ONLINE COURSE CATALOGUES AND DATABASES FOR TRANSPARENCY AND RECOGNITION

Comparative report

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Abbreviations

AIC	Academic Information Centre (Latvia)
ANQF	Armenian National Qualifications Framework
ArmEnic	National Information Centre for Academic Recognition and Mobility (Armenia)
BIP	Public Information Bulletin
CIP	Centre for Information and Recognition of Qualifications in Higher Education (Bosnia and Herzegovina)
CNC	National Qualifications Framework in Romania (*Cadrul Național al Calificărilor*)
CNRED	National Centre for Recognition and Equivalence of Diplomas (Romania)
ECTS	European Credit Transfer and Accumulation System
EHEA	European Higher Education Area
ENIC	European Network of National Information Centres on academic recognition and mobility
EQF	European Qualifications Framework
EQF-NCP	National coordination point for European Qualifications Framework
EAR Manual (2012)	Lisbon Recognition Convention Committee and European Area for Recognition Manual (2012)
EAR Manual (2023)	Lisbon Recognition Convention Committee and European Area for Recognition Manual (2023)
HE	Higher education
HEI	Higher education institution
ISCED	International Standard Classification of Education
Law No 199/2023	Romanian Higher Education Law No 199/2023
LQD	Latvian Qualifications Database
LQF	Latvian Qualifications Framework
NACID	National Centre for Information and Documentation (Bulgaria)
NARIC	National Academic Recognition Information Centres
NAWA	Polish National Agency for Academic Exchange
NQD	National qualifications database and register
NQF	National qualifications framework
NRQ	National Register of Qualifications (Bulgaria)
OCTRA	Online course catalogues and databases for transparency and recognition
OCTRA 2	Online course catalogues and databases for transparency and recognition 2
PRK	Polish Qualifications Framework
Recommendation (2022)	Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02
The Guide	ECTS User's Guide (2015)
ZRK	Integrated Qualification Register (Poland)

Introduction

In the fast-paced changing labour market, the mobility and transparency of the learning of each individual has gained new emphasis; thus, the possibility and need for mutual automatic recognition of higher education (HE) achievement is ever important and topical. The recent emergence of micro-credentials has made this task event harder. This study was conducted to facilitate the practices of cooperation among ENICs/NARICs and aims to support and provide guidance to higher education institutions (HEI) on improving the recognition practices, as well as enabling transparent programme design, which would help in providing detailed and up-to-date documentation to better support mobility. The study particularly referred to the Council Recommendation of 26 November 2018 on Promoting automatic mutual recognition of higher education (HE) and upper secondary education and training qualifications and the outcomes of learning periods abroad[1] and the Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (Recommendation (2022))[2]. The study emphasised the cooperation with NARIC offices and HEIs, that would lead to and provide support to HEIs in producing and effectively implementing transparency tools.

According to the ECTS User's Guide (2015) (the Guide)[3], HEIs are free to choose how to inform the public on the education opportunities they provide; however, the course catalogue is one of supporting documents facilitating ECTS recognition for the purpose of mobility. The Guide provides a comprehensive perspective from student's perspective on course catalogues, but does not focus on the recognition of qualifications, and even less on the recognition of smaller learning units. Therefore, the focus of this project and study is to further explore already existing, publicly available online course catalogues, as well as information HEIs provide on micro-credentials. In doing so, we also promote dialogue with HEIs to improve course catalogues for the use of recognition of qualifications and to support broader understanding and implementation of the Recommendation (2022).

To support the cooperation between ENIC/NARIC offices and HEIs, ENIC and NARIC offices from seven countries – Armenia, Bosnia and Herzegovina, Bulgaria, Ireland (advisory role), Latvia (coordinator), Poland, Romania – and two representatives of higher education sector – BA School of Business and Finance (Latvia) and the Council of Rectors of Latvia (advisory role) – joined in the Erasmus+ project "Online course catalogues and databases for transparency and recognition 2" (OCTRA 2, 2023-2024) to focus on enhancing the implementation of the transparency tools – online course catalogues, with an emphasis on information provision on micro-credentials.

The **aim** of the OCTRA 2 project is to further explore the role of online course catalogues of HEIs in the project partner countries, with a special focus on the micro-credentials so as to support HEIs in providing reliable information for the recognition of Bologna cycle qualifications and micro-credentials provided at HE level. The project is expected to promote a dialogue between credential evaluators at ENICs and NARICs and HEIs by agreeing on the

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[1] Council Recommendation of 26 November 2018 on promoting automatic mutual recognition of higher education and upper secondary education and training qualifications and the outcomes of learning periods abroad. Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32018H1210(01)

[2] Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability. Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32022H0627%2802%29

[3] ECTS users' Guide (2015). Available here: https://op.europa.eu/en/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1

information necessary to foster easier and transparent credential evaluation and recognition, including for smaller learning units (i.e. micro-credentials). By working towards this aim, the project also addresses and encourages the automatic recognition of HE qualifications in the future. In the terms of project, the guidelines are elaborated concerning a common content of course catalogues to facilitate fair and transparent recognition of Bologna cycle qualifications and micro-credentials provided at HE level. The guidelines generally reflect position of credential evaluators and are targeted at HEIs and other stakeholders involved in recognition (e.g. employers, students).

The OCTRA 2 project focused on HE qualifications of all Bologna cycles (including short-cycle) as well as micro-credentials at the HE level. To achieve the aim of the OCTRA project, the project partners explored the context and situation in their countries with regard to the legal framework both on the use of course catalogues and status of micro-credentials. The NARIC offices of Bulgaria, Latvia, Poland, Romania and ENIC offices of Armenia, Bosnia and Herzegovina (in total six countries) conducted an online survey of HEIs, as well as interviews with HEIs. The methodology of the study was discussed and approved during the project meetings. For this study, two approaches were used: first, for partners who were part of the OCTRA project, and, second, for the partners who did not take part of OCTRA project.

To explore the state of art in the mentioned countries, the project partners[4] carried out desk research. Due to the change of two of the project partners (comparing OCTRA and OCTRA 2 projects), research tasks were different for those project partners (Armenia, Romania) who joined the project team for OCTRA 2 as they had to collect data analysed in both projects. In addition, to ensure a broader view on availability of course catalogues and information provided there, data collected during OCTRA project in Croatia and Estonia is left in the Report, as well as national level conclusions from both countries.

This study was carried also out in two distinct steps: firstly, research of the legal framework and national practices (existence of recommendations); secondly, quantitative and qualitative research on the information provision. National level legislation research, quantitative and depth analysis of online course catalogues in Latvia, Bulgaria, Poland and Bosnia and Herzegovina were performed during OCTRA project (2020-2022), during this project research regarding information provision and course catalogues was conducted in Armenia and Romania. The project partners, who had already done this, reviewed and updated information regarding legal framework and national practices. All OCTRA 2 project partners analysed national legal framework regarding smaller learning units (i.e. micro-credentials) and conducted a survey of HEIs on micro-credentials and interviews with the HEIs on the same subject.

This Report is divided in introduction, two chapters, conclusions and the guidelines. The first chapter contains results from the comparison of Country Reports with a brief insight in each project partner country's higher education system and legal framework in terms of publicly available information on HE study programmes, courses and micro-credentials, as well as information on NQDs. The second chapter describes results of interviews with credential evaluators to outline information valued in course catalogues during the recognition of Bologna cycle qualifications. The conclusions are based on the Country Reports prepared by the project partners, as well as national level recommendations included in the Country Reports.

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[4] Desk study in full extent was carried out in six of seven project partner countries – Armenia, Bosnia and Herzegovina, Bulgaria, Latvia (Academic Information Centre), Poland, Romania. This Comparative Report presents information provided by the mentioned project partners who prepared the Country Reports. The NARIC of Ireland has an advisory role in the OCTRA 2 project, they also carried out small scale survey reflecting experience of the some HEIs.

Data collected by the NARIC of Ireland is reflected in the respective section of the Comparative Report.

Course catalogues

One of significant references about course catalogues used in this project is the ECTS User's Guide (2015); therefore, the following paragraphs briefly summarise the description of course catalogues available in this document.

The Guide states that the most significant purpose of course catalogues is to ensure quality information for potential students to help them "to make the right choices and use their time most efficiently". The main information should be in the national language and in English. Furthermore, the course catalogue should be published online on the website of HEI, as well as include contact information of the staff working with student enrolment to promote availability of the data and access to studies. Thus, according to the Guide, the course catalogues are targeted at potential students when they choose their learning pathways.

Although the Guide acknowledges that HEIs may decide on the format and information structure of course catalogues, the document provides some recommendation about elements to be included in the course catalogues to foster transparency and comparability of qualifications. The Guide differentiates provision of information on three levels: institutional, programmatic and course -level. See the full lists of elements in the Guide.

The Guide explores the purpose and content of the course catalogue but does not provide definition of the concept. Therefore, this Report clarifies how the term "course catalogue" could helpfully be defined in the context of recognition. Moreover, the project focuses only on the online course catalogues, while the Guide refers to course catalogues in general, although, according to the Guide, course catalogues should be published on the HEI website.

Micro-Credentials

The main objective of this study is to identify national approaches to micro-credentials of HE in the project partner countries. Considering that term "micro-credential" is a rather new concept, agreeing on a common understanding of the term was important to ensure that comparable data was collected in the desk study. In the framework of this project and this Report, the Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02 was used as a ground for defining this concept.

According to the Recommendation (2022), micro-credential means the record of the learning outcomes that a learner has acquired following a small volume of learning, and that learning outcomes must 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 may be stand-alone or combined into larger credentials. They are underpinned by quality assurance measures following agreed standards in the relevant sector or area of activity. This definition of the concept provided in Recommendation (2022) was used in the studies conducted in the project partner countries and within this Report.

However, within the scope of OCTRA 2 project, the analysis described in this Report focuses on the general provision of information on the micro-credentials from the perspective of recognition and not on the record of learning. The project team is aware of the existing variety of micro-credentials; therefore, the project addresses the main principles related to the ensuring clear and transparent information about micro-credentials provided by HEIs.

Chapter I. Analysis of Country Reports

In order to provide a broader overview of the HE environment in the project partner countries, this chapter includes information gathered both in the OCTRA (2020-2022) and OCTRA 2 (2023-2024). There have been changes to the composition of the consortium; thus, OCTRA 2 project study does not involve updated information from Croatia and Estonia, but some of the data from OCTRA has been kept in this Report for comparability.

The six Country Reports (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland, Romania) were composed by the representatives of project partner ENIC or ENIC/NARIC offices based on the methodology and the content agreed on by all the project partners (see Annex 1). The purpose of the Country Reports was to learn about national approaches to micro-credentials, as well as presence of these smaller learning units in national legal frameworks, recommendations, and higher education environment.

To achieve the aim of OCTRA 2 project, the project partners developed a questionnaire (see Annex 4) for the representatives of HEIs about the implementation of smaller learning units that lead to micro-credentials and provision of information on this type of learning. The questionnaire was designed to clarify whether HEIs implemented learning units that could be considered a micro-credential and what information on such learning was provided on HEIs' website. To gain further insight, structured interviews (see Annex 5) with the representatives of HEIs were carried out.

The Country Reports covered, as agreed, the succeeding topics:

1. Overall situation in the country regarding the regulatory framework and existing guidelines (national/regional level documents) on course catalogues and micro-credentials. As mentioned above, two approaches were used, for partners involved in OCTRA project and OCTRA 2 project. During OCTRA 2 project, the partners from Armenia, Romania gathered information on course catalogues in line with the methodology of OCTRA project[5], the partners from Bosnia and Herzegovina, Bulgaria, Latvia, Poland updated the information, all the mentioned project partners used the same methodology for gathering information on smaller learning units that lead to micro-credentials;

2. Analysis of data collected in the surveys of HEIs (see questionnaires in Annex 2 and 4);

3. In-depth case studies of at least three course catalogues (see fiche in Annex 3);

4. In-depth case studies on micro-credentials (interviews, see questions of structured interviews in Annex 5);

5. Description of NQD and other online information sources;

6. Conclusions and proposed national level recommendations for improvements of course catalogues, NQD (if applicable) and information provision on micro-credentials.

Consistent with OCTRA project, similar difficulties were met during this project – the main challenges referred to conducting desk research, i.e. reaching HEIs and receiving fully completed questionnaires. The partners mentioned technical issues, e.g., non-functioning e-mails, but the assumption may be that a low response rate could be contributed to the lack of national level understanding of micro-credentials and the fact that the representatives of HEI

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[5] Methodology and Comparative Report of the OCTRA project is available here: https://aic.lv/content/files/OCTRA_report_web.pdf

were reluctant to fill in the questionnaire on a subject, which was not fully understood or for which mobility related recognition demand may yet be at an early stage.

When the project partners submitted their Country Reports[6], AIC conducted analysis of the Reports and elaborated this Comparative Report following structure of the Country Reports:

1. analysing provided data on existing legal framework, guidelines or recommendations in the country;

2. results of the surveys of HEIs;

3. results of in-depth case studies (course catalogues, micro-credentials and NQDs).

The Report was reviewed by the project partners and discussed during the project meetings. Information provided in the Country Reports, as well as discussions with the project partners were used for elaborating the guidelines in terms of the implementation and use of online course catalogues, provision of information on micro-credentials and NQDs for HEIs, NARICs, ENICs and institutions responsible for NQDs.

1. Outline of HE systems in the project partner countries

Although this project did not aim to have an in-depth study of HE systems in the project partner countries, a brief insight was considered as beneficial to understand whether some aspects should be taken into account when analysing gathered information. In the term of project, various features of HE systems in six countries (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland, Romania) were explored to clarify general context of course catalogues, micro-credentials and NQDs in the project partner countries. The results of comparison indicate that no major differences in HE systems may be observed in the six project countries, since all are involved in the Bologna Process and are part of European Higher Education Area.

In most cases, the countries have introduced NQFs consisting of eight levels. Three of the project partner countries have referenced their NQFs to EQF:

1) Latvia – 8 level NQF, HE qualifications are at Latvian Qualifications Framework (LQF) level 5-8 corresponding to EQF 5-8 level;

2) Poland – 8 level NQF, HE qualifications are at Polish Qualifications Framework (PRK) level 5-8 corresponding to EQF 5-8 level;

3) Romania – 8 level NQF, HE qualifications are at Romanian Qualifications Framework (CNC) level 5-8 corresponding to EQF 5-8 level.

Bulgaria has developed the National Qualifications Framework of the Republic of Bulgaria of 8 levels and "zero" level, with HE qualifications at NQF level 6-8, but the NQF[7] has not been referenced to EQF yet. Armenia has launched NQF of 8 levels, HE qualifications are placed at Armenian Qualifications Framework (ANQF) level 6-8[8]. The competent body for the development of ANQF has made a decision to start the process of self-certification of the

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[6] As mentioned before, NARIC of Ireland and both representatives of HE sector in Latvia have an advisory role, therefore, these partners did not compose Country Reports. Thus, in context of this Comparative Report, the analysis of six Country Reports (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia (study conducted by Academic Information Centre), Poland and Romania) was conducted.

[7] Information on the National Qualifications Framework of the Republic of Bulgaria (in Bulgarian). Available here: https://www.mon.bg/bg/100209

[8] Information on Armenian National Qualifications Framework (in Armenian). Available here: https://www.arlis.am/DocumentView.aspx?docid=107371

ANQF against QF-EHEA. Bosnia and Herzegovina has NQF of 8 levels[9], at the moment HE qualifications are considered to be at NQF level 6-8[10].

When exploring the concept of micro-credentials, their inclusion in the NQFs and general openness of NQF should be considered. This issue requires a thorough discussion among the national stakeholders (HEIs, vocational education and training institutions, ministries of education and other field ministries/institutions, employers' associations, i.e., labour market actors). A careful balance should be preserved between providing transparency of micro-credentials (including them formally in the NQF) and flexibility of micro-credentials (autonomy of providers to state (or not) a reference to the NQF.

The **Armenian** Qualifications Framework (ANQF) covers all sectors with the focus on formal education: general secondary education, vocational education and training and higher education, but no mechanism has been provided to include qualifications awarded outside of formal education sector in the framework.

