-EHEA.

27. Guidelines and common principles for implementing micro-credentials should be developed at national and European level, optimally after consensus has been reached on their definition.

ECTS

28. Ensure that the existing ECTS Users' Guide (2015 edition) is well known and correctly followed by HEIs and its elements clarified for other stakeholders.

29. If deemed useful, formulate a simple guide to the relevant existing ECTS principles and features, to facilitate the correct understanding and application of ECTS to micro-credentials.

30. Encourage cooperation between HEIs and other education sectors as well as private providers in order to facilitate the correct definition of learning outcomes and indication of workload, as well as co-creation of learning activities.

Peer exchange and support, involvement of all actors, guidelines

31. Create opportunities for peer support and exchange of practices among stakeholders at national and international level.

32. Have a national discussion on the terminology and how this should be taken up in national legislation.

33. Develop a guidebook including a set of guidelines, good practices and recommendations for HEIs.

34. Support the development of a clear policy framework with transparent standards, while at the same time supporting the increased development of micro-credentials in co-creation with all stakeholders.





Introduction

The MICROBOL project engages ministries and stakeholders involved in the Bologna Follow-up Group to explore whether and how the existing EHEA tools can be used and/or need to be adapted to be applicable to micro-credentials. The European Higher Education Area (EHEA) is a unique international collaboration on higher education and the result of the political will of 49 countries which, step by step during the last twenty years, have built an area implementing a common set of commitments structural reforms and shared tools ([European Higher Education Area and Bologna Process - www.ehea.info](http://www.ehea.info)). For this reason, the project focuses its efforts on national qualifications frameworks, QF-EHEA and ECTS as they are one of the key bases for transparency in European Higher Education Area, while acknowledging the existence of other frameworks such as European qualifications frameworks for lifelong learning across EU member countries.

In the framework of the project 3 working groups on the 3 Bologna key commitments – Quality Assurance, recognition and QF & ECTS – have been established with nominated representatives of the EHEA countries. The 3 working groups had a kick-off on the 1st of September 2020 and two extensive meetings in the first semester of 2021, in January and May 2021.

The first meeting of the working groups on QA, recognition and QF & ECTS focused on identifying challenges in the applicability of Bologna tools to micro-credentials, while the second meeting focused on identifying possible solutions.

This document is meant to:

- provide a comprehensive overview of the main observations, challenges and solutions emerged from the Working Group meetings held in January and May 2021;
- provide recommendations to overcome these challenges, highlighting the way forward for micro-credentials in general and giving a contribution to the consultation in the view of a EU Council Recommendation on micro-credentials.





Transversal themes

1. An opportunity to rethink higher education's role in lifelong learning

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

Micro-credentials are often referred to as a way to increase and diversify **lifelong learning provision** to support individual learning pathways and widen access to higher education. Provision of lifelong learning opportunities, or units smaller than full degrees, such as courses, modules, diplomas, parts of degrees, in-service training, etc., is however 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. In this regard, micro-credentials may not bring anything new under the sun at all. However, by including already existing diverse learning provision in the discussion, the micro-credentials may help to **re-conceptualise** this diversity by putting these different concepts together into a coherent and more understandable whole.

At the heart of micro-credentials are **learners** – individuals in search of a first experience of higher education or in pursuit of updating and enhancing 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 full educational and professional development of individuals. This learner-centred approach should be at the core of the discussion, and in this sense the Bologna tools are now as always **levers for the training and development of individuals**. In this regard, micro-credentials should be understood as learning opportunities provided **before, during and after higher education studies leading to a degree**.

Another important aspect is **collaboration**. In many cases, the diversification of learning provision takes place in **collaboration with HEIs and other education providers** both within the sector and between different sectors nationally and internationally. At EU level, one example is the HEIs participating in the European Universities initiative, where participating institutions together seek to expand their learning offer to different target groups by combining their strengths, which can lead to the co-development of micro-credentials between institutions, students and employers/companies. Efforts can also be made to open up learning opportunities together on **various platforms**, often including **collaboration with employers** (e.g. FUN-MOOC). In this regard, micro-credentials can be seen as a way to **tailor the learning offer** to the needs of working and family life, but also as a means to make evident the acquired knowledge, skills and competences. Another interesting aspect is **the relationship with research** and how micro-credentials could support knowledge transfer by translating the latest research results quickly into learning opportunities to the benefit of society.