The Baseline of Qualifications Framework in **Bosnia and Herzegovina** is not open for new type of qualifications. The Baseline of Qualifications Framework was established in 2011 and, due to the complex national situation is still to be fully implemented in practice especially in the labour market. As a result, some Bologna (three-year Bachelor) and pre-Bologna (*Viša stručna sprema*) qualifications have not been accepted by the labour market appropriately. Thus, the Baseline of the Qualifications Framework still has not been open for a new type of qualifications.

The National Qualifications Framework of the Republic of **Bulgaria** covers all formal education and training degrees and levels in lifelong learning context, including pre-school education, school education (including general education and vocational education and training), and higher education. The lack of specific national legislation is not an obstacle, rather it could serve as an advantage in this respect, ensuring HEIs as education providers the opportunity within their academic autonomy to search their own pathways to design and implement micro-credentials in the context of their study programmes and course catalogues.

The **Latvian** Qualifications Framework (LQF) includes only full formal qualifications that have been assigned LQF level by Cabinet of Ministers "Regulations on the education classification of Latvia" (in force since 13.07.2017). Since 2022, all vocational education programmes at LQF level 2-4 have modular structure, which could be considered as partial qualifications. The amendments to the law in 2022 set provisions that LQF levels of certificates of professional qualifications have been extended from the LQF levels 2-4 to LQF levels 1-8; thus, in parallel to HE qualifications there would be other qualifications (labour market oriented). There are several elements defined by law that could be considered as micro-credentials which are also not included in LQF (please see section 2.3. of this Report for detailed information). At present, no mechanism has been established of assigning levels to qualifications that are not already included in the LQF.

Polish Qualifications Framework (PRK) has 8 levels and includes both full and partial qualifications. Full qualifications are awarded in the framework of the formal education system by law (Act on integrated qualifications system adopted in 2015). They are all listed in the Act of 2015.

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[9] Information on Bosnia and Herzegovina National Qualification framework. Available here: http://cip.gov.ba/images/pdf/Legislativa/Bosanski/Nacionalni_kvalifikacijski_okvir_bos.pdf

[10] Information on higher education in Bosnia and Herzegovina. Centre for Information and Recognition of Qualifications in Higher Education. Available here: http://cip.gov.ba/en/he-system-eng

The following types of qualifications are considered as partial qualifications:

1. distinguished within the professions included in the classification of vocational education professions;

2. confirmed by master craftsman's diplomas and the journeyman's qualifications;

3. awarded after completing post-diploma studies (*studia podyplomowe*);

4. awarded after completing other forms of university education, Polish Academy of Sciences institutes and research institutes;

5. regulated qualifications;

6. market qualifications – not regulated by legal regulations, the transmission of which takes place on the basis of freedom of economic activity.

Partial qualifications can be placed at all levels.

Implementation of the **Romanian** National Qualifications Framework (CNC) targets the national system of qualifications obtained in apprenticeships, secondary education, as well as in tertiary university and non-university education, both in formal and informal and non-formal contexts, from a lifelong learning perspective. According to the Romanian Higher Education Law No 199/2023 (Law No 199/2023), HE system is structured in Bologna cycles, as well as continuous training programmes are included in CNC. Thus, HE system consists of:

1. Initial education – carried out through university study programmes organised in four cycles complying with the QF-EHEA[11];

2. Continuous education, that according to the Law No 199/2023 can be considered a micro-credential – provided subsequently to initial education, achieved through postgraduate study programmes:

   1) postgraduate professional training programmes for adults;

   2) postdoctoral study programmes;

   3) residency postgraduate study programmes;

   4) professional training programmes for adults.

In all the project partner countries, HE is organised into three Bologna cycles – first (bachelor), second (master) and third (doctor) (see Table 1). In addition, in three countries (Latvia, Poland, Romania) there are also short-cycle higher education programmes. Short-cycle programmes were introduced in part of Bosnia and Herzegovina in 2020, where the new Law on Higher Education in the Republic of Srpska stipulates that the short-cycle of HE lasts from one to two years (at least 60 ECTS credits and up to 120 ECTS credits). Thus, there is a possibility that other competent education authorities might introduce short-cycle programmes in the country. The Law states that short-cycle HE can be organised if it provides appropriate knowledge, skills and competences for areas of work or profession, a personal development of students or provides further education for a completion of the first cycle of higher education. On the completion of a short-cycle HE programme, a certificate is issued by the higher education institution.

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[11] The Ministry of National Education and National Qualifications Authority (2018). Referencing the Romanian Qualifications Framework to the European Qualifications Framework. Available here: https://europa.eu/europass/system/files/2022-05/Romanian_Referencing_Report%5B1%5D.pdf

Table 1. Higher education cycles in the project partner countries

Country / Cycle	Armenia	Bosnia and Herzegovina	Bulgaria	Latvia	Poland	Romania
Short-cycle programmes	n.a.	X*	n.a.	X	X	X
Bachelor	X	X	X	X	X	X
Master	X	X	X	X	X	X
Doctor	X	X	X	X	X	X

*In one part of Bosnia and Herzegovina (established with Law on Higher Education in the Republic of Srpska)

HEIs in the project partner countries either use ECTS credits or a national system is in place providing guidelines of transfer of local credit point system to ECTS credits. As shown in Table 2, the use of credit points varies by the project partner countries. In Armenia, Bosnia and Herzegovina, Bulgaria, Poland and Romania ECTS credits are the only credit points used. In Latvia, currently, ECTS are used side by side with national credits and information on ECTS credits is included in Diploma Supplements. On 15 September 2022 amendments were made to Law on Higher Education Institutions that initiated process of shifting to ECTS credit point system that would be fully in force on 1 January 2025. In all the project partner countries there is a possibility to visibly provide information on ECTS credits both in each HEIs course catalogue and in national level information systems.

Table 2. Use of ECTS in the project partner countries

Country	Armenia	Bosnia and Herzegovina	Bulgaria	Latvia	Poland	Romania
Use of ECTS as the only credits system	Yes	Yes	Yes	In the process of shifting to ECTS credits	Yes	Yes
ECTS transfer system	n.a.	n.a.	n.a.	1 LV credit point = 1.5 ECTS	n.a.	n.a

Following ECTS User's Guide (the Guide), course catalogues should provide reliable, up-to-date and quality assured information; therefore, quality assurance of HE study programmes is significant aspect. In all the project partner countries[12], external quality assurance of study content can be carried out. In Armenia, study programme accreditation is voluntary and is conducted only in case of positive results of institutional accreditation when launching a new HE study programme. Institutional quality assurance is performed in all the project partner countries, except Poland where institutional quality assurance was carried out for a short period

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[12] Institutional accreditation in Bosnia and Herzegovina was started in 2013, while accreditation of study programmes was initiated in 2019. However, until 2023, the study programme accreditation had been conducted rather sporadic. In 2023, the state level Agency for Development of Higher Education and Quality Assurance of Bosnia and Herzegovina (HEA) adopted the Recommendations for Accreditation of Study Programmes for the First and Second Cycles of Higher Education. All competent national education authorities still have to harmonise their legislation with the provisions of these Recommendations. The HEA is not a full member of the ENQA and EQAR.

(2012-2016) when this procedure was suspended, and changes were made to the programme evaluation criteria for general academic and practice-oriented profile.

External quality assurance practices are in place in all the project partner countries, with slightly different approaches and periods of quality assurance; hence, highlighting the importance of publicly available and easy to find information on external quality assurance is essential for both applicants as well as credential evaluators.

1.1. Information on recognition/validation of previous learning

Formal evaluation of smaller learning units has been a topical issue in Europe for several years. The evaluation of the outcomes of this type of learning can be performed in several ways. For instance, through validation of non-formal and informal learning, or procedures similar to recognition of study courses or study periods acquired in another study programme, in another HEI or during mobility periods. To understand whether any procedures have been introduced which could aid in recognition of micro-credentials, the existing validation methods were clarified in the six Country Reports of Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland and Romania.

The **Armenian** Country Report does not provide information on validation of non-formal and in-formal learning. Although no national level legislation regulating credit transfer system has been introduced, recognition of credits typically refers to a process by which HEIs evaluate and accept previously earned credits from another institution. This evaluation is done for the purpose of transferring credits earned at one institution toward a degree or a separate course at another institution.

In **Bosnia and Herzegovina**, a step forward has been taken in the field of recognition of smaller learning units. Although the situation is complex in terms of labour market, CIP has issued Recommendations on the Recognition of Foreign Higher Education Qualifications in Bosnia and Herzegovina to the Persons with Insufficient Documentation or without Documentation (Official Gazette of Bosnia and Herzegovina, No. 81/14), which contain provisions for recognition of smaller learning units. Since the Baseline of Qualifications Framework in Bosnia and Herzegovina has not been opened for this new type of qualifications, these provisions can be applied only for academic recognition. In the case of professional recognition, even if this new type of qualifications is recognised, they will not be accepted by the public labour market. In addition, the analysis of 12 laws on HE reveals that some of laws and their latest amendments, stipulate that smaller learning units may be provided by HEIs, but a clear and substantive provisions are not included. This means there is not legal rational that this type of certificates will be accepted/recognised by the labour market especially in public sector.

In addition, CIP as the stated level agency issued two recommendations: Recommendations on Recognition on Non-formal Education and Informal Learning (Official Gazette of BiH, No.96/16) and Recommendations on the Recognition of the Specific Learning Paths (Official Gazette of BiH, No. 69/22). Considering the present legal framework, these recommendations can be implemented just for academic recognition.

In **Bulgaria**, formal evaluation of smaller learning units is performed the same way as typical learning units, with all common challenges associated with them. In accordance with the national legislation[13], HEIs recognise foreign periods of studies for continuing studies. Current national legislation allows recognition of degrees and periods of studies only from accredited

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[13] Ordinance on the recognition of acquired higher education and completed periods of study in foreign higher education institutions (2000, in Bulgarian). Available here: https://web.mon.bg/bg/59

and quality assured foreign HEIs, the law does not define options for validation or recognition of prior learning, informal or non-formal education.

HEIs have legal powers to accumulate and transfer credits in accordance to the legislation since 2004[14]. The HEIs develop rules for organising student mobility and recognition of credits and study periods acquired in another HEI or according to the curriculum of another specialty, as well as ensures publicity of information. Pursuant to the mentioned ordinance, a student has right to transfer and recognise ECTS credits according to the principles set out in the study regulations. The ordinance states that each discipline receives a credit equivalent depending on the curriculum of the specialty and the full student workload. One credit is awarded for 25-30 hours of student workload. HEIs provide students with the opportunity to choose disciplines, study forms and forms of independent work, as well as for mobility on the basis of mutual recognition of separate periods of studies as part of the curriculum of the specialty and qualification degree.

Micro-credentials are not specifically cited in the ordinance, but there are no legal obstacles for the micro-credentials to be implemented as any typical learning units in the meaning of the current legislation. Another specific national option is granted by the ordinance, allowing credits to be awarded by accredited HEIs for knowledge and skills, already acquired in a HEI's structural unit for continuing education and training.

In **Latvia**, previous learning outcomes can be evaluated both in a form of validation of informal and non-formal learning, as well as recognition of study courses or periods. General principles of both practices are regulated by Cabinet of Ministers Regulations, but precise criteria and expenses are determined by each individual HEI.

The Articles 59^2 and 59^3 of the Law on Higher Education Institutions (1995) lay down the basic principles for the validation of non-formal and informal learning outcomes at higher education level (LQF 5-7). The validation is done by HEIs that assess a person's previous learning or experience against the learning outcomes of a specific study programme, and via validation process credit points are awarded (not certificates).

Cabinet Regulations "Regulations regarding the validation of competences achieved outside of formal education or in professional experience and the learning outcomes achieved in previous learning" (in force since 17 August 2018) prescribe the procedure and criteria for the validation of non-formal and informal learning outcomes by specifying the procedures applicable to an individual, the assessor, and the decision-making process. Thus, a person has the right to apply to any HEI to have their knowledge, skills, and competences acquired in previous learning or non-formal and informal learning outcomes validated. The precise procedure is determined by each individual HEI.

Cabinet Regulations "Procedure for starting studies in later stages of studies" (adopted on 16 November 2004 in force on 24 November 2024) regulate that HEIs compare previous learning in another HEI and determine their scope with the relevant part of the study programme. Comparison can lead to either enrolment without additional examination, partial enrolment or enrolment with additional examination or determination that previous learning cannot be transferred to the particular study programme / course. Previous learning in another institution is considered if its volume in credit points in both comparable study programmes is the same or the number of credit points in the previously studied relevant subject is greater. The total number of additional study subjects must not exceed 30 ECTS credits. These Cabinet Regulations also note that this type of comparison is not made if the studies are started at later stage after the knowledge, skills and competences have been acquired outside of formal

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[14] Ordinance No 21 on the Implementation of a System for the Accumulation and Transfer of Credits in Higher Education Institutions (30.09.2004, in Bulgarian). Available here: https://web.mon.bg/bg/59

education and/or in work, as well as if the learning outcomes achieved in the previous education have been already recognised.

In **Poland**, there are two approaches that can be used to recognise previous learning in the higher education area. Firstly, HEIs may recognise study periods. Pursuant to Article 85 of Law on Higher Education and Science, a student has right to transfer and recognise ECTS credits according to the principles set out in the study regulations. Secondly, pursuant to Article 71 of Law on Higher Education and Science, there is a possibility to recognise prior learning outcomes, which is done only in the case of admission to a HE programme. A HEI may recognise the learning outcomes achieved in the learning process outside the study system for persons applying for studies in a particular field of study, level and profile, if the HEI has:

1. a positive assessment of the quality of education at these studies, or
2. scientific category A+, A or B+ within the scope of the discipline (as defined in the Law on Higher Education and Science (Article 269)).

Learning outcomes are confirmed to the extent that they correspond to the learning outcomes set out in the curriculum of the particular study programme. No more than 50% of the ECTS credits allocated to the classes included in the study programme can be transferred.

This type of prior learning recognition can be done only if a person already has:

- the school leaving certificate (maturity certificate), and at least 5 years of professional experience – when applying for admission to first cycle programmes or long-cycle programmes;
- a full level 5 PRK qualification or a foreign HE qualification corresponding to level 5 of the EQF;
- a full level 6 PRK qualification and at least 3 years of professional experience after the completion of first cycle studies – when applying for second cycle programmes;
- a full level 7 PRK qualification and at least 2 years of professional experience after the completion of second cycle programmes or a long-cycle programmes – when applying for an admission to subsequent first or second cycle programmes or long-cycle programmes.

In **Romania**, Law No 199/2023 in HE stipulates that Ministry of Education, among its main attributions in the field of lifelong learning, has to establish mechanisms and methodologies for validation and recognition of learning outcomes. National Qualifications Framework of Romania (CNC) enables the recognition of learning outcomes acquired in formal, non-formal and informal contexts and ensures the coherence of qualifications and certified titles. The recognition of certificates acquired in formal, non-formal and informal system at authorised/ accredited professional training providers or in authorised/accredited competence assessment centres and/or within other entities with equivalent role outside Romania is made based on a methodology approved by order of the Minister of Education.

HEIs establish evaluation and recognition centres for recognition of competences. In these centres, according to methodology developed by the National Qualifications Authority and Agency for Quality Assurance in Higher Education and then approved by order of Minister of Education, evaluation and recognition of non-formal and informal learning acquired by young people and adults is performed. Diplomas/certificates awarded by HEIs, following the recognition of learning outcomes in non-formal and informal contexts, produce the same legal effects as diplomas/certificates obtained after learning conducted in formal contexts organised by higher education institutions.

Law No 199/2023, Article 191 stipulates that "Adult vocational training programmes, as well as systems for identifying, documenting, evaluating and certifying learning outcomes obtained in non-formal and informal contexts will use the ECTS. Learning outcomes and associated credits, previously acquired in formal contexts or as a result of identifying, assessing and recognising non-formal and informal learning outcomes, are transferred and integrated into the learner's training programme. In order to recognise learning outcomes obtained in non-formal and informal learning contexts, individuals may apply to an accredited HEI, which organises study programmes for qualification [CNC] levels 5-8."

According to Article 35 of Law No 199/2023, HEIs may recognise study periods. Student has the right to transfer and recognise ECTS credits according to the principles set out in the study regulations.

In addition, Law No 198/2023 on pre-university education (Article 158, Paragraph 14) also mentions that "the high school graduates can enrol in post-secondary education [..] organised for level 5 of the CNC. [..] According to the CNC, the admission tests may also aim at the recognition of non-certified skills, acquired non-formally and informally." Furthermore, the Article 158, Paragraph 18 stipulates that for the graduates with a baccalaureate degree, credits for education and vocational training obtained in post-secondary education can be recognised by HEIs, based on the decisions of the HEI's senate, as transferable study credit units for the bachelor's level.

Table 3. Presence of recognition of prior learning (RPL) in partner countries' legislation

Country	Armenia	Bosnia and Herzegovina	Bulgaria	Latvia	Poland	Romania
Presence of state regulated recognition/ validation of prior learning system	No	Yes*	No	Yes	Yes	Yes
Practice or recognition of credit points for learning in other HEIs	Yes	Yes*	Yes	Yes	Yes	Yes

* State level recommendations on recognition of non-formal, informal learning and specific learning pathways issued by state agency that can be applied to academic education.

2. Legal framework on publicly available information about study programmes, courses and micro-credentials

As the OCTRA 2 project aims to address the needs of various stakeholders, including employers, it is important to look at the information that is freely provided to all interested parties. Thus, in terms of this Report, "publicly available information" is understood as an intelligence that can be accessed online by any user without registration, subscriptions, or any other type of additional inquiry on an information platform. National level legal framework and guidelines/recommendations are understood as documents that are developed to support HEIs on national level, parallel to existing international supporting documentation. In addition,

ENICs and NARICs from six project countries (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland, Romania) analysed national documentation to see if there was a national level definition of "micro-credentials" and what a national level understanding of this term could be observed.

To analyse the availability and development of information provision on study programmes, study courses and learning units leading to micro-credentials in the project partner countries, present national legal framework in this context was explored in the mentioned six project countries. Firstly, the project partners clarified whether a national level regulation requires HEIs to have a course catalogue or provide publicly available information on learning opportunities and/or information on smaller learning units, e.g. micro-credentials. Secondly, the project partners explored whether there are any national level recommendations or guidelines on both developing of course catalogues and providing information on learning leading to micro-credentials.

The legal framework of information provision on study programmes, courses and micro-credentials varies by the project partner country (see Table 4).

Table 4. Summary of legal framework and national supportive documents in the project partner countries

	Armenia	Bosnia and Herzegovina	Bulgaria	Latvia	Poland	Romania
National legal framework on course catalogues	No	No	No	No	No	Romanian Higher Education Law No 199/2023 (in force since September 2023) and in the subsequent legislation (in process of elaboration)
National legal framework on micro-credentials	No	No	No	No	No	Yes
National level recommendations/ guidelines on course catalogues	No	No	No	No	No	Part of HEI's quality management system Basis: Law No 199/2023, subsequent legislation is in process of elaboration (2024)
National level recommendations/ guidelines on micro-credentials	No	No	No	No	No	In development (2024) Methodological framework that will be approved by order of the Minister of Education, at the proposal of National Authority for Qualifications and Romanian Agency for Quality Assurance in Higher Education, is in the process of elaboration. Basis: Law No 199/2023
Legal framework on providing publicly available information about study courses/ programmes/micro-credentials	Not explicitly	No	No	No	Law mandates HEIs to provide publicly available information on study process and programmes (provisions are mentioned in more than one legal act)	Law No 199/2023 and subsequent legislation, mandates HEIs to provide information on education offer (study courses/ programmes/ micro-credentials) on their websites and Study in Romania
National level recommendations/ guidelines on providing publicly available information about study courses/programmes/ micro-credentials	No	No, but according to Work Plan for 2024, CIP will issue the Recommendations on Recognition of Micro-Credentials	No	Short recommendations on study course description content (do not mandate public availability)	No	No

2.1. Providing information on study programmes and national level recommendations on development of course catalogues

The project partner countries as regards legal regulations on information provision on study programmes and courses can be divided in two parts:

- Regulation mandating publicly available information on study programmes (Poland, Romania) or

- No such regulation (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia).

Only in Romania, HEIs are mandated by law to provide information in at least one language of international circulation on the HEIs website and on Study in Romania[15] platform.

In Poland and Romania, HEIs by legal framework are required to ensure publicly available information on their study programmes/educational offer. In all other project partner countries, no legal regulations were observed mandating publicly available information.

The Country Reports showed that even in the countries where publicly available information is mandatory, no guiding documents are provided regarding the manner of publishing the data, and no guidelines are available on the content of course catalogues. Some guiding documentation was identified in two project countries (Armenia, Latvia), but this documentation does not explicitly mandate HEIs to provide publicly accessible information.

In Latvia, a short recommendation has been elaborated on how to create descriptions of study courses, but the document does not suggest making this description publicly available. The Armenian project partner Country report notes that in Armenia, the "legal framework does not include any obligation for the Armenian HEIs on the public provision of information on study programmes and courses. Moreover, there are no common guidelines on how the information related to study programmes and courses should be published", project partner reports, that "as the EHEA Member State, Armenia committed to implement the 2015 ECTS User's Guide, which underlines the importance of course catalogues as a main source of information".

In **Armenia**, although no legal acts were identified that directly mandates HEIs to provide publicly accessible information on study programmes, the Law on Higher and Postgraduate education (2004) defines main components of the study programmes and stipulates that HEIs ensure transparency and publicity of the educational process. This provision may indicate that HEIs may provide information on main components of the study programme publicly. Main components of the study programmes defined by the Law on Higher and Postgraduate education (2004) are:

- Duration (in years and credit points);

- Mode of study (full-time; part-time);

- Assessment method;

- Admission requirements;

- Graduation requirements.

In **Latvia**, the regulation was identified that mentions either preparing or having information on certain aspect of study programmes. In practice, it means that HEIs may prepare the information and possess the data, but not necessarily make this information available for public. The Law on Higher Education Institutions (1995), Article 56[1] "Study course" provides regulation for the content of study course description, but does not specify where and how

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information must be presented. This section of the Law mandates that five criteria must be included in study course description:

- Requirements to enrol in the study course;
- Aim of the study course and expected learning outcomes;
- Outline the content of the study course needed to achieve the learning outcomes (study calendar, list of required literature etc.);
- Description of students' self-directed work organisation and tasks;
- Regulation for assessment.

Based on this law, short recommendations on how to create a study course description were developed by Academic Information centre – Higher Education Quality Agency (AIKA) that propose listing the following information in study course description:

- Study course title;
- Responsible person (head) of the study course and/or the developer(-s) of the study course;
- Study course implementer(-s);
- Number of credits (ECTS);
- Number of contact hours;
- Requirements for enrolling study course;
- Purpose of study course (implementation);
- Expected learning outcomes;
- Study course content;
- Study course calendar;
- Organisation and tasks of students' self-directed work;
- Criteria for evaluating the learning outcomes;
- Mandatory literature, additional literature;
- Other sources of information.

In two project partner countries (Poland, Romania), legal regulations are in force mandating publicly available information. The case of each country is described in the following paragraphs.

Poland

All institutions executing public functions in the country must share certain information required by law in a specific section of their website. Those sections are connected into a platform named Public Information Bulletin (BIP; *Biuletyn Informacji Publicznej*) – which is used for all the authorities executing public functions to share vital information. The platform provides information only in national language. Although this system is beneficial as data is provided in a single source using unified layout, most intelligence is uploaded in the form of a simple text or PDF files; thus, limiting access to or interoperability with other databases.

The Polish project partners reported: "Although the BIP websites should be accessible from the relevant institution's main website, they are, in fact, separate entities and a HEI (or other institution) can introduce only limited scope of changes into the basic structure. With form quite strictly determined, institutions are rarely willing to spend more energy and time on the content and presentation than what is necessary to meet legal requirements."

According to Polish Law on Higher Education and Science[16] (adopted in 2018), certain documentation must be published in the BIP section of HEIs website: the statutes of the HEI, study regulations, student financial support regulations, modes and rules of recruitment. These documents cover most official information on the institution, as well as its internal regulations. The following information on study programmes must be published in the BIP section of the website:

- Mode(-s) of study and the number of semesters,
- Total number of ECTS credits to be obtained to graduate at the particular level of study,
- Qualification awarded (title obtained by graduates),
- Courses or groups of courses regardless of the mode of teaching,
- Learning outcomes of courses or groups of courses and contents leading to achievement of these learning outcomes,
- Total number of hours,
- Verification and assessment methods during the entire cycle of study,
- Number of ECTS credits to be obtained during activities in direct contact with academic staff or other teaching staff,
- Duration, rules and forms of work-based components of the programme/work placements with number of ECTS credits to be obtained from those components,
- For fields of study other than humanities or social sciences: number of ECTS credits to be obtained from courses in humanities or social sciences (not less than 5 ECTS).

Although a common platform where specific information must be shared has been established, several drawbacks of the system were identified by the Polish project partners. First, the format in what most information is uploaded limits access to or interoperability with other databases, and only limited scope of changes can be introduced into basic structure. The BIP platform is a separate entity from HEIs websites, which does not motivate HEIs to invest time, energy, and financial resources on presentation of information and content in addition to the data required by legal framework.

To conclude, in Poland, there is a legal framework requiring HEIs to provide publicly available information online, which covers wide information on study programmes, but this information does not have to be provided in any other language than Polish. The information can be uploaded in formats that are not machine readable and, thus, may not be translated by freely accessible online translations tools.

Romania

The Law No 199/2023 and subsequent legislation stipulate the following aspects: as part of the internationalisation process, HEIs are required by law to ensure the inclusion in their websites of information of general interest about the educational offer in at least one language of international circulation, as well as the obligation to permanently update the information in the Study in Romania (SIR) platform[17]. SIR platform provides information:

- Programme description;
- Admission page;
- Online application;
- Study domain;

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[16] Law on Higher Education and Science. Journal of Laws of 2023, item 742.

[17] www.studyinromania.gov.ro

- Language;
- Tuition fees;
- Duration;
- ECTS credits;
- Type of study;
- Link to the official programme website.

The Law No 199/2023 highlights the principle of transparency and access to information, based on which all interested parties have the right of free access to information regarding possible education path and services offered by HEIs, including information on the teaching programme and teachers, as well as on the life of the academic community. Additionally, availability of information of public interest, including those regarding the programmes and fields of study offered, as well as the related certificates, diplomas and qualifications is a criterion for evaluating quality management in higher education institutions defined by the law.

Comprehensive legal framework, based on the Law No 199/2023, is in process of elaboration (2024), but legal provision that is already in force mandates HEIs to provide information on their website (however, the law does not directly specify the use of course catalogues. As indicated in the Romanian Country Report, when students have registered for certain study programmes, more detailed information (how many credits, whether it is written or oral exam, the sheets of study subjects, etc.) is mandatory in internal information systems, which are accessible to the registered students.

According to Law No 199/2023, Articles 118 and 226, availability of information of public interest, including those regarding the programmes and fields of study offered, as well as the related certificates, diplomas and qualifications is a criterion for evaluating quality management in higher education institutions.

2.3. Providing information and national level recommendations on smaller learning units leading to micro-credentials

In this section several topics of the project partners' Country Reports have been described: presence of national level definition of and regulation on micro-credentials, national level regulation that obligating HEIs to provide publicly accessible information on micro-credentials (smaller learning units). In all the partner countries, except Romania, HEIs are not legally mandated to provide publicly available information on smaller learning units that lead to micro-credentials.

To explore the legal framework and recommendations regarding micro-credentials it is important to know whether there is a clear definition of micro-credential on a national level. Romania is the only project partner country where micro-credentials are defined in legal acts (see the section about Romania below).

Armenia

Currently, there is no national legislation related to micro-credentials as well as there is no common definition of the term. The concept is not well-known by HEIs. Nevertheless, HEIs offer various types of short courses and some of them may correspond the criteria of programmes or courses leading to micro-credentials as commonly defined across the Europe. For the Armenian HEIs short courses are additional source of revenue and usually these are preparatory courses, postgraduate and professional development courses. Some of the HEIs as

a result of the COVID-19 pandemic started providing online short courses which were usually advertised on HEI official websites.

Additionally, the Law on Education of the Republic of Armenia defines "Complementary educational programmes" at all levels of education aimed at meeting the education needs of students and professionals outside the main programmes and improving their qualifications. Also, there is a Government Regulation adopted in 2010 on how these types of programmes are implemented by education institutions.

Bosnia and Herzegovina

As currently there is no national level legislation that defines a smaller learning unit/ micro-credential, the project partners from Bosnia and Herzegovina reported that HEIs did not have a clear understanding of Recommendation (2022), which was also confirmed by survey of HEIs done during preparation of OCTRA 2 Country Report. Thus, HEIs, which provide certain short courses, in some cases use and, in another cases, do not use the European approach concerning the accumulation of credits. The sustainability of micro-credentials is not assured because they are not linked to the Baseline of Qualifications Framework; therefore, presentation of micro-credentials in the official websites of HEIs is not so relevant and depends on individual HEI. As a result, no national level approach to micro-credentials may be observed, and HEIs are not legally obliged to provide information on these learning opportunities.

Bulgaria

Currently there is no legal obligation for HEIs to provide information on full Bologna study cycle programmes and courses included in the HE programmes; hence, HEIs in Bulgaria are not legally obligated to provide information on smaller learning units either.

The current national legislation of Bulgaria in HE does not distinguish micro-credentials among other learning units. Currently micro-credentials are developed and designed within the legal requirements, applicable to all elements of study programmes, and first of all quality assurance in the HE system. However, the lack of national definitions is not a challenge, but rather an opportunity for HEIs to explore different approaches for adoption and implementation of micro-credentials in their practice. Especially taking into account the fact that the challenges associated with typical learning units and mobility (including Erasmus+) are well known by HEIs and smaller learning units can be treated the same way as them.

Latvia

The terminology regarding micro-credentials is not included in the national legal framework. As no explicit terminology at national level has been outlined in the laws and regulations, the volume of a micro-credential has not been determined and a common understanding among the stakeholders of the concept of micro-credential should be sought. Article 5 of the Law on Higher Education Institutions (1995) defines the role of HEIs in ensuring continuing education, i.e., promoting continuing education and arranging the activities of continuing education. According to the study commissioned by Academic Information Centre (2021), in practice, the role of HEIs in providing continuing education is significant, as many HEIs offer not only separate study courses and modules, but also non-formal education programmes and study courses.

In the context of Recommendation (2022) there are two HE elements in the national legal acts (Law on Higher Education Institutions, Chapter 1) that could be considered as micro-credential:

- Study course – an outline of a system of knowledge, skills, and competences corresponding to the study programme, organised at a specific level and in a

specific amount, for which learning outcomes have been defined for the achievement of which credit points are awarded (Article 1 of the Law on Higher Education Institutions).

- Study module – a component of study programme which is created by combining study courses or parts thereof, which have a common goal and achievable learning outcomes (Article 1 of the Law on Higher Education Institutions).

Although these study programme elements have been identified; the law does not stipulate precise way on what type of certification (title and template is not provided) HEIs should issue. Article 59^2 of Law on Higher Education Institutions lists what information should be included in the certificate awarded for the acquisition of study course or module:

1. Information on recipient of the certificate (without specifying what information);
2. Title of the HEI;
3. Title of study course / module;
4. Credit points;
5. Full name and qualification of the lecturer;
6. Amount of work done;
7. Evaluation of study outcomes.

Previous research[18] on micro-credentials in Latvia identified that for regulated professions, in certain cases, there may be specific types of education programmes, which must be acquired as part of the certification, recertification, or professional development for an individual to be able to practice the respective profession. Law on the Regulated Professions and the Recognition of Professional Qualifications (Section 1) identifies "a certificate of professional qualification" that can be issued only by an institution that has received right to issue this type of certificate. According to the Law, these certificates can either:

1) certify professional qualification or a specific level of the professional qualification;
2) certify that the owner thereof has successfully fulfilled the certification requirements for the acquisition of a specific profession or professional specialisation (including work involving new materials, machinery, and technology).

Certificate of professional qualification may be issued only by an authorised institution. Authorisation of the institution can be done by economic fields and even by a certificate, which means that these documents may be issued by any type of institution, not only by HEIs.