Consideration is needed on the cost of developing and delivering micro-credentials across different disciplines and how they are linked to higher education funding structures. Currently these are often focused on degrees and differ greatly from country to country. Appropriate incentivisation of micro-credentials will be important for their broader take-up.

Recommendation 1: Facilitate the exploration of the concept of micro-credentials to support engagement of higher education institutions in lifelong learning by reaching out and providing access to education to diverse learners before, during and after studies that lead to a degree.

Recommendation 2: Support a learner-centred approach and foster various forms of collaboration in developing micro-credentials with relevant stakeholders. Collaboration of HEIs with other providers or employers should be encouraged, as this may increase the relevance of the micro-credentials for the labour market.

Recommendation 3: Explore the usefulness of micro-credentials in evidencing knowledge, skills and competences acquired at work, alongside Recognition of Prior Learning (RPL).

Recommendation 4: Explore the potential of micro-credentials in facilitating the transfer of latest findings from research quickly in learning opportunities, also in the context of lifelong learning and diverse learners.

2. Awareness of and common agreement on what a micro-credential is

The very first step for having a coherent approach for micro-credentials is to develop a common understanding of what a micro-credential is.

The MICROBOL project developed the following working definition:

“A micro-credential is a small volume of learning certified by a credential. In the EHEA context, it can be offered by HEIs or recognized by them using recognition procedures in line with the Lisbon Recognition Convention or recognition of prior learning, where applicable. A micro-credential is designed to provide the learner with specific knowledge, skills or competences that respond to societal, personal, cultural or labour market needs. Micro-credentials have explicitly defined learning outcomes at a QF-EHEA/NQF level, an indication of associated workload in ECTS credits, assessment methods and criteria, and are subject to quality assurance in line with the ESG” ([“European project MICROBOL. Micro-credentials linked to the Bologna Key Commitments”](#), August 2020, p. 7).

Later, another working definition was developed and presented in the report [“A European approach to micro-credentials”](#), the final output of the Commission’s consultation group on micro-credentials:

“A micro-credential is a proof of the learning out-comes that a learner has acquired following a short learning experience. These learning outcomes have been assessed against transparent





standards. The proof is contained in a certified document that lists the name of the holder, the achieved learning outcomes, the assessment method, the awarding body and, where applicable, the qualifications framework level and the credits gained. Micro-credentials are owned by the learner, can be shared, are portable and may be combined into larger credentials or qualifications. They are under pinned by quality assurance following agreed standards”.

Unlike the MICROBOL definition which refers to micro-credentials offered by HEIs or recognized by them, this definition refers to all types of education, including non-formal and informal education.

Next to the definition, the Commission’s consultation group also proposed an EU standard¹ of constitutive elements of micro-credentials.

This definition and proposed EU standard for micro-credentials are a starting point to explore to what extent we can enhance academic recognition of micro-credentials and contribute to inclusiveness of higher education.

Recommendation 5: Support the development of a shared vision of what a micro-credential is, enhance awareness of the importance the European standard may have for the quality of micro-credentials, contribute to micro-credential implementation and develop good practices in cooperation with different stakeholders at national and European level.

3. A common format

The development of micro-credentials includes different aspects that need to be taken into consideration when building a European common framework.

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

A common format to issue micro-credentials will be necessary for providers to document the value of micro-credentials. At the same time it should be ensured that the mandatory information needed for recognition is kept to **the necessary minimum in order to avoid imposing an unnecessary burden**, also in terms of overlapping approaches.

Taking the above mentioned considerations into account, the following format is proposed for the purposes of **issuing** a micro-credential.

¹ <https://op.europa.eu/en/publication-detail/-/publication/7a939850-6c18-11eb-aeb5-01aa75ed71a1> (p. 13)





Compulsory

- **Information on the learner:** identification on the learner
- **Information on micro-credential:** title, information on the provider (including country), information on the awarding body institution, if different (including country), date of issuance or date of assessment
- **Information on learning experience:** learning outcomes, workload (in ECTS, whenever possible), assessment and form of quality assurance

Optional

- NQF level (whenever possible, and if self-certified/referenced QF-EHEA and EQF level)
- Field(s) of learning or subject area
- Form of participation in the learning activity
- Prerequisites needed to enrol
- ISCED level
- Expiration date

Recommendation 6: Support knowledge and enhance awareness of the importance of the common European format to document micro-credentials, create consensus on them, contribute to their implementation and develop good practices.