The Cabinet Regulations "The procedure on issuing permits for the implementation of the non-formal education programme" (in force since 19.07.2023, applicable to all education levels) determine not only what information must be included in non-formal education programme description (volume, acquired learning outcomes, evaluation criteria, quality assurance process, where information on non-formal education programme will be published (does not mandate to publish information)), but also require to submit a template of certificate that must include:

1) Identification of a person/institution implementing/issuing the certificate;
2) Tittle of the document "Certificate of acquisition of non-formal education programme" (*Apliecība par neformālās izglītības programmas apguvi*);
3) Registration No of the certificate;
4) Name and surname of the person obtaining the certificate;
5) Title of the programme;

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[18] Academic Information Centre – Latvian NCP, Līce, A. (2021). Micro-Credentials in Latvia. Available here: https://nki-latvija.lv/storage/resources/mico_credent_lv_draft.pdf

6) Volume of the programme (hours);

7) Achieved learning outcomes;

8) Date and place of issuing.

Poland

As in most project partner counties, also in Poland term "micro-credential" has not been defined by law; thus, there is no specific regulatory framework regarding micro-credentials or recognition of micro-credentials. Pre-research on micro-credentials done by the Polish project partner indicated that concept of micro-credentials was not a very clear in Polish higher education. The Polish HEIs rarely use this term as name of trainings, courses and another form of learning offered by them.

Although direct mention of micro-credential/smaller learning units was not found in the Polish legal acts, e.g. the Law on Higher Education and Science, Article 162 (20 July 2018) mentions that HEIs may provide other forms of education. The Law includes a reference regarding provision of other than degree programmes form of education, which could include micro-credentials. This reference also regulates that a person who has completed another form of education obtains a document confirming the completion of that form of education. The type and template of the document are determined by the entity providing this form of education.

Romania

Law No 199/2023 regulates that HEIs may organise adult vocational training programmes that may have small learning volumes, targeting competences and/or corresponding learning outcomes, using ECTS, and resulting in a micro-credentials, which can also be issued in digital format and stored in a national or European digital register designed to ensure the authenticity of certifications. According to Article 185 of Law No 199/2023, micro-credentials can both be issued as individual certificates and stacked and combined. This part of the law also lists the following characteristics of this type of learning:

1) is the intended result of specific learning;

2) may represent a form of evaluation, validation and attestation of non-formal and informal learning, in compliance with the legal provisions;

3) aims at measuring knowledge and skills and the degree of autonomy and responsibility, responding to social, personal, cultural or labour market needs;

4) qualifications are issued on the basis of an assessment based on transparent standards;

5) the workload specific to the education activities related to these programmes is described by using the ECTS;

6) is structured to meet the needs of learners, being constantly improved starting from the evaluation of beneficiaries' satisfaction;

7) can be achieved through collaboration between HEIs or organisations providing education and employers, social partners or other education providers, in order to increase their relevance in relation to the labour market.

As mentioned above, CNC also includes Certificate of professional competence. Certificate of professional competence or partial qualification by micro-credential – is issued if the candidate has been declared competent for the learning outcomes associated with one or more competences related to a qualification or occupation, according to the qualification standard or occupational standard.

This law and also subsequent legislation stipulate the following: as part of the internationalisation process, HEIs are required by law to ensure the provision on their websites

of information of general interest about the education offer that also includes smaller learning units/micro-credentials.

3. NQDs and alternative information sources on qualifications

The OCTRA 2 project mainly focused on further exploration of the role of online course catalogues of HEIs in the project countries with a special focus on the micro-credentials in order to ensure support to HEIs in providing reliable information for recognition about Bologna cycle qualifications, including micro-credentials offered at HE level. As the project aims also to address all potential stakeholders (such as employers) involved in recognition of the qualifications, the project team considered that it was important to provide sources of reliable information on HE qualifications; therefore, information on national NQD and other reliable national level information sources on HE qualifications were updated and gathered. To provide a wider range of information data sources identified during OCTRA project in Croatia and Estonia was kept in the Report. This section of the Report includes summary information on databases in: Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland since the full analysis of these information sources is already available in the OCTRA project Comparative Report (2022)[19]. In this Report, more detailed description is provided about the Romanian information sources.

As the project aims to address information accessibility on micro-credentials, the project partners explored reliable information sources on smaller learning units, but since in none of the project partner countries clear definition of "micro-credential" is established on a national level, it is hard to determine with a certainty that some education elements (e.g. partial qualifications or courses) are micro-credentials. Official state recognised information sources identified during OCTRA and OCTRA 2 projects do not provide data on smaller learning units leading to micro-credential, for that reason this section of the Report outlines information on data sources for qualifications included in national NQFs. Since a study course could be considered as a micro-credential, the data sources providing information on study programmes and also individual courses are described in the Report.

Three project partner countries (Latvia, Poland, Romania) mentioned NQDs in the context of developing their national qualifications frameworks (see Table 5).

Four Country Reports (Bulgaria, Latvia, Poland, Romania) noted that at national level several information sources provide various information on HEIs and implemented study programmes, but most are developed for specific purpose and do not always include comprehensive information on study programmes and courses. Table below names few of the information sources available in the project partner countries. Four of project partner countries (Bulgaria, Latvia, Poland, Romania) also have dedicated websites, e.g. "Study in.." that were developed as part of European initiative, where relevant information for HE applicants is provided, including information on study programmes.

Table 5. NQD and other national information sources in the project partner countries

Country	NQD	Alternative information sources
Armenia	n.a.	n.a.

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[19] OCTRA project Comparative Report (2022) is available here: https://aic.lv/content/files/OCTRA_report_web.pdf

Country	NQD	Alternative information sources
Bosnia and Herzegovina	n.a.	n.a.
Bulgaria	n.a.	· National Register of Qualifications (NRQ)[20] – substantial data granularity, not available publicly. Various national registers, such as: · The Register of Higher Education Institutions, maintained by NACID with level of description all individually approved HE programmes[21] · Bulgarian University Ranking System[22]
Croatia	Croatian Qualifications Framework Register[23]	The Directory of Study Programmes[24]
Estonia	n.a.	· Estonian Education Information System (EHIS)[25] that is regulated by the Government of Estonia · The Study Information System (ÕIS[26] (older) and TAHVEL[27] (new))
Latvia	Latvian Qualifications Database[28]	· National Education Information System (NEIS)[29] maintained by the Ministry of Education and Science · E-platform[30] maintained by Quality Agency for Higher Education
Poland	Integrated Qualification Register[31]	· RAD-on[32] (Reports, Analyses and Data on Higher Education and Science in Poland) · Public Information Bulletin[33]
Romania	National Register of Qualifications (RNC)*	· The National Register of Qualifications for Higher Education (RNCIS)[34] · The National Register of Professional Qualifications (RNCP)[35] · National Register for Postgraduate Programmes (NRPP)[36]

*Generic title used in the Romanian legal framework to refer to RNCIS, RNCP and NRPP.

[20] No link is available, as the database is not publicly available.

[21] https://rvu.nacid.bg/HomeEn/IndexEn

[22] https://rsvu.mon.bg

[23] https://hko.srce.hr/registar/ ; https://hko.srce.hr/registar/standardi

[24] https://mozvag.srce.hr/preglednik/?lang=en

[25] http://www.ehis.ee

[26] https://ois2.ut.ee/#/dashboard; https://www.ois.ee

[27] https://tahvel.edu.ee

[28] https://www.latvijaskvalifikacijas.lv/en

[29] https://www.viis.gov.lv

[30] https://eplatforma.aika.lv

[31] https://kwalifikacje.gov.pl/en

[32] https://radon.nauka.gov.pl/dane

[33] https://www.gov.pl/bip

[34] http://www.anc.edu.ro/registrul-national-al-calificarilor-din-invatamantul-superior-rncis/

[35] http://www.anc.edu.ro/rncp/

[36] http://www.anc.edu.ro/registru_rnpp

Armenia

No national level information sources on HE study programmes were identified by the project partner. However, according to the roadmap approved by the Government in 2019 it is planned by 2025 to create a national register of the Armenian qualifications.

Bosnia and Herzegovina

No national level information sources on HE study programmes were identified by the project partner.

Bulgaria

Several national HE registers have been developed, as most of them were launched for a particular reason, the structure of data varies by each source. Only the Register of Higher Education Institutions provides information both in Bulgarian and English.

The most comprehensive system is **National Register of Qualifications** (NQR), but currently this database is not fully publicly accessible. The Bulgarian project partner noted that this system "incorporated data from different national sources from national competent authorities, including the Ministry of Education and Science, the National Evaluation and Accreditation Agency, the National Agency for Vocational Education and Training, etc. as a result, their incorporation in NRQ unfortunately had substantial internal data granularity, which prevented the database to be launched for public access and remained available with restricted access only."

Two information sources, one maintained by the Bulgarian NARIC office – NACID, and the other maintained by the Bulgarian Ministry of Education and Science, provide public information on HEIs and study programmes:

- **The Register of Higher Education Institutions** – provides general information on registered and accredited HEIs, as well as on accredited study fields and individually approved HE programmes with links to individual HEIs course catalogues.
- **Bulgarian University Ranking System** – includes information about the programmes that are offered in each HEI, described comparatively via a number of indicators.

Latvia

Latvian Qualifications Database (LQD) is an information platform where data from different sources (legal acts, other national platforms and separate HEIs) is collected and presented in a user-friendly way. The database was launched in 2016 by AIC as part of Erasmus+ project "Databases and registers for qualifications (EQF-NCPs)"; therefore, the LQD follows the structure and layout stipulated by the European Commission to promote visibility and comparability of national qualifications. LQD includes core information on the Latvian education system, as well as Latvian Qualifications Framework (LQF) and its core terminology. LQD outlines information on all level formal qualifications referenced to the LQF that are (or were) awarded by accredited education institutions in Latvia since 2016.

National Education Information System is a state-maintained register of all registered, licenced, and accredited education institutions and formal education programmes including HE sector. The law stipulates that responsible body must enter information in this system when education programme is registered, licenced and accredited. The system is partly publicly available and is available only in national language (Latvian). The system for all users provides rudimentary information on education institution and education programmes.

E-platform is maintained by the Academic Information Centre – Quality Agency for Higher Education, i.e., institution responsible for organising licencing and accreditation of HE and its study programmes. This platform has both publicly available and restricted access information,

and provides information on all the state accredited HEIs and HE programmes. The platform contains information on study programmes both in Latvian and English, database does not have information on separate study courses.

Poland

Integrated Qualification Register (ZRK) is a public register that collects information about all the qualifications included in the Integrated Qualifications System (ZRK) independently of other registers and catalogues available in Poland. ZRK was developed to support ZRK and is one of the main components of the system. The system provides information on the specific requirements that should be met in order to obtain a qualification, and which institutions have the authority to award these qualifications. The register includes the following types of qualifications:

- Full qualifications (awarded exclusively in the general and higher education systems),
- Partial qualifications (awarded in vocational education),
- Regulated qualifications, market qualifications and market qualifications in crafts.

The ZRK also serves as a liaison for institutions that cooperate within the framework of the **RAD-on database** also offers access to data on HEIs. RAD-on is a system created for the Polish Ministry of Education and Science to store, process and share data and information on higher education and science in Poland. The data on study programmes offered by each HEI that is presented in RAD-on come from another system: POL-on (available only in Polish). RAD-on is partly available for public use and specific data on HEIs, including their study programmes, branches, scientific activities, and certain financial data. The database is complex to navigate, but it contains a list of fields of study programmes offered by each HEI,

Romania

The National Qualifications Authority elaborates, implements, updates and manages the National Register of Qualifications (RNC), correlating the requirements of the labour market with the qualifications from pre-university education, university and non-university tertiary education, respectively the professional training of adults, which is approved by Government decision.

RNC[37] includes the description of all qualifications in Romania and comprises two main qualifications registers:

1) The National Register of Qualifications for Higher Education (RNCIS) – first introduced in legislation in 2011 and currently includes 4,900 qualifications from higher education at CNC levels 6-7 (December 2022)

2) The National Register of Professional Qualifications (RNCP) – covers all nationally recognised vocational qualifications at CNC levels 1-5, obtained in formal, non-formal and informal contexts, including adult education. The methodology for developing, updating and managing the RNCP was approved in 2019 and currently includes 346 qualifications at ROQF levels 3-5 (December 2022).

RNCIS and RNCP include (in Romanian) the mandatory and most optional elements outlined in Annex VI of the 2017 Council recommendation on the EQF:

- credit points or workload,
- external quality assurance body,
- qualification code,

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[37] National Register of Qualifications (RNC) is the generic name which covers the three registers (RNCIS, RNCP and NRPP).

- NQF level,
- occupations that can be practiced,
- information about the qualification,
- awarding body,
- description of the qualification,
- ISCED field.

The main target groups for the RNCIS and RNCP are learners, employees, employers and, for RNCIS – HEIs. In addition, for making qualifications publicly available, the registers' purpose is to make visible the correlations between qualifications obtained in education and occupations in the labour market. Qualifications included in RNCIS must be reviewed and, if necessary, updated every five years. The two registers have a search function. Analysis and comparison tools are expected to be developed in the future. The registers' interoperability with learning opportunities, occupational classifications and career information and guidance portals is under development. Connectivity with the Europass platform is currently being tested. [38]

A National Register for Postgraduate Programmes (NRPP) has also been put in place, covering postgraduate programmes for continuous professional development, specialisation, and programmes for adults; 443 such programmes, assigned to NQF level 6, have been included by December 2022. NRPP provides information in Romanian on the following elements of the postgraduate programmes:

1) programme name,
2) ISCED field,
3) NQF level,
4) description of the postgraduate programme in terms of learning outcomes (knowledge, skills, abilities autonomy and responsibility),
5) ECTS credits,
6) information on the legal entity that organises and issues the certificates,
7) related occupations.

4. Results of HEIs survey

This section of the Comparative Report consists of two parts: firstly, survey data on course catalogues[39]; secondly, survey data on implementation of smaller learning units leading to micro-credentials by HEIs in the project partner countries. As mentioned above, survey data about course catalogues presented in this Report was gathered in two periods. Survey data for Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland were gathered during OCTRA project (2020-2022)[40], additional data was gathered during OCTRA 2 project (2023-2024) in two project partner countries – Armenia and Romania. The survey of HEIs on micro-

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[38] Source: Cedefop, 2023, European Inventory of National Qualifications Frameworks 2022 – Romania. Available here: https://www.cedefop.europa.eu/files/romania_-_european_inventory_of_nqfs_2022.pdf

[39] Data was gathered using methodology used in the OCTRA project. As additional data gathered during OCTRA 2 project confirmed findings of OCTRA project, this Report provides summary of findings and key conclusions. Methodology and gull analysis can be found in OCTRA project Comparative Report (2022). Available here: https://aic.lv/content/files/OCTRA_report_web.pdf

[40] To provide a wider range of information, the project partners decided that it would be beneficial to keep data collected by OCTRA project partners from Estonia and Croatia to provide wider data to base conclusions on.

credentials was conducted by OCTRA 2 project partners from all the countries, including Ireland, where a small-scale initial survey was done and data submitted to project coordinator.

The Guide suggests that course catalogues should provide reliable and up-to-date information on HE programmes and "single educational components". In context of micro-credentials, "single education component", in some cases, can be considered a type of smaller learning unit leading to micro-credential. Although Recommendation (2022) puts emphasis on the "record" aspect of the micro-credentials, it is important to note that this project just as its predecessor explores the information provision aspect of credentials, and not the record of credentials.

Annex I of Recommendation (2022) lists several aspects that are essentials for the record of the micro-credentials, such as[41]: title, learning outcomes, workload, level of learning (if applicable), type of assessment, form of participation in the learning activity, type of quality assurance etc. Recommendation (2022) also emphasises the stackability and combining of micro-credentials that would lead to more transparent and flexible lifelong learning pathways. Taking into account aspects underlined in the Recommendation (2022), to gather data on information provision by HEIs on micro-credentials a questionnaire was designed especially for the purposes of this project by AIC and discussed and approved by the project team (see Annex 4). The questionnaire consisted of nine questions addressing:

1) Provision and type of micro-credential programmes,

2) Use of ECTS for measuring workload,

3) Information provision on learning leading to micro-credential (institutions website),

4.1. Results of HEIs survey on course catalogues

Data on course catalogues were collected in two periods. Initial data gathered during OCTRA project (in spring and summer 2021 by project partners from: Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia (by AIC and Council of Rectors of Latvia), Poland), supplementary data gathered by partners from Armenia and Romania (in spring and summer 2023). Questionnaires were disseminated on a national level either in English and/or in national language. The number of HEIs to include in the survey also was left for the decision of the project partners for the best way to reflect the situation in their country (see Table 6 below).