4. Legislation

Legislation can facilitate as well as hinder the development of micro-credentials. For example, in some countries, the legislation allows only the delivery of micro-credentials by institutions that offer full degree programmes in the particular study field as this is considered a quality indication, while in other countries the digital mode of delivery presents a legal issue.

The QA procedures are different depending on the division of competences in the national system. It is important to explore whether a change in legislation is needed or not and to consider the necessary prerequisites for HEIs to offer high quality micro-credentials regarding legislation, regulations around qualifications, funding, student guidance, etc.

Recommendation 7: National governments should explore whether a change in legislation is needed, and if this is the case, plan the relevant changes, exchange information with other countries and explore good practices and experiences at international level while providing support to higher education institutions, encourage the development of micro-credentials and consider institutional autonomy to allow for diversity and creativity.

Recommendation 8: Explore the possibility to have a public overview table where countries can share where they are in terms of legislation, to have an overview of the state of play in the EHEA.





5. Digitalisation

There is a general agreement that original micro-credentials (certificates) should be issued in digital format and be learner-controlled. Depending on the national regulatory framework and the level of development of digital infrastructures, micro-credentials can also be issued in paper format.

Digital credentials can facilitate portability, transparency, reliability of information and verification of authenticity, and as such support a fast and fair recognition process and enhance stackability.

Digitalisation of micro-credentials should take into account the main agreed principles of the international community in the field, such as, but not limited to, user-centricity, inclusion and accessibility, subsidiarity and proportionality, openness, data protection by design and by default, interoperability, transparency, etc.

This is particularly relevant for micro-credentials taking into consideration the large number of such certificates. It would be also relevant to explore synergies with existing initiatives, such as Europass.

Concerning the digital provision of micro-credentials, internal QA needs to consider the following particular aspects: appropriateness of digital tools, digital learning materials, pedagogies and assessment methods and support systems for students. Additional guidance to address the digital modes of delivery might be needed (for example teaching staff trained for using digital tools).²

Recommendation 9: Encourage digitally awarded and user-controlled credentials, as a means to support portability, transparency and reliability of information and verification of authenticity.

Recommendation 10: Explore if and how additional aspects need to be considered in the quality assurance of digitally delivered micro-credentials.

² Specific guidance on e-learning has been provided by ENQA in the report [Quality Assurance of E-learning](#).





Bologna Key Commitments

In order to support the quality assurance of micro-credentials, possible steps on the way forward are outlined below.

Quality Assurance

1. Internal and external quality assurance

The 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 HEIs, 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. The ESG apply to all higher education offered in the EHEA, in whatever format, duration or mode of delivery and institutions are expected to include all education provision into their internal quality assurance mechanisms.

Translated to the context of micro-credentials, this division of tasks firmly places responsibility for assuring the quality of provision with the education providers. They are expected to put in place quality assurance processes corresponding to the expectations laid down in Part 1 of the ESG, including for any micro-credentials they provide regardless of their lifecycle and whether they are part of a degree programme or provided as a stand-alone offering. It is the responsibility of the institution to also “consistently apply pre-defined and published regulations covering all phases of the student “life cycle”, [...] e.g. certification.” (standard 1.4, p. 13) This responds to the need to assure the quality of certification received by a learner. This distribution of tasks was confirmed and agreed on in the course of the working group discussions.

As the procedures for programme level evaluation are extensive, it may be difficult to apply them to micro-credentials which are smaller volumes of learning. In some countries, programme level evaluation is linked to study fields/scientific fields. In that case, a solution could be to evaluate all programmes (full or short) within a certain study field together. The focus of external quality assurance should be on the institutional approach to micro-credentials and their explicit inclusion into (existing) processes. Therefore, QA agencies should also explicitly address internal QA of micro-credentials in the external QA processes, and develop criteria, such as institutional policy, transparent information on recognition issues, use of ECTS, description of learning outcomes, appropriate assessment methods, etc. The external QA should ensure that the HEIs offering micro-credentials have a reliable and well-built system to monitor their quality internally (as, presumably, also happens for full degree programmes).

If the institution offers stand-alone micro-credentials (whether or not in collaboration with industry), more elaborate QA procedures might be needed compared to micro-credentials that are part of a regular degree programme.





Recommendation 11: All micro-credentials should be subject to internal QA, independently of the external QA approach. However, the application of programme level evaluation procedures should not be encouraged for each micro-credential course, as these procedures are too elaborate for small volumes of learning like micro-credentials. The institutional evaluation approach is better fit to cover also micro-credentials.

Recommendation 12: Design a set of "key considerations" for (internal) QA of micro-credentials³ in collaboration with various stakeholders and providers.

Recommendation 13: Explore in collaboration with alternative providers (including companies) if and how QA procedures should be adapted for the provision of micro-credentials in partnerships.

2. Learner involvement in quality assurance

When developing policies related to micro-credentials, it is assumed (as this should be a normal procedure in case of all types of higher education learning provision) that learners⁴ are involved as representatives in the governing bodies of the institution and when institutional consultations take place.

However, when the target group of learners is very diverse, reaching all groups might be challenging and because micro-credentials are shorter, it might be also challenging to get learners involved in quality assurance processes.

In this context a distinction between traditional and non-traditional students' involvement needs to be made. The former group can be more easily involved in micro-credential design, approval and IQA processes than the later. Therefore, it should be acknowledged that the engagement of the non-traditional students in the quality assurance processes could be complicated and potentially even more so in the case of stand-alone micro-credentials.

Recommendation 14: Include learners in all steps of development and implementation of micro-credentials. When designing a micro-credential, learners should be involved and the needs of the target group of learners need to be considered. Furthermore, learners should be involved in the quality assurance processes and the feedback of alumni should be taken into account as part of the continuous improvement plan of the micro-credential.

³ Along the lines of report [Considerations for QA of e-learning provision](#) (Huertas et al., 2018) (assessing for each standard of the ESG Part 1 and 2 what specific issues should be considered for e-learning in light of the requirements of the standard and suggestions of the guidelines).

⁴ By 'learners', the authors of this document understand any student or learner enrolled in a micro-credential. These may be both traditional and non-traditional students. The authors opted for the use of the word learner 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)." (p. 11)





3. Transparency of information

The quality of a micro-credential represents one of the main elements to be considered in recognition procedures. It is relevant that HEIs provide transparent information about the quality assurance policies and processes applied to the micro-credentials they award.

To further enhance transparency, the concept of a 'supplement' or supplementary information on a micro-credential, could facilitate a better understanding of the micro-credential's worth and subsequently its recognition, and lead to the creation of a shared (and commonly recognized) format. A model certificate, such as the EU standard⁵ could be considered with some elements being obligatory and some advisory.

The supplementary information could also include information regarding recognition of the awarded credits within the same institution (providing thus an indication of the internal value given to the micro-credential).

Ensuring transparency of information contributes to building trust in micro-credentials and may lead to lesser need for external quality assurance procedures because data would be easily collected and used for recognition.

Recommendation 15: HEIs should provide information on the quality assurance mechanism for awarded micro-credentials. In particular, this should be included on the HEIs' websites and in the micro-credential.

4. Register and catalogues of providers and micro-credentials

Quality and quality assurance are central elements for other aspects, like recognition. A register of trustworthy providers could be a useful tool for supporting acceptance and recognition of micro-credentials. Being listed in the register should become a de-facto 'label' of adherence to the ESG and the European framework for micro-credentials.

This register could also include alternative providers, if they deliver micro-credentials on higher education level, that are evaluated by an EQAR registered QA agency. The evaluation process should be based on the ESG with fit-for-purpose and flexible procedures that could be developed.

At European level, DEQAR could serve as the register of providers, since its scope is to cover all providers and provision aligned with the ESG. At national and regional level, existing registers might be extended or specific ones could be created⁶.