This section of the Report outlines the results of national surveys presented in the Country Reports. Additional data gives wider insight into situation regarding presence and content of course catalogues in wider area. Although the number of respondents is not great, having done research in seven countries provides opportunity to observe some tendencies and draw conclusions on international transparency and comparability of HE qualifications. In total, 272 questionnaires (see Table 6) were completed providing quantitative data on HE sector regarding course catalogues.

Table 6. Number of respondents per country in survey on course catalogues

Country	Number of disseminated questionnaires	Number of completed questionnaires
Armenia	17	9[42]

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[41] Full list available in Recommendation (2022). Available here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02)

[42] Further analysis of survey data on course catalogues only provides information on the second question of the survey done in Armenia (Question 2. "Does your institution have a course catalogue?" – 3 HEIs confirmed having a course catalogues, 6 HEIs did not have course catalogues), since the Armenian project partner determined that

Country	Number of disseminated questionnaires	Number of completed questionnaires
Bosnia and Herzegovina	47	16
Bulgaria	5	5
Croatia	100	47
Estonia	13	9
Latvia	53	38
Poland	397	131
Romania	82	17
Total	714	272[43]

The results of survey indicate that 69% of surveyed HEIs have a course catalogue, i.e., 184 HEIs have a course catalogue, 29[44] HEIs replied that their course catalogue was under development, and 55 HEIs do not have a course catalogue. The next question clarified whether the course catalogues were available online, and 78% of respondents noted that their course catalogues are developed as online course catalogues, 19%[45] of HEIs are developing online course catalogues (see Figure 1). Most (153 of 217 or 70%, question 5) of the course catalogues are also fully publicly available (can be used without additional registration).

Figure 1. Availability of (online) course catalogues (%)
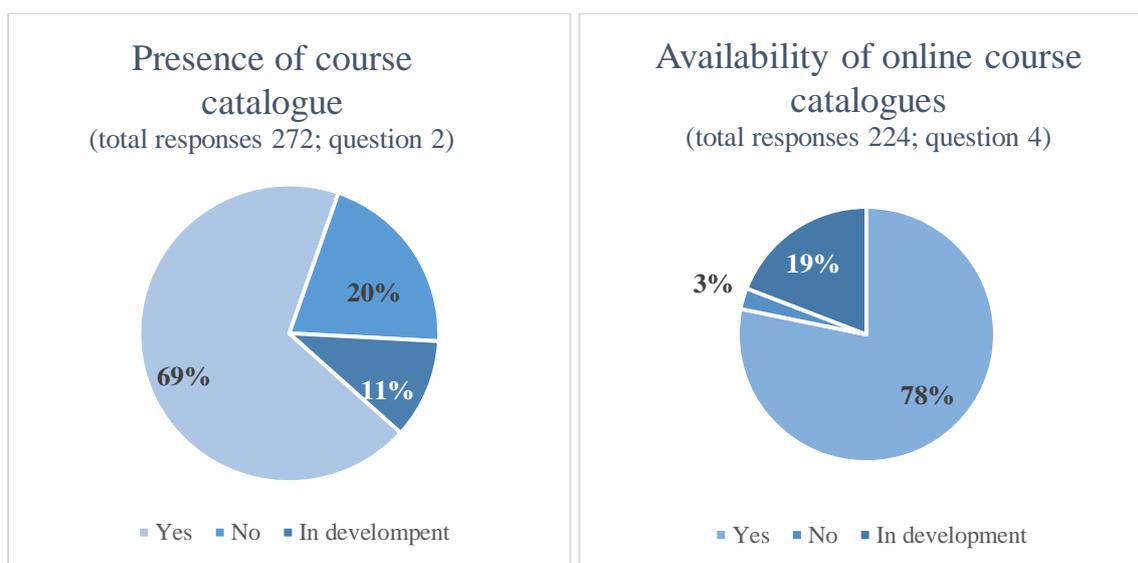
According to the results of survey, 57% (171 responses) course catalogues are only in national language(-s), 42 (29%) respondents noted that course catalogue was also available in English and 86 (29%) HEIs – in other language(-s) (question 3). The respondents, who have course

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"None of the universities publish information on their study programmes and courses in internationally accepted manner in the format of catalogues", other data on the survey on course catalogues in Armenia was not submitted.

[43] Considering the fact that the Armenian case is represented only by one question of the questionnaire, the total of the received completed questionnaires is 263.

[44] Of the mentioned number of HEIs: 2 Romanian HEIs; it could be assumed that 27 HEIs surveyed during OCTRA project (2021) have either already completed developing or close to finishing development of course catalogues.

[45] Of the mentioned number of HEIs: 3 Romanian HEIs; it could be assumed, that perhaps the rest (40 HEIs) have launched their online course catalogues.

catalogues in a foreign language, were asked to identify what information was provided in foreign language (questions 3.1.). The respondents remarked that the succeeding elements were published in a foreign language:

- General information on HEI (on HEIs website);
- Study courses and programmes available for exchange students or study programmes/courses offered in a foreign language;
- Basic information on study programmes/courses, i.e. title, ECTS or workload expressed in hours/national credits, short description, learning outcomes, information on examination.

The content of course catalogues varies by HEI, there is no specific correlation between collected data to suggest that specific aspect of course description is more important in one country and is not considered as important in another. In surveyed HEIs, the course catalogues usually provide information on the following items (question 8):

1) Title of study course (209 of 236, 88%),
2) ECTS credits or other credit points (207 of 236, 87%),
3) Short description of study course (180 of 236, 76%),
4) Field of study (176 of 236, 74%),
5) Learning outcomes (162 of 236, 68%).

Other information elements noted in the question 8 on course catalogue (see Annex 2) were included in some of the course catalogue, the response rate for these elements were less than 100 from 224 of respondents.

As both OCTRA and OCTRA 2 projects analyse course catalogues and information provision in the context of recognition of qualifications, question on external quality assurance was included in questionnaire on course catalogues (question 7). As the results of the survey show, around half of HEIs (118 of 215 or 55%) does not include information on external quality assurance in their course catalogues.

The following questions of survey clarified the use of ECTS by the HEIs. The results of survey reveal that 98% of surveyed HEIs not only measure workload in ECTS credits, but also 90% of respondents use them as a credit system for the transfer of credits for students' learning outcomes achieved in another HEI (see Figure 2).

Figure 2. Reflection of ECTS in the course catalogues (%)
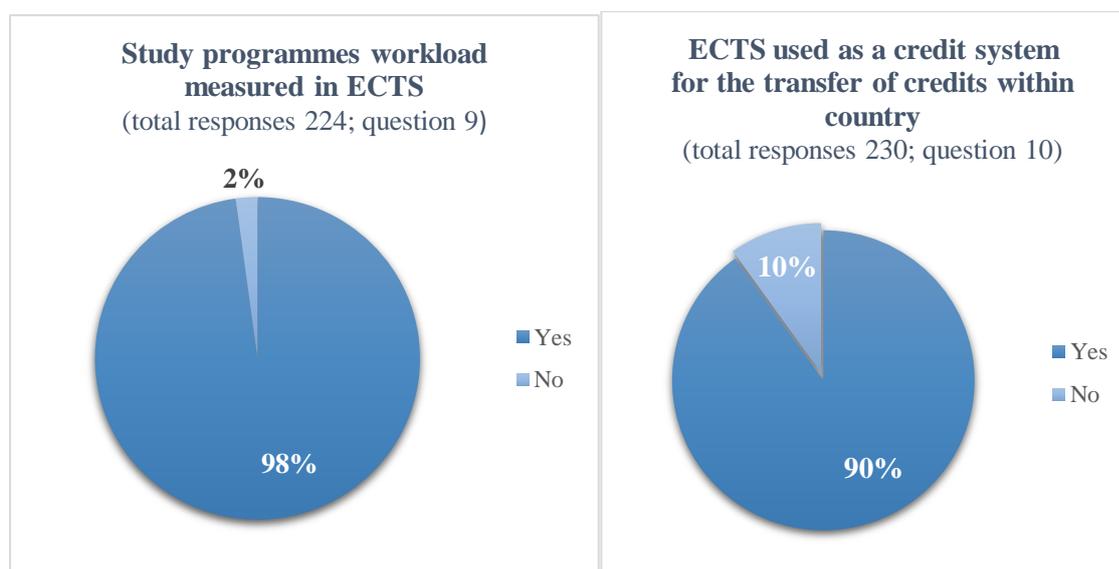
Additional data from Romania confirmed findings of OCTRA project. Thus, the same summary and conclusions of the survey results can be drawn as in OCTRA project[46]. The following main conclusions could be outlined:

1) Most HEIs have already developed a course catalogue that has public access and is not limited to internal use;

2) Content of the course catalogues varies by the country or HEIs, none of the respondent HEIs provide all the information mentioned in the Guide;

3) Almost all surveyed HEIs use ECTS credits to measure workload of the study programmes and study courses, and an internal credit transfer system tool;

4) Data on external quality assurance is rarely provided in course catalogues;

5) Varied results were provided on the content of the course catalogue leading to the to the conclusion that there is a need to develop a common understanding on the content.

According to the Armenian Country Report, their HEIs provide information on study programmes, although it is claimed to be only a rudimentary information "list of the programmes and the subjects in usually three languages, Armenian, English and Russian". The Armenian Country Report also revealed that few (number not specified) HEIs might have course catalogues that do not have public access, but which provide basic information (titles, workload). Thus, this data confirms findings of OCTRA and OCTRA 2 projects on the online course catalogues – further dialogue on online course catalogues and their content should be carried out.

4.2. Results of HEIs survey on micro-credentials

To gain insight on what information is provided on smaller learning units leading to micro-credentials by HEIs, a survey on implementation and information provision on micro-credentials by HEIs were conducted during spring 2023 by all the countries involved in the OCTRA 2 project, additional information was gathered in Bulgaria in January 2024. A questionnaire (see Annex 4) with nine questions was designed by AIC and approved by all the project partners. While developing questionnaire, the provisions of Recommendation (2022) were taken in account in the context of information provision on smaller learning units.

The questionnaire was built to understand the following aspects:

- type of micro-credentials provided by HEIs (parts of study programme and/or standalone units or learning);

- providing information on micro-credentials on HEIs website/other information sources;

- content of provided information on learning that leads to micro-credentials.

The questionnaire was disseminated on a national level either in English or in national language. The number of HEIs to be included in the survey also was left for the decision of the project partners for the best way to reflect the situation in their country (see Table 7 below).

This section of the Report outlines the results of national surveys presented in the Country Reports and data provided by the Irish project partner. Although the number of respondents is not great and results on implementation of the micro-credentials is questionable, some tendencies could be observed, and conclusions could be drawn on the information provision regarding smaller learning units. It is important to emphasise that in terms of the OCTRA 2 project research and guidelines and recommendations are developed in context of information

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[46] Please see conclusions on HEIs survey on course catalogues in the OCTRA project Comparative Report (2022), Chapter I, paragraph No 5. Available here: https://aic.lv/content/files/OCTRA_report_web.pdf

provision and not the implementation of learning; thus, survey findings can be used as one of the bases for development of guidelines for structuring information on micro-credentials.

In total, 140 questionnaires (see Table 7) were completed providing quantitative data on smaller learning units in the project partner countries. In several Country Reports (Armenia, Bosnia and Herzegovina, Latvia, Romania) speculations were made that a low rate of return could be explained by the fact that – as there is no national definition or common understanding of what is micro-credential or understanding of European approach to micro-credentials, HEI representatives were reluctant to participate in the survey. It was further confirmed during the interviews with HEIs (in-depth case studies) by four project partners (Armenia, Latvia, Poland, Romania) as HEIs that initially indicated that they did not provide micro-credentials, during the interviews with the opportunity to expend on the term "micro-credential", concluded that this type of learning opportunities was provided by their HEI. The interviews also revealed that one of the causes that led to misinterpreting term "micro-credential" was the fact that on a national level these learning units were traditionally called differently, e.g., short courses, extension, modules, courses or complementary courses.

Table 7. Number of respondents per country in the survey on micro-credentials

Country	Number of disseminated questionnaires	Number of completed questionnaires
Armenia	17	9
Bosnia and Herzegovina	39	19
Bulgaria	52	13
Latvia	52	23
Poland	350	60
Romania	17	17
Ireland	5	5
Total	532	146

First and second question of the survey were designed to understand whether smaller learning units were provided in the project partner countries and how these learning units interact with full HE study programmes. As mentioned before, respondents' answers on provision of micro-credentials could be discountable due to lack of understanding of this term. Only 40% (58 of 146 respondents) of respondents confirmed that the HEI they represented implemented smaller learning units, and rarely these learning units were only as a part of study programme. Responses indicate that HEIs do not limit the education offer of non-degree programmes to only parts of the study programmes, but also provide learning outside existing HE study programmes (see Figure 3). Of two respondents, who indicated the "Other", one specified that they offered "certification for marketable qualifications in the PRK system".

Figure 3. Provision and type of smaller learning units

Provision of micro-credentials/smaller learning units
(total responses 146; question 1)

Yes 40%
No 60%

Type of micro-credential/smaller learning unit
(total responses 58; question 2)

Standalone units of learning that are not part of a study programme	Part of study programme (courses, part of the courses etc.)	Both	Other
24	8	24	2
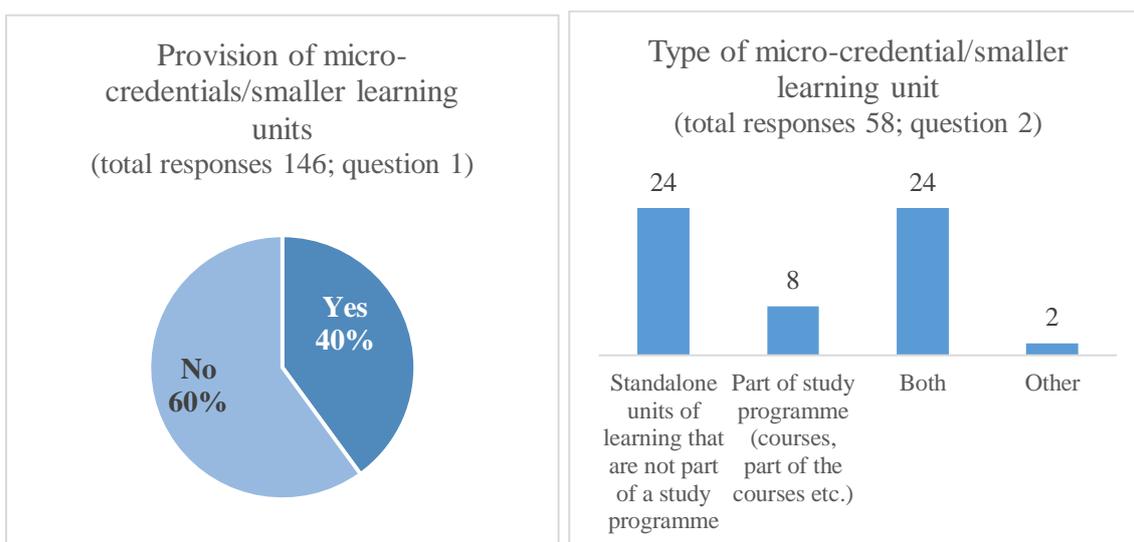
Further exploration was made on where the information on smaller learning units was provided by HEI, i.e., on the HEI's website or/and other information sources. If the information was provided in other information sources whether a clear reference to the source could be found on HEI's website. Only 12% of the respondent HEIs do not provide information on their website, the rest (88%) have included information on these learning opportunities on their website. All the representatives of HEIs also noted that information was provided on other platforms (question 5: social media, national level sectoral institution/organisation websites, national level platforms for learning opportunities, national employment agencies websites, national education ministry website), and at least a link to information published on other platforms is provided on HEIs website by at least 62% of respondents (see Figure 4). This lessens information fragmentation and makes finding information on both micro-credential and the provider of particular learning opportunities easier and more transparent.

Figure 4. Information provision on smaller learning units

Information provision on HEI's website
(total responses 58; question 3)

No	7
Yes	51

Linking information on micro-credentials/smaller learning units
(total responses 58; question 4)

|	
No	22
Yes, as links	3
Yes, with short description and links	13
Yes, full description and options	20
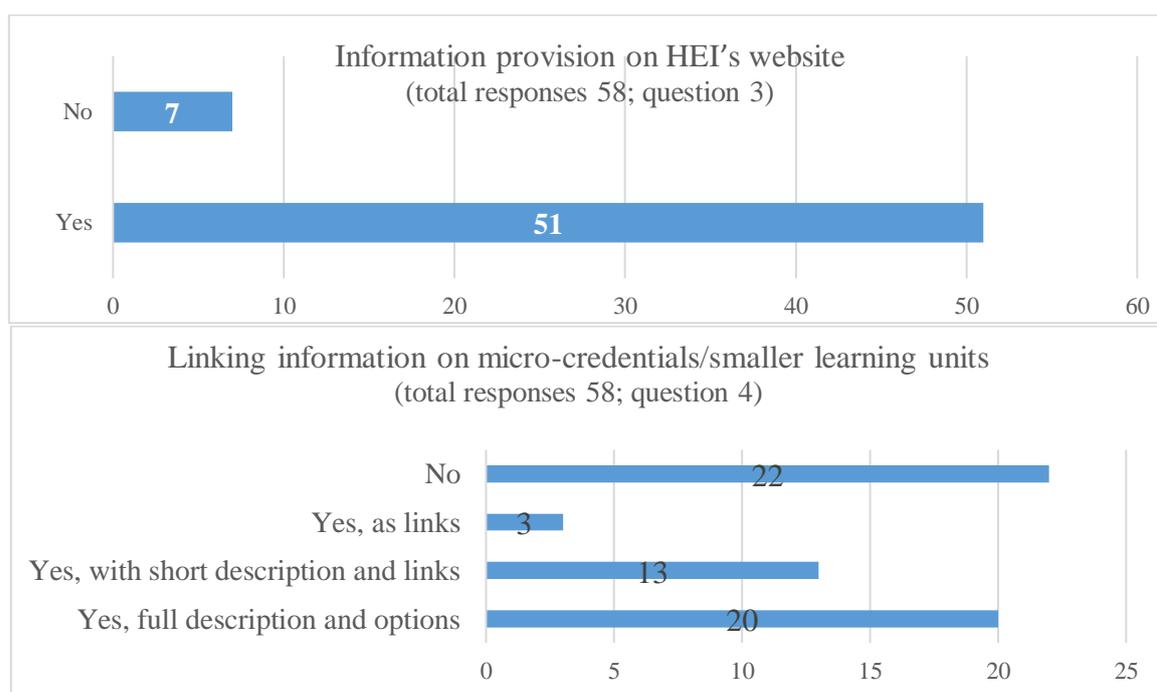
Thus, conclusion may be drawn that most HEIs provide information on their education offer on their websites. In most cases this information can be traced and validated, since it was possible to directly interlink and/or find information provided on these learning units on HEI's website. Accessibility and possibility to validate information on micro-credentials/smaller learning units could be crucial in ensuring the transparency of issued credentials, as it is possible to find this information not only on outside sources, but also on provider's official website.

To foster the mobility of learners and transparency of information, an important aspect of the information provision is the language used. Although modern technologies provide automatic translations of websites, these programmes might not provide a correct translation, but only approximate information. HEIs in the survey were asked to indicate the language of information on micro-credentials/smaller learning units (question No 7). More than half or 54% (30 of 56 responses) of HEIs provide information on this type of learning only in national language(-s), 19 % (10 of 56 responses) provide information in national language(-s) and at least one foreign language on all the micro-credentials, 27% provide information in foreign language only for those micro-credentials/smaller learning units that are available in this language. Hence, the results of survey indicate that HEIs that offer smaller learning units also provide information on these learning opportunities either on their website or on other information platforms.

Based on the Recommendation (2022), two questions of the survey were designed to have insight in what type of information HEIs provide. First, information on the content and formal components, as content of the learning is not only important for the potential learner, but also important in recognition practices by all stakeholders, other education institutions, credential evaluators and employers (question 9; see figure 5). Survey results indicate that in many cases, HEIs design micro-credentials/smaller learning units in a way that that it is possible to indicate workload, content and field, in addition, although comparatively small percentage, but some HEIs (17%) also indicate types of quality assurance that underpins the micro-credential/smaller learning unit. The results of survey lead to the conclusion that it would be possible to include information on credentials as provided by Recommendation (2022). Previously it was determined that not all of the micro-credentials/learning units are part of the existing study programme, thus, do not have ECTS credit points already assigned. In question 8, more than half of respondents (66%, 37 of 58 responses) indicated that micro-credentials/smaller learning units' workload was measured in credit points, but it should be also noted that these credit points not always were ECTS. When HEIs' representatives were asked what other credit points were used, the following aspects were listed: credits for continuous education (Romania), national credit points (Latvia); hourly credits (TIP points; Latvia); special consideration for pedagogical courses that gives right to perform pedagogical work (Latvia); IACBE-accredited modules (Poland).

Figure 5. The content of provided information on smaller learning units (N=58; question 9)
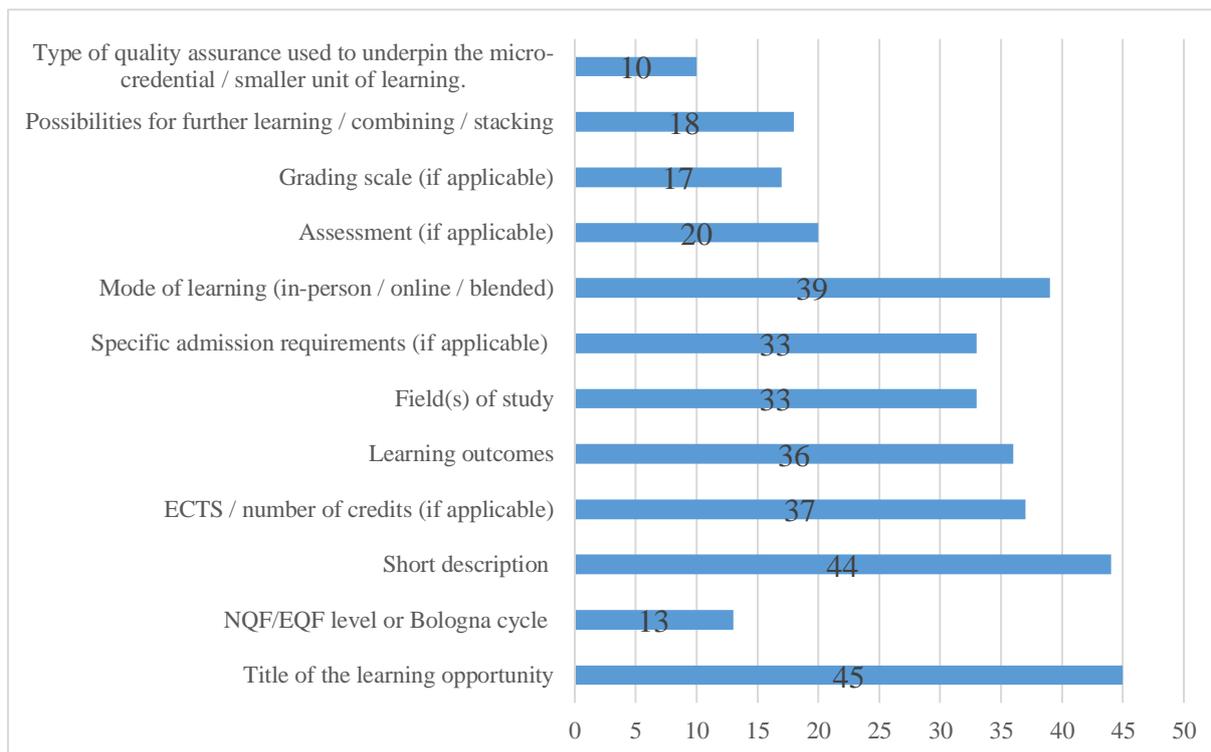
Second, Recommendation (2022) underlines the importance of micro-credentials to ensure flexible learning and career pathways, as well as their potential role in lifelong learning. The role of micro-credentials in lifelong learning is underpinned by the diversity of possibilities to recognise, stack and/or combine micro-credentials. Information on such possibilities as recognition, stacking or combining micro-credentials or smaller learning units is also important for effective credential evaluation. Thus, in the survey it was important to highlight information on recognition/stacking/combining micro-credentials (question 6; see Figure 6). Most HEIs of respondents provides information on these possibilities and only 34% (19 of 56) do not provide this type of information. Since the scope of this project is not to determine whether micro-credentials are designed in a way that they can be stacked and combined, but to determine what information is published, as not providing information on possibilities to recognise, stack, combine learning does not mean that these are not possibilities in practice.

Figure 6. Providing information on integration possibilities of micro-credentials/ smaller learning units (N= 56; question 6)
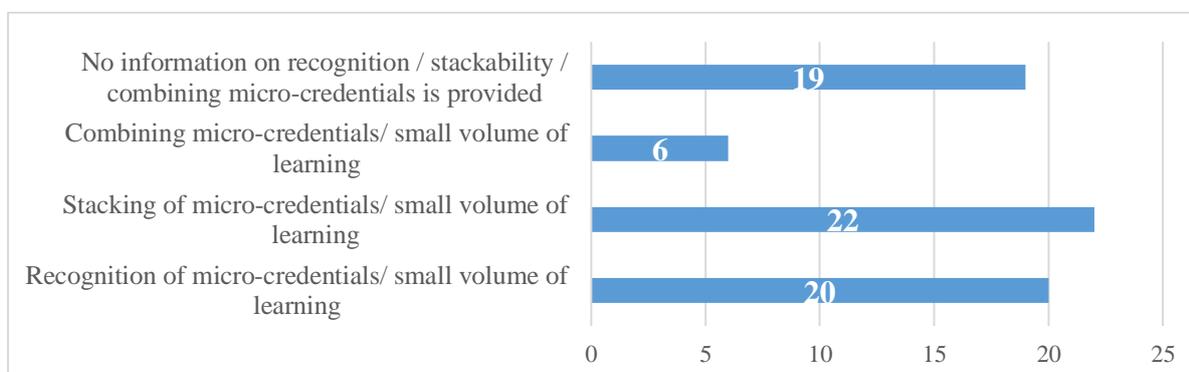
Survey data and conclusions provided in the project partner Country Reports (Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland and Romania) allow summarising that there is still a lack of understanding on a national level on the concept of a micro-credential and what type of learning can be considered to be leading to a micro-credential. This lack of common understanding may be the reason for the low response rate in the survey, but the data gathered during OCTRA 2 project by the project partners indicate that many HEIs provide learning opportunities outside formal HE study programmes. These learning units not always are part of existing study programmes and information on them can be found either on HEIs' websites or other informational platforms, and, in many cases, information provided on other platforms can also be found on HEI's website. Published data on micro-credentials/smaller learning units provided by HEIs in many, but not all cases, covers information highlighted by Recommendation (2022). Information on possibilities to stack, combine and/or recognise micro-credentials is also provided by majority of surveyed HEIs.

5. Results of the in-depth case studies on course catalogues and micro-credentials

To gain a more thorough overview of the situation regarding course catalogues and micro-credentials, in-depth case studies were carried out by the ENICs and NARICs of Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland and Romania.

In-depth analysis of at least three course catalogues in each country by Bosnia and Herzegovina, Bulgaria, Latvia, Poland (in addition – Croatia and Estonia) during the OCTRA project, and by Romania during the OCTRA 2 project was carried out. To ensure comparability of data between both projects, the analysis was conducted following the fiche designed within the OCTRA project (see Annex 3). Since additional data from the Romanian project partner did not drastically change the general findings, full analysis of the results in-depth studies on course catalogue may be found in the OCTRA Comparative Report[47], while this Report contains only collected data and main conclusions.

To examine the understanding of representatives of the HEIs on micro-credentials and the provision of information on micro-credentials, structured interviews in summer 2023 (see Annex 5) with at least three respondents were conducted by the following project partners: Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland, and Romania.

5.1. In-depth case studies on course catalogues

The methodology for in-depth case studies on course catalogues was developed during the OCTRA project[48]. The same methodology was used in Romania during the OCTRA 2 project to provide comparable information on both projects and all other involved countries.

Due to the low return rate of the HEIs survey on the course catalogue in Armenia, the partner decided not to use the OCTRA project methodology, but to examine the websites of all 17 HEIs. The partner concluded that the situation with course catalogues was rather discouraging in Armenia as none of the HEIs published information on their study programmes and courses in the internationally accepted manner in the format of course catalogues. This conclusion led to the decision not to fill in the fiche on course catalogues in Armenia.

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[47] OCTRA Comparative Report. Available here: https://aic.lv/content/files/OCTRA_report_web.pdf
[48] Please see OCTRA project Comparative Report (2022), Chapter I, section 5 for details on the methodology od in-depth case studies. Available here: https://aic.lv/content/files/OCTRA_report_web.pdf

In total, 32 course catalogues were analysed:

- three in Bosnia and Herzegovina, Croatia, Poland;
- four in Estonia, Latvia and Romania;
- 11 course catalogues from five HEIs in Bulgaria.

The fiche focused on several aspects of existing course catalogues – how easy the course catalogue may be found; the language of course catalogue; and the content. The project partners who filled in the fiche[49] commented that information reflected in the fiche may be provided on the HEIs website, and not necessarily in a course catalogue, e.g., descriptions of study courses may be published in other sections of the HEI's website.

Additional information collected by the Romanian project partner did not show evident differences, just affirmed findings of OCTRA project. As shown in table below, most course catalogues (and HEIs websites) have a wide information on study opportunities and study content. Furthermore, the information is provided in English. Link to the course catalogue can be easily found either on HEI's or faculty's website.

Table 8. General description of course catalogue and HEI (frequencies)

General information on course catalogue								
	Overall availability of information			Link to course catalogue can be found			Languages		
	With links, additional info.	With additional info.	Title, short description	Main page	Faculty/ study field page	Hard to find	National lng(-s)	EN	Other
Freq. of fiches	27	4	1	18	14	1	32	29	1

Information on institution		
Content	Frequencies	
	Yes	No
Name and address	32	0
List of programmes offered	32	0
Admission requirements, including language requirements, and registration procedures	31	1
Arrangement of recognition of prior learning (formal, informal, and non-formal), and credit transfer	24	8

Range of the information included in the course catalogues varies by HEI (see table 9), that was affirmed by additional data, but another element (underlined) was added to the information that is most commonly included in course catalogues (in total, analysed 32):

1) Workload (for programmes – 31 course catalogues; for courses – 31 course catalogues);
2) Field of study (for programmes – 30; for courses – 28);
3) Graduation requirements (for programmes – 30; for courses – 30);
4) Length of study programme (31 for programmes and courses);

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[49] Includes data provided by OCTRA project partners from Estonia and Croatia, does not include data of OCTRA 2 project partner from Armenia.

5) Learning outcomes (for programmes – 29; for courses – 29);

6) Title (for programmes – 28; for courses – 32);

7) Aim of the course (for courses – 30).