⁵ <https://op.europa.eu/en/publication-detail/-/publication/7a939850-6c18-11eb-aeb5-01aa75ed71a1> (p. 13)

⁶ In addition to registering providers, some countries may wish to establish registers of micro-credentials in the sense of 'micro-qualifications' that providers can award, as is already the case in some countries. Such registers can stimulate transparency, recognition and employability. They should, however, leave room for innovation and experimentation by learners and providers.





For learners, catalogues of existing micro-credentials, offered by registered providers, are an important source of information and can help them navigate the diverse offer across Europe. Catalogues could aggregate information from providers at different levels – regional, national, European, sectoral, etc. – and should also include information on accumulation and stackability of credentials.

Recommendation 16: Develop official registers of micro-credential providers at national/regional levels, or incorporate them into existing registers.

Recommendation 17: Ensure the inclusion of micro-credential providers in DEQAR, based on quality assurance in line with the ESG.

Recommendation 18: Promote the development of clear and transparent catalogues of existing micro-credentials, offered by registered providers.

Recognition

1. Coverage/link with Lisbon Recognition Convention

As far as possible, micro-credentials should be assessed according to the principles and procedures of the Lisbon Recognition Convention (LRC). This is easier and more “natural” for micro-credentials awarded in the formal context of the higher education sector, but it would still be important to make explicit to what extent micro-credentials awarded by HEIs can fall in the Lisbon Recognition Convention definition of period of study, or, as long as they are awarded as a stand-alone credential, they can fall under the LRC definition of qualification:

- Period of study: “Any component of a higher education programme which has been evaluated and documented and, while not a complete programme of study in itself, represents a significant acquisition of knowledge or skill”.
- Higher education qualification: “Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a higher education programme” (*LRC section I - Definitions*).

For qualifications awarded by non-formal providers, the lack of legal instruments could leave the question of admission/recognition predictability open. In this sense, recognition agreements on micro-credentials among education providers, at regional and cross-regional level, may be relevant for the recognition purpose. Most micro-credentials do not follow common standards for non-formal learning. The LRC definition is relevant because it impacts for example the topic of a possible “substantial difference” between micro-credentials. It would be relevant to streamline the procedure in line with the LRC principles and have a flexible approach.





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, integration, or to take inspiration for principles and practices already used. One example is the [E-evaluate project](#), and its seven principles for recognition of non-traditional learning.

Recommendation 19: Make explicit to what extent micro-credentials can fall within the scope of the Lisbon Recognition Convention, clarify what could be legal ground for the academic recognition of micro-credentials and explore the need for a subsidiary text to the LRC to support their fast and fair recognition.

Recommendation 20: Explore the possibility of recognition agreements on micro-credentials among education providers, at regional and cross-regional level.

Recommendation 21: Consider the possibility to include a chapter on micro-credentials in the revised version of the [European Area of Recognition \(EAR\) manual](#) and of the [EAR HEI manual](#), to support the development of day-to-day recognition practices.

2. Recognition of Prior Learning⁷

A generalised use of micro-credentials offers the opportunity to enhance the use of recognition of prior learning in higher education². On one hand, it is clearly beneficial for the more standardised and more easily accessible recognition of small volumes of formal or non-formal (including industry types of) learning certified by a credential (based on the principles of the LRC). On the other hand, this creates possibilities to issue micro-credentials as the result of procedures to recognise informal (experiential) learning and non-formal learning that does not meet the micro-credential standard. Recognizing such non-formal and informal learning requires different procedures and training and this needs to be defined.

International approaches and good practices in recognition of qualifications of refugees with partial or missing documentation could be seen as an example from which to learn and take inspiration, also for micro-credentials.

Recommendation 22: Use validation of learning outcomes from non-formal and informal learning only in cases where a (micro-)credential is absent or it does not provide enough reliable evidence on the learning outcomes.

⁷ In the context of this document, the term recognition of prior learning refers to the definition contained in the Council of the European Union Recommendation of 20 December 2012 on the validation of non-formal and informal learning: “Validation means a process of confirmation by an authorised body that an individual has acquired learning outcomes measured against a relevant standard and consists of the following four distinct phases: 1. IDENTIFICATION through dialogue of particular experiences of an individual; 2. DOCUMENTATION to make visible the individual’s experiences; 3. a formal ASSESSMENT of these experiences; and 4. CERTIFICATION of the results of the assessment which may lead to a partial or full qualification”.