Table 9. Information on study programmes and study courses in HEI's course catalogue and website (frequencies)

Information on study programmes/study fields		
Criteria	Frequencies	
	Yes	No
Information on study programmes or study fields		
Qualification awarded (and professional qualification if applicable)	28	2
Workload in ECTS or other credits	31	1
Level of qualification (NQF, EQF or/and Bologna cycle)	24	9
Field(-s) of study (main field)	30	2
Type of study (academic or professional study programme)	28	4
Quality assurance or accreditation	24	8
Admission requirements	28	4
Information on validation of prior learning	15	17
Graduation requirements	30	2
Learning outcomes	29	3
Matrix of learning outcomes	9	23
Programme structure diagram with credits (ECTS or other)	25	8
List of obligatory courses	28	2
Mode of study (full-time/part time/e-learning etc.)	27	5
Mode of teaching	22	10
Examination regulations and grading scale	21	11
Obligatory or optional mobility windows	13	19
Obligatory or optional course windows	21	11
Work placement(-s)	19	13
Work-based learning	16	16
Programme coordinator (name, contact information)	10	21
Occupational profiles of graduates	25	7
Length of study programme (minimum time required to receive qualification)	31	1
Information on study courses		
Title of course	32	0
Study programme the course is included	25	7
Field(-s) of study (area/branch)	28	4
Level of programme (Bologna cycle or EQF level)	26	6
Workload in ECTS or other credits	31	1
Language of instruction	29	4
Aim of the course	30	2
Course contents (description)	31	1

Information on study programmes/study fields		
Criteria	Frequencies	
	Yes	No
Information on study programmes or study fields		
Learning outcomes	29	3
Requirements to pass the course (tests, essays, attendance etc.)	30	2
Assessment methods	27	6
Assessment criteria	23	10
Information on validation of prior learning	6	26
Course interconnectivity (information on other courses that further explores the same route of study/speciality)	20	12
Visibility of course interconnectivity (information on study programmes that can include the particular course)	8	24

As the additional data collected about the Romanian HEIs did not reflect major differences and no significant updates were reported by other project partners, conclusions of the analysis of the in-depth case studies on the information and accessibility of the information provided by HEIs on study programmes and course catalogues have not been changed. Main conclusions[50] are:

1. Course catalogues provide information on study programmes and courses, information on study related matters can be found elsewhere on the HEIs websites;

2. Information for applicants and students are provided in different places in website;

3. Information in national language(-s) and information in foreign language might be different and structured differently.

Although the approach of providing slightly different information and publishing certain information in specific places and not the others can be explained by HEIs trying to target different audiences (potential foreign and national applicants and foreign and national students), this approach to publishing creates information fragmentation and complicates finding necessary data on particular study programme or course. It also could create additional workload to staff of the HEI as well as creating a risk of not providing up to date information on the same subject in all places it is available on the HEIs website, as information on the same study programme / course should be updated simultaneously in more than one place.

In addition, the Armenian project partner provided their main conclusions on in-depths study of Armenian HEIs' websites:

1) few HEIs publish study programmes that they are offering on their websites and usually it is in three languages: Armenian, Russian and English;

2) majority of HEIs publish only list of programmes without detailing them;

3) there are few HEIs that keep this information on restricted area claiming that it is their intellectual property and can be used only by their academic staff.

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[50] Please see conclusions on the in-depths case studies in the OCTRA project Comparative Report (2022), Chapter I, paragraph No 5. Available here: https://aic.lv/content/files/OCTRA_report_web.pdf

5.2. In-depth case studies on micro-credentials

As micro-credential is relatively new term, the OCTRA 2 project team decided that most efficient way of gathering qualitative data on national level practices of implementing and providing information on micro-credentials by HEIs would be to have structured interviews with at least three representatives of HEIs in each country. This way there would be a possibility of reaching a common understanding about the information provision on micro-credentials, as well as of collecting comparable data. Thus, the structured interviews consisted of seven main questions (see Annex 5), answers to these questions are analysed in this section of the Report. There was no agreement on specific type of HEIs to be included in the study. In Latvia and Poland, HEIs for interviews were selected considering the data collected in survey – invitations to participate were sent to HEIs who implement micro-credentials. In Bulgaria, initial selection was based on desk research and information available about national and international initiatives and projects in the field of micro-credentials, while the second round of interviews was conducted by disseminating the interview questions to all 52 HEIs in the country. The Romanian project partner based the selection of respondents by taking into account the following aspects: expertise at internationalisation process, part of European Alliances, experience in implementing new European tools/instruments, number of international students, different locations in Romania. Since CIP has been involved in the project PARTISH[51], five public HEIs of Bosnia and Herzegovina participating in the project PARTISH were selected.

The aim of the structured interviews was twofold – to raise the awareness of representatives of the HEIs about micro-credentials and improve their understanding of Recommendation (2022) on a national level and collect data on:

1. implementation practices of micro-credentials on a national level;
2. information provision on this type of learning by HEIs.

In total, 28 structured interviews were carried out:

1) Armenia – 3;
2) Bosnia and Herzegovina – 5[52];
3) Bulgaria – 10 (of these five HEIs do not implement micro-credentials at the moment, but have understanding of and reasons why this type of learning can be beneficial to learners[53]; two HEIs work on developing micro-credentials that they are planning to implement within international projects[54]);
4) Latvia – 3;
5) Poland – 3;
6) Romania – 4.

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[51]PARTISH project is aimed at improving HE studies and lifelong learning orientation in Bosnia and Herzegovina (BiH) through the development of part-time and short-cycle studies and development of legal framework for introduction of this type of studies in order to support different needs and interests of students and companies. Further information available here: https://partish.lurmk.lv

[52] Detailed information of conducted interviews in Bosnia and Herzegovina was not analysed as only summary of the finding were included in the Country Report.

[53] According to the Bulgarian Country Report, four HEIs share their experience that smaller learning units, including micro-credentials are most suitable and applicable for implementation in their education programmes at HE level and qualification courses for pedagogical specialists.

[54] Two HEIs are involved in international projects regarding micro-credentials. Technical University of Sofia (Bulgaria) is involved in the topic of micro-credentials within an international group of HEIs, namely together with the other seven founders of the European University of Technology EUt+ together with the following HEIs from the project partner countries: Riga Technical University (Latvia), *Universitatea Tehnică din Cluj-Napoca* (Romania) and Technological University Dublin (Ireland). University of National and World Economy (Bulgaria) is involved in the subject of micro-credentials within an alliance of leading European universities ENGAGE.EU.

The first three questions were designed to clarify what type of learning opportunities outside full formal HE study programmes are provided by HEIs and what are the reasons, in the opinion of HEIs' representatives, that micro-credentials are attractive for learners. In addition, the potential motivation of HEIs to provide these learning opportunities was explored. The following three questions concentrated on information provision aspect, but unlike the survey, interviewees were not asked to list specific elements that were provided on each learning opportunity, rather the overall opinion of information provision was explored both on micro-credentials and possibilities how these credentials could benefit to more flexible learning pathways.

In the first question of the interview HEIs were asked to name learning opportunities that could be considered to be leading to a micro-credential. In this question HEIs' representatives mentioned several smaller learning units that can be considered to be leading to a micro-credential in their opinion:

- Study courses (Armenia, Bulgaria; Latvia, Poland, Romania);
- Study modules (Latvia, Romania);
- Professional development programmes for teachers to acquire right to work as teacher; or to change speciality within a field (Armenia, Bulgaria, Latvia);
- Professional development programmes that are developed in collaboration/ by request by companies or analysis of labour market needs (Armenia, Bulgaria, Latvia);
- Professional development programmes by request of state agencies (Latvia);
- Education programmes implemented according to external regulation for certification (professional development courses that are necessary to continue working in specific profession) (Armenia, Bulgaria, Latvia);
- Leisure education programmes (Armenia, Latvia, Poland);
- Study courses that are developed as international qualifications (certificate of a qualification according to other countries' NQF and quality assurance) that can be obtained as separate courses or as part of full study programme (Latvia);
- Learning support courses (Poland);
- Learning experiences for acquisition of transversal competences (Romania);
- Participation in Master classes (Bulgaria);
- Blended intensive programmes (Bulgaria).

Non-specific learning opportunities mentioned:

- All additional courses leading to a certificate through which the provider verifies and validates the learning outcomes (Poland);
- Longer and shorter courses (Armenia, Bulgaria).
- Non-formal education programmes (Latvia).

Following two questions of the structured interview analysed the representatives' of HEIs opinion on reasons why micro-credentials seem to be attractive to participants of these learning opportunities, as well as reasoning for HEIs to provide this type of learning.

All the representatives of HEIs primarily see that smaller learning units were chosen by learners because they were a chance to change or improve person's professional qualification in a shorter time and improve their competitiveness in national and international labour market, which was also reason why these learning opportunities were offered. For students enrolled in a particular study programme this is also extra-curricular learning to achieve learning outcomes that are not included in the study programme. In Romania, the interviewees also underline that

this is a way for acquiring additional transversal and soft skills. However, the representatives of HEIs point out that learners could choose acquiring micro-credentials due to some private reasons to facilitate their personal development that cannot be directly linked to education or career paths.

Implementing smaller learning units is additional revenue for many HEIs; thus, if there is a demand (students, labour market and public in general) and HEIs have resources to provide this type of learning, HEIs are willing to ensure such service. Thus, this is in part opportunity to cover topical issues or specific professional skills outside study programmes. In some cases, smaller learning units are implemented in accordance with external regulation, and could be implemented by the demand of state or other state agencies that are funded or co-funded by the state.

As there is no external national level regulation regarding information provision on learning that leads to micro-credentials, in the project team's opinion, the views of the representatives of HEIs on information provided by HEIs on this type of learning is highly important. Particular focus was on information provision about recognition, combining and stacking micro-credentials. The results of interviews show that the representatives of HEIs consider that this information is sufficient to ensure a general overview about the offered learning possibilities. Yet the information provided can differ depending on the type of the learning experience: 1) if particular learning unit is stipulated by external regulation, the description is more robust and precise; 2) if a learning opportunity is a part of the existing study programme most of the time it can be found with information for study programmes; 3) in the case of a stand-alone learning unit in some websites of HEIs there is a dedicated section for lifelong learning, or sometimes this information is only available on social media or other information sources and not on the HEIs website (this was also confirmed by HEIs' survey on micro-credentials).

An important aspect of information provision on smaller learning units was brought up in interviews – short term learning experiences are not a part of regular HEIs curriculum, information might not be permanently found on HEIs website. The data is not published in advance, as it is for study programmes, and sometimes does not have a detailed description, just a general one.

Another problematic area identified is information provision on further learning pathways. As recognition, validation, possibilities to combine and stack credentials depends on the type of credential, it is hard to provide comprehensive information on these possibilities in a way that general public would understand. Hence, information that is provided can be different for various smaller learning units. In this regard, the national approach to the validation of non-formal and informal learning as well as to ECTS or other credit point transfer systems (see section 1.1 of this Report) plays a role in the possibilities for the further incorporation of micro-credentials in HE system. As mentioned by the Bulgarian project partner, this type of information would be hard to comprehend by the general public, but in Latvia, not only are these systems are hard to comprehend for people who are not directly involved in education processes, but also in some cases, as the representatives of HEI note, HEIs' staff is reluctant to perform validation of prior learning, as it is perceived as a difficult and lengthy process, and the personnel does not or might not get paid for the additional effort.

National practices also play a role in implementation of validation, stacking and combining. In Bulgaria, Latvia and Poland, these processes are in fact implemented in practice, but in Romania, where there have been recent changes to legislation, this is only possible in theory and not yet in practice.

Project partner Country Reports reflected some additional comments by HEI representatives. In Romania, the representatives of HEIs think that further analysis of the impact and meaningfulness of these learning activities must be conducted to fully assess if they are to continue as they were designed, or if new approaches are needed. Currently, online course

catalogues reflect more the content of a study programmes than a micro-credentials. Similarly in Latvia, representatives of HEIs see a future for this type of learning, but there is a lack of national consensus in understanding not only of the concept and possible implementation practices relating to micro-credentials. The results of the interviews indicate that the lack of common understanding of these learning units raises questions regarding funding and other resources to implement this type of learning.

In-depth case studies of the national practices of implementing smaller learning units and providing information on these learning opportunities lead to the conclusion that although HEIs respond to the demand of various interested parties, due the lack of a concrete national level understanding, there are several obstacles that may arise with not only national, but also the international recognition of micro-credentials. This issue might be addressed by further informing national level stakeholders on Recommendation (2022), as well as keeping communication channels open between credential evaluators at ENIC/NARIC offices and HEIs.

Chapter II. Information on qualifications valued by credential evaluators

In context of OCTRA and OCTRA 2 projects, the perspective of the credential evaluators as regards publishing information on qualifications (including micro-credentials) has been brought into focus. Therefore, in order to foster meaningful dialogue between credential evaluators and HEIs about the online course catalogues and information provision online, information sought by credential evaluators on the educational offer of HEIs is important and topical.

Although the OCTRA 2 project concentrates on information provision on learning leading to micro-credentials, it is important to also see what information is needed for the evaluation of full formal Bologna cycle credentials. This information, based on the findings and discussions with HEIs during OCTRA project, will most likely be found in online course catalogues. In the context of the evaluation of micro-credentials, this information should also give an insight to possible application of online course catalogues in recognition practices of micro-credentials, as separate courses in some contexts may be considered as a micro-credential. In addition, if a common understanding of necessary information necessary for the recognition of Bologna cycle credentials is established, this approach could also be applied to providing information on learning units leading to micro-credentials, as, looking at the Recommendation (2022), many of the elements listed there are also applicable to full formal qualifications.

In order to clarify Bologna cycle credential evaluation practices in the project countries regarding the information that could be found in course catalogues which are necessary for recognition, the project partners (ENIC and NARIC offices) carried out non-structured interviews with their colleagues. The interviews were carried out both in the OCTRA project (by Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland) and during the OCTRA 2 project (by Armenia and Romania). This chapter reflects the results of the non-structured interviews from all the mentioned countries submitted to the project coordinator.

In total, fifteen elements of information were highlighted during the non-structured interviews with the representatives of ENICs and NARICs, which are important for the recognition of qualifications and could be provided in an online course catalogue on study programmes. The following aspects of study programmes (listed in the order of importance) were mentioned in the interviews:

Level of the study programme and the study course can either be identified by Bologna cycle or by using NQF level (mentioned by experts from eight countries: Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland, Romania). Bulgarian experts noted, when only NQF level is provided, a link to information on how NQF level relates to EQF should be included. Armenian experts also look for reference to the regional qualifications framework.

Formal rights persons are granted by successfully completing the study programme or course, i.e. access to further studies (level of studies) or labour market (mentioned by experts from eight countries: Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland, Romania). The Estonian experts seek information on the application of the qualification in the labour market. In Bosnia and Herzegovina, experts also analyse how these rights apply in their country.

Workload expressed in a measurable way (national credits, hours or other way that can be measured) and how the credits correspond to ECTS credits (mentioned by experts from eight countries: Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia, Poland, Romania). The Romanian and Armenian experts stress that number of credits for each course

not only study programme, practical training, theoretical training, exams and other is important, especially in case of regulated profession.

Information on external quality assurance – quality assurance/accreditation of higher education institution, study programmes or programme groups according to the national system and regulations. Information on the status of both the awarding institution and study programme should be included (mentioned by experts from six countries: Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Latvia).

The status of the awarding institution – legal status, type of institution, whether the institution is a recognised institution in the home country (mentioned by experts from six countries: Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Poland, Romania). The Polish experts proposed that a link to website of all recognised HEIs in country should also be added.

The composition of the study programme – data on obligatory and elective study courses, number of credits for each course not only the study programme, practical training, theoretical training, exams and other elements that are essential to identify particular programme (mentioned by experts from five countries: Armenia, Poland, Bulgaria, Latvia, Romania).

Grading system in the home country or institution (mentioned by experts from four countries: Armenia, Poland, Estonia, Bulgaria).

Graduation requirements (mentioned by experts from four countries: Armenia, Poland, Estonia, Bulgaria). In Armenia, it is also important to have information on assessment methods.

Certificates issued to graduates – full title of the awarded qualifications (especially important for joint and other forms of collaborative study programmes) and whether a professional qualification is also awarded (mentioned by experts from three countries: Armenia, Poland, Bulgaria). The Polish and Armenian experts pay attention to the full title of the awarded qualification both in national and in English language. Type (joint degrees, international study programmes) and title of awarded certificate are important as various qualifications may entitle different rights for their owners, as well as each HEI may issue separate certificates with different titles.

Speciality or field of study – information needed both about study courses (general or specialised courses, ISCED-2011 code) and study programme (mentioned by experts from three countries: Armenia, Latvia, Romania).

Access and admission requirements – minimum level of qualification or professional activities that are required for accessing and enrolling in study programme(-s) (mentioned by experts from two countries: Poland and Croatia).

Nominal length of the full-time programme – duration in years of full-time studies (mentioned by experts from two countries: Bulgaria, Bosnia and Herzegovina).

Form of studies – full-time, part-time etc. studies (mentioned by experts from two countries: Armenia, Bulgaria).