Recommendation 23: Develop procedures for the validation of learning outcomes from non-formal and informal learning that are fit-for-purpose and appropriate for higher education institutions and learners.

Recommendation 24: Explore the possibility of defining opportunities for training and experience sharing on the recognition of non-formal and informal qualifications validation of learning outcomes from non-formal and informal learning.

Qualifications framework & ECTS

1. Qualifications framework & ECTS

The Framework of Qualifications of the European Higher Education Area (QF-EHEA), originally adopted in 2005 and modified in 2018, serves as the basis to which National Qualifications Frameworks (NQFs) in the EHEA are referenced. The framework consists currently of the following cycles: first cycle, second cycle, third cycle and an optional short cycle. Each cycle is described in terms of learning outcomes and competences through generic descriptors and, with the exception of the third cycle, in terms of typical ECTS credit ranges.

The QF-EHEA is in principle fit for purpose also when addressing micro-credentials. However, further work is needed to explore the opportunities and possible challenges when applying them to micro-credentials. For example, QF-EHEA descriptors describe qualifications that mark the completion of each cycle. Learning outcomes provided by micro-credentials will rarely, if ever, mark the completion of a QF-EHEA cycle so it will be important to make very clear how are they represented within QF-EHEA, e.g. as intermediate qualifications within a cycle, as part of larger qualification that is QF-EHEA compliant. The work on European level should be supported by discussion and work at national level. **How the NQF is developed, implemented and used at national level has a direct impact on how micro-credentials can benefit from the NQF and the QF-EHEA.**

Micro-credentials offered by HEIs seem to be compatible with QF systems and may be included as **qualifications within NQFs. A common approach to principles** for including them within the NQF is needed both at European level and at national level, as Member States are responsible for their respective NQFs. If micro-credentials are included within the NQF at a certain level, this also indicates the QF-EHEA level of the micro-credential, as per self-certification.

Micro-credentials can be viewed in the context of a traditional degree programme, extracted and adapted or developed as a single course unit/module or individual learning component. In principle, **these can be described as being within a level (1st, 2nd, 3rd cycle of the QF-EHEA), in the same way as they would be “part of a full degree programme”.** This also gives an indication of associated workload in ECTS credits, assessment methods and criteria, and ensures quality assurance in line with the ESG.





Viewed in a wider context, aiding flexible learning paths, a **learning outcome approach** to developing micro-credentials and well managed qualifications processes, including QF-EHEA Dublin Descriptors (generic cycle/ level descriptors), can support the inclusion of micro-credentials in QFs. NQF 'level indicators' can be compatible with micro-credentials, taking the form of generic statements about the breadth and kind of knowledge, the range and selectivity of skills, the role and context competences, learning competences and insight.

Micro-credentials offered by providers other than HEIs can be recognised by HEIs using recognition procedures in line with the Lisbon Recognition Convention or validation/recognition of prior learning, where applicable, assessing evidenced learning.

The decision whether to include all micro-credentials or only some of them in an NQF is made on a national level. There are issues that should be taken into account. **Firstly, there is the principle of openness and flexibility** of the NQF regarding micro-credentials as opposed to the NQF that currently includes only traditional degrees. **Secondly, including micro-credentials in NQFs will support the recognition, quality, transparency and uptake of micro-credentials.**

If the national decision is to include micro-credentials in the NQF, **the criteria for inclusion in the NQF should be decided.** These criteria may include the size, naming, value/relevance and quality assurance of the micro-credentials. Progression and transfer opportunities attached to the level of the micro-credentials in the NQF are other possibilities, to name a few.

The indication of the level may be useful to create transparency and facilitate stackability. In this case, **micro-credentials could also be distinguished**, e.g. by size and naming conventions, from other types of qualifications included within the same level of the NQF to avoid confusion among learners, employers and societal stakeholders, for instance, in terms of progress between the levels. Proliferation of titles that leads to confusion or misunderstanding is best avoided.

As mentioned before, in some cases instead of indicating the level of the micro-credentials, a description of learning outcomes could also be sufficient. In this case, **the descriptors of the NQF as well as the QF-EHEA** can be used as a basis for formulating the learning outcomes provided by the micro-credential.

Moreover, it is crucial that there be enough information about European and national qualifications frameworks. Information is needed especially about the criteria for including micro-credentials within the national frameworks and principles based on which the NQF level of the micro-credential can be included in the certificates and/or in national or European qualifications registers or databases.

Recommendation 25: The European discussion and national solutions should be taken forward simultaneously. The European discussion on micro-credentials can have an impact on national solutions. At the same time, it is important that the national solutions and their consequences be considered and discussed on European level.



Recommendation 26: Micro-credentials should be included in the NQF, when possible. The decision on including micro-credentials within national frameworks is to be made at national level. Micro-credentials as qualifications are included within an NQF which is then self-certified as compatible with the QF-EHEA.

Recommendation 27: Guidelines and common principles for implementing micro-credentials should be developed at national and European level, optimally after consensus has been reached on their definition.

2. ECTS

ECTS, officially the European Credit Transfer and Accumulation System, was established when Erasmus mobility just started, as a practical ‘rule of thumb’ way of describing mobile learners’ accomplishments abroad, so that on return they could be recognized by their home institution. The central purpose of ECTS was to permit the description of a piece of learning in a form that would be **transparent** and **understandable** for others. Its initial purpose was not to describe a full degree programme, but the smaller quantities of learning that a mobile student would need to have recognized.

Thus, in the present search for tools that can permit the shift to more flexible learning paths, which includes the exploration of the potential of micro-credentials, **ECTS is inherently very useful**. The translation of ECTS into workload is particularly useful when communicating about micro-credentials to potential learners and employers.

As ECTS has evolved, its credits express two key elements, tightly linked: **learning outcomes**, which are descriptions of what competences the learner is able to demonstrate at the end of a learning experience, and **volume of learning**, understood as the amount of time a normal learner will need to form those competences. Thus, the basic element of ECTS, the ECTS credit, is ready for use to describe a micro-credential. In fact, unsurprisingly, the possibility of using it for a stand-alone course unit or piece of learning is already contemplated in the 2015 ECTS Users’ Guide, and indeed, ECTS credits are regularly awarded for such learning experiences as summer schools or special courses of various kinds.

In addition to credits themselves, another key element of ECTS is the production of **the Course Catalogue in standard format**, and made available on-line: this includes a succinct description of all degree programmes and all course units/individual components of learning offered by an HEI. Micro-credentials (or, in principle, any ‘small piece’ of learning), **could be included in an HEI’s Course Catalogue**. The same standard format could also be used by ‘other providers’ to present their offer. How the Course Catalogue would relate to the current discussion on the registry of micro-credentials should be further explored. This highlights the fact that the micro-credentials should not be developed separately from the existing higher education system.

Whether micro-credentials should have **a specific number of credits, or a broader or narrower range of credits** is a question that has been discussed in earlier meetings. In the varied taxonomy of the





‘small pieces of learning’ rapidly becoming available, examples go from badges indicating very brief learning experiences (less than 1 credit) to longer mini-courses that may even require a year of a full-time learners’ life. There is a need for flexibility, but also for clarity. The most common idea seems to describe micro-credentials as something of the order of **a course module**, usually something between 3 and 15 ECTS credits. As the concept and its content are still very much evolving, we should allow quite a broad range, but one that distinguishes micro-credentials clearly on the one hand both from full degree programmes, and on the other, perhaps, from very small pieces of learning (e.g. under 1 ECTS credit).

The question arises as to **whether all micro-credentials**, including those offered by other educational sectors and employers, **should be described in terms of ECTS**. Are there cases in which competences and describing learning outcomes are enough? One argument is that a principle aim of micro-credentials is to upskill or reskill current or future employees, and that employers only need to know that a person has the required competences. Credits are irrelevant in this regard. It seems however that most employers are interested in having competences described using the widely known and accepted language of ECTS. ‘Alternative providers’ too would find it beneficial to be able to present their offer in that language. But in some countries, only recognised HEIs can award ECTS.

ECTS should be used for micro-credentials provided by HEIs. This seems to be a foregone conclusion, as HEIs are trusted providers, and can easily adapt to describing micro-credentials in the system they use for other courses, whether stand-alone or not. But how can ‘alternative providers’ guarantee that they use ECTS properly? It seems that the easiest way would be to promote **cooperation agreements** between ‘alternative providers’ and HEIs: in this way the HEIs can verify that the learning outcomes and the volume of learning are correctly described in terms of ECTS. Such partnerships can be encouraged as they provide a path for employers and HEIs understanding each other’s needs and profiting by having access to each other’s know-how. For those countries with restrictions in awarding ECTS by other providers, awarding ECTS would continue to be guaranteed by the HEI but in close cooperation and coordination with the provider. Such a practice would also encourage ‘co-creation’ of micro-credentials, and so their responsiveness and relevance to the rapidly changing context.

A careful reading of the ECTS Users’ Guide (2015 edition) shows that **ECTS in its current form supports the development of stand-alone micro-credentials**, and already comprises numerous features that can be deployed for this purpose. Unfortunately, experience shows that frequently ECTS is understood only in a superficial way, and sometimes it is applied incompletely or incorrectly. Not all HEIs offer an updated Course Catalogue, completed according to the suggested format. There are instances, furthermore, in which an excessive number of ECTS credits are awarded, for example for summer schools, thus debasing the ECTS currency (“selling ECTS credits”).

If ECTS and micro-credentials are to have credibility, ECTS needs to be implemented correctly, and its many facets better known not only to academics, but also to other stakeholders. It is particularly important to clarify that ECTS credits represent two elements, learning outcomes as well as volume of learning in student time. Because all issues relating to micro-credentials are covered, a new ECTS



Users' Guide is not required. However, a specific 'Addendum' might be useful in order to clarify ECTS and learning outcomes issues in relation to micro-credentials, and point out to potential users the solutions that can be applied.

Recommendation 28: Ensure that the existing ECTS Users' Guide (2015 edition) is well known and correctly followed by HEIs and its elements clarified for other stakeholders.

Recommendation 29: If deemed useful, formulate a simple guide to the relevant existing ECTS principles and features, to facilitate the correct understanding and application of ECTS to micro-credentials.

Recommendation 30: Encourage cooperation between HEIs and other education sectors as well as private providers in order to facilitate the correct definition of learning outcomes and indication of workload, as well as co-creation of learning activities.





Peer exchange and support, involvement of all actors, guidelines

Exchange of experiences and practices at European, national and regional level, inputs from experts and students, and occasions to share information on legislative and policy developments are essential for the uptake and development of micro-credentials both at national and international level. The Bologna Process can facilitate this by including micro-credentials in the peer support groups' agendas.

A guidebook including a set of guidelines, good practices and recommendations on how to organize, develop and ensure the quality of micro-credentials could be developed within the EHEA. Such a guidebook should especially focus on supporting HEIs in:

- the provision of micro-credentials
- further development of a quality culture
- development of transparent policy and QA procedures
- contributing to the development of a database/register for micro-credentials

The proposed framework by the MICROBOL project should give certain guidance in order to facilitate transparency. On the other side, it should be open and flexible enough to allow for experimentation, innovation and adjustments in response to the rapid changes in the knowledge society. Furthermore, it is important that all the relevant stakeholders (HEIs, QA agencies, ministries, students, employers) are involved.

Recommendation 31: Create opportunities for peer support and exchange of practices among stakeholders at national and international level.

Recommendation 32: Have a national discussion on the terminology and how this should be taken up in national legislation.

Recommendation 33: Develop a guidebook including a set of guidelines, good practices and recommendations for HEIs.

Recommendation 34: Support the development of a clear policy framework with transparent standards, while at the same time supporting the increased development of micro-credentials in co-creation with all stakeholders.





Reference materials

- Materials of the kick-off meeting: [report](#) and [presentations](#)
- Desk research: “[European project MICROBOL. Micro-credentials linked to the Bologna Key Commitments](#)”
- Survey Report “[Micro-credentials and Bologna Key Commitments. State of Play in the European Higher Education Area](#)”
- Outcome of the first meeting of working groups held in January 2021 (see above and see the minutes of each group: [QA](#), [Recognition](#), [QF & ECTS](#))
- Output documents and recommendations of working groups on [QA](#), [Recognition](#), [QF & ECTS](#) held in May 2021