Detailed information on awarding institution – description of HEI (titles of HEI, structure, merges with other institutions) and information on changes the institution has gone through, as well as information about institution's system of qualifications (mentioned by experts from two countries: Armenia, Poland).

Description of study programme, content and objectives, language of instruction, teaching methods (in person, online, hybrid)(mentioned by experts from one country: Armenia).

The information on qualifications that is crucial for credential evaluators and is provided by HEIs was outlined in the previous paragraphs covering both survey and in-depth case studies on course catalogues. HEIs publish rather varied information that is essential in the work of credential evaluators, such as nominal length of study programmes, ECTS or national credits, composition of the course. As results of survey of HEIs showed, HEIs do not consider the

necessity to publish information on external quality assurance or study programmes/fields nor the institution (where applicable). Although this is not the only information element that is crucial in understanding validity and recognition status of the credential and issuing institution. By not providing this information in an easily accessible and visible manner, transparency and comparability of qualifications is hindered creating obstacles for cross-border mobility.

The results of interviews indicate that another aspect, which is not covered by course catalogues (according to the case studies on course catalogues), should be mentioned – information on the HEI. It is hard or impossible to find historic information on issuing institution and historic information on its issued credentials (e.g., changes in institutions title or status, reorganisation activities etc.). Although this information might not have a logical place in the online course catalogue, and is not mentioned in any of the international guides, in the opinion of the project OCTRA and OCTRA 2 teams, this information perhaps via interlinking could allocated a visible place on HEIs' website or even in course catalogue, as historical information not only on institution, but also on its study programmes fosters trust and transparency of issued credentials.

To further understand role of information provision on full credentials, it is important to look at international documentation used in credential evaluation. All the project partner countries have signed and ratified Convention on the Recognition of Qualifications concerning Higher Education in the European Region[55] (Lisbon Recognition Convention). The Convention sets basic principles and procedures to be used in the recognition of HE qualifications. The methodology of recognition may be individually created by each country, but there are several documents and recommendations to use as a reference: Council of Europe and UNESCO Revised Recommendation on Criteria and Procedures for the Assessment of Foreign Qualifications (Recommendation, 2010)[56] adopted by the Lisbon Recognition Convention Committee and European Area for Recognition Manual (EAR Manual, 2012[57])[58]. Using these documents, a list of **twelve recommended criteria for evaluation and recognition of Bologna cycle qualifications** was drafted[59]:

1. Type and competence of the awarding institution,
2. Recognition of the awarding institution in home country,
3. Accreditation or any other quality assurance of the awarding institution,
4. General access requirement to the programme (previous education),
5. Accreditation or any other quality assurance of the programme,
6. Nominal duration and/or workload of the programme,

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[55] Convention on the Recognition of Qualifications concerning Higher Education in the European Region. Chart of signatures and ratifications of Treaty 165 (11.04/1997) – Special conditions of opening for signature. Available here: https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treatynum=165

[56] Revised Recommendation on Criteria and Procedures for the Assessment of Foreign Qualifications. Adopted by the Lisbon Recognition Convention Committee at its fifth meeting, Sèvres. Strasbourg/Paris: 23.06.2010. Available here: https://www.enic-naric.net/fileusers/FINAL_REVISED_Recomm__for_Rec_Foreign_Qualif_29%2006%2010_(PUBLISHED)(1).pdf

[57] Updated version of Lisbon Recognition Convention Committee and European Area for Recognition Manual. Available here: https://www.enic-naric.net/page-EAR-manual. Revised version still lists twelve recommended criteria for the evaluation and recognition of the HE qualifications. Revised version of the manual provides insight to the evaluation and recognition of micro-credentials.

[58] Lisbon Recognition Convention Committee and European Area for Recognition Manual (2012). Available here: http://ear.enic-naric.net/emanual

[59] Adapted from: Ramiņa, B., Kinta, G., Prikule, Dz., Vaht, G., Valeikienė, A., Sutkutė, Kr., Žilinskaitė, R. (2015). Automatic Recognition 8 between Estonia, Latvia and Lithuania. Riga: Academic Information Centre, Archimedes Foundation, Centre for Quality Assessment in Higher Education. Available here: http://www.aic.lv/portal/content/files/AURBELL_report_EN.pdf

7. Graduation requirements,

8. Level of the programme in the national education system (qualifications framework)

9. Function of the qualification (formal rights the qualification gives to the holder for further studies),

10. Learning outcomes,

11. Workload,

12. Profile (encompasses the orientation of the programme and qualification).

Information valued by the project partner ENIC and NARIC experts partly overlaps with the list of criteria in above mentioned Recommendation (2010) and EAR Manual (2012 and 2023); thus, the assumption may be made that elements that overlap may be strongly recommended to be included in course catalogues, the rest of them can be listed as optional.

There are six elements, which do not overlap in both lists, and may be considered as optional:

1) Learning outcomes – only aspect not mentioned by ENIC and NARIC experts of any of the project partner countries, listed in Recommendation (2010) and EAR Manual (2012 and 2023).

2) Grading system – mentioned by the experts of four project partner countries – Poland, Armenia, Estonia, Bulgaria, not listed in Recommendation (2010) and EAR Manual (2012 and 2023).

3) Education documents issued to graduates – mentioned by the experts of three project partner countries – Armenia, Poland, Bulgaria; not listed in Recommendation (2010) and EAR Manual (2012 and 2023).

4) Form of studies – mentioned by the experts of two project partner countries – Bulgaria, Armenia; not named in Recommendation (2010) and EAR Manual (2012 and 2023).

5) Detailed information on awarding institution – mentioned by the experts of two project partner countries – Poland and Armenia; not listed in Recommendation (2010) and EAR Manual (2012 and 2023).

6) Description of study programme – mentioned by the experts of one project partner country – Armenia; not listed in Recommendation (2010) and EAR Manual (2012 and 2023).

Hence, when designing or updating their course catalogues, HEIs may use the lists mentioned in this chapter to promote the comparability and transparency of the qualifications they provide. Of course, the lists are not absolute and may be adapted to the needs and national context as far as the information is clearly structured.

In 2023, revised version of Lisbon Recognition Convention Committee and European Area for Recognition Manual (EAR Manual (2023)) was released. This revision of the EAR Manual (2023) in addition to providing comprehensive information on flexible pathway and evolving landscape of education also addresses micro-credentials. The EAR Manual (2023) further exposed and promotes use of the definition of micro-credentials provided in Recommendations (2022). In the EAR Manual (2023) micro-credentials are viewed in the context of modular learning and ongoing efforts to standardise micro-credentials, to ensure wider use and transferability.

The EAR Manual (2023) provides evaluation methodology for micro-credentials. Seven criteria for evaluation are proposed by the EAR Manual (2023):

1. Quality of the study programme (in terms of Recommendation (2022) this criterion could be interpreted that micro-credentials should be "underpinned by quality assurance following agreed standards in the relevant sector or area of activity");

2. Verification of the certificate;

3. Level of the study programme;

4. Learning outcomes (in terms of Recommendation (2022) this point could be interpreted that micro-credentials should be "learning experiences leading to micro-credentials provide the learner with specific knowledge, skills and competences");

5. Workload;

6. The way learning outcomes are tested (in terms of Recommendation (2022) the criterion could be interpreted that learning outcomes should be "assessed against transparent and clearly defined criteria");

7. Identification of the participant.

In terms of the OCTRA 2 project, evaluation criteria proposed by EAR Manual (2023) suggest that following information on smaller learning units leading to micro-credentials should be provided for evaluation:

1. Level of smaller learning unit;

2. Quality assurance underpinning smaller learning unit;

3. Learning outcomes of the smaller learning unit;

4. Workload;

5. Assessment criteria.

Conclusions

This section of the Report outlines conclusions based on the comparison of the Country Reports and the results of the interviews with credential evaluators. The section includes national recommendations for improvement of course catalogues and information provision on smaller learning units proposed by the project partners.

Conclusions were made on the course catalogues based on:

- Survey of HEIs on course catalogues,
- In-depth case studies on course catalogues,
- Non-structured interviews with credential evaluators in ENIC and NARIC offices.

Conclusions were drawn on the micro-credentials/smaller learning units based on:

- Survey of HEIs on micro-credentials/smaller learning units,
- Structured interviews with the representatives of HEIs.

In this Report conclusions on course catalogues are not presented to full extent, as major updates or reforms in this regard were not observed and may be found in the OCTRA project Comparative Report (2022)[60]. Thus, the Report provides a summary of the main conclusions on course catalogues and more extensive conclusions drawn considering collected data about information provision on micro-credentials.

Survey of HEIs and case studies of course catalogues

Additional data gathered during the OCTRA 2 project confirmed previous conclusions on course catalogues. In total during both OCTRA and OCTRA 2 projects, surveys covered 263 HEIs and a further in-depth analysis of 32 course catalogues in seven project partner countries were performed[61]. Additional data gathered during the OCTRA 2 project confirmed previous findings and did not reveal issues that were not stated in the previous project. These results lead to conclusion that previously made observations and recommendations developed based on these conclusions, in general, may be applicable and useful for target audience (HEIs). The results of OCTRA 2 emphasise the necessity for a guide for HEIs about the design and content of course catalogues using a common understanding of what the concept means.

The results of the survey suggest that HEIs already see the advantages of having course catalogues as these tools have already been developed, but there is a lack of national or international level regulation which would guide HEIs in creating and structuring information in a nationally or internationally recognisable structure and layout. Existing international guidelines, e.g., the Guide, do not provide the perspective of a credential evaluator but rather concentrates on perspective of a (prospective) students. The differences in the content of course catalogues could be explained by the evidence found in Country Reports – rather poor understanding of concept of course catalogue among HEIs. Thus, there is a need for comprehensive description and perhaps even a definition of an online course catalogue.

Lack of national level guidelines or agreement on information layout has been shown to enable different approaches to information presentation that can and in some cases leads to an inability

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[60] Please see conclusions included in the OCTRA project Comparative Report (2022). Available here: https://aic.lv/content/files/OCTRA_report_web.pdf

[61] The number of countries does not include Armenia, because, considering the results of analysis of websites of 17 HEIs, the project partner decided that none of the websites of HEIs would qualify for the in-depth case studies. See more detailed information in the Section 4.1.

to find the necessary information in the course catalogue or on a HEI's website. Common information layout may minimise the possibility of misinterpretation by users, credential evaluators included. The information provided in existing online course catalogues varies by individual HEIs, although core information on study programmes or courses is provided in almost all course catalogues studied during the projects.

Although both survey data and in-depth analysis of course catalogues confirm that HEIs provide information on some of the aspects that are essential in credential evaluation, not all are included. The survey of HEIs showed that HEIs rarely publish information on external quality assurance and the legal status of the HEI. Almost no HEIs provide information on the formal rights graduates are granted by successfully completing study programme or course. Providing information on external evaluation fosters transparency of issued credentials and promotes trust in HEI among the prospective students. Similarly, the information on formal rights provides a perspective of lifelong learning pathways available in the country, hence, promoting international mobility and access to education.

To promote the understanding of HEIs regarding course catalogues, the OCTRA project team proposed a definition for online course catalogues that was also discussed and agreed upon by OCTRA 2 project partners. The following definition was formulated:

"Online course catalogue is a publicly available data system developed and maintained by higher education institution which includes organised, detailed and descriptive information on higher education institution and study components that form study programmes offered by the higher education institution."

Data collected in the OCTRA and OCTRA 2 projects highlights that in the opinion of credential evaluators course catalogues should follow several general principles:

1. Public availability,
2. Availability online,
3. Availability in commonly used language.

These findings in part can be tied to Standards and Guidelines for Quality Assurance in the European Higher Education Area in "Standards and guidelines for internal quality assurance" under criteria "Learning resources and students support" subsection "Public Information" note that HEIs "should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible"[62]. Data collected in this project from the project partner countries point out that most HEIs either already have or are in process of developing online course catalogue, but there is still a small number of HEIs in the partner countries that has not elaborated online course catalogues and are not in process of developing one (see Chapter I).

As the Guide primarily concentrates on (potential) students, it also does not fully draw on potential of ECTS. The ECTS is a tool designed not only for making studies and study courses transparent to (potential) students (addressed by description given in the Guide), but also to foster transparency and transferability[63] of issued credentials (credential evaluation and recognition, not mentioned by the Guide). ECTS is also a topical issue in terms of recognition of, stacking or combining micro-credentials, so this internationally accepted tool should be considered when providing information on workload both for full HE study programmes, as

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[62] Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (2015). Available here: https://enqa.eu/wp-content/uploads/2015/11/ESG_2015.pdf

[63] Erasmus+ EU programme for education, training, youth and sport in regards to the mobility also provides various tools to aid HEIs and students in mobility process. One of the tools provided is "Inter-institutional Agreements" that can be concluded by two or more HEIs. The agreement also prompts HEIs to provide links to the course catalogues in the agreement. More information here: https://erasmus-plus.ec.europa.eu/resources-and-tools/inter-institutional-agreement?facets__field_eac_themes=1996

well as study courses (as study courses may be interpreted as one of type of learning leading to micro-credential issued by HEIs as indicated by the research of OCTRA 2 project).

In-depth case studies of course catalogues identified that information on study programmes, courses and study related processes is fragmented, but can be located and in most cases is provided by HEIs. Information often cannot be easily found and rarely is interlinked. Course catalogues contain information only on courses and/or study programmes (in all the project partner countries), less on other aspects related to studies. If this information is translated to commonly used foreign language and interlinked in course catalogue to make it easier to find, the data can be used by credential evaluators given that there is a clear information on the full title of degree qualification and all the elements necessary to obtain the qualification is provided. Information fragmentation is also an issue identified when it comes to providing information on learning units leading to micro-credentials (see conclusions on desk research on providing further information on micro-credentials).

Several aspects that can enhance publishing information on course catalogues were found (see the list by country below "National level recommendations on online course catalogues and information provision learning units leading to micro-credentials") by OCTRA 2 project partners, but these aspects do not necessary apply to all the countries. Nevertheless, in all the partner countries, further dialogue between credential evaluators at ENIC/NARIC offices and HEIs is necessary to achieve a better understanding on the use of course catalogues for recognition.

Survey of HEIs and case studies on information provision about learning units leading to micro-credentials

Although smaller learning units have been present in education for many years, these smaller learning units have also been called by different names both on international and national level (short courses, certification courses, modules, courses, badges etc.). The term "micro-credential" might apply to all the mentioned, the definition of "micro-credentials" is rather new. Speculations have been made on an international level via research and events[64], to some extent confirming that micro-credentials are not new phenomena, rather an element in education highlighted by recent Covid-19 pandemic and rising popularity of online courses, as well as uptake of professional development courses required by changing labour market. On European level, formal definition of "micro-credential" and its components was proposed in 2022 by Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02. Since the term is relatively new, more time and discussions are necessary for the concept to be fully embraced and understood on the national level by education providers. For the purpose and in the context of this study definition and main characteristics mentioned in Recommendation (2022) were used, as all the project countries belong and are full members of both to European Higher Education Area and Bologna Process[65], i.e., although these processes do not cover non-degree

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[64] Most notably: Microbol project. Available here: https://microbol.microcredentials.eu. CEDEFOP project "Microcredentials for labour market education and training". Available here: https://www.cedefop.europa.eu/en/projects/microcredentials-labour-market-education-and-training. Research done by OECD and presented in Education Working Paper No 216 "The Emergence of Alternative Credentials". Available here: https://one.oecd.org/document/EDU/WKP(2020)4/En/pdf. As well as other research done on the subject, e.g., Oliver, B. "Making micro-credentials work for learners, employers and providers" (2019). Available here: https://dteach.deakin.edu.au/wp-content/uploads/sites/103/2019/08/Making-micro-credentials-work-Oliver-Deakin-2019-full-report.pdf

[65] The European Higher Education Area (EHEA) is the result of the political will of 48 countries which, step by step, have built an area on common values and using common tools. Available here:

programmes such as micro-credentials, it is reasonable that in the field where similar values are promoted, use of the same tools may be applied (for example, use of ECTS credits that are also, in some cases, applied to measure workload of micro-credentials). In addition, EHEA aims to promote mobility by overcoming obstacles to the exercise of free movement by students, teachers, researchers and administrative staff, which is directly related to potential of the micro-credentials promoted via Recommendation (2022).

Lack of a national level understanding of the term "micro-credential" was identified during this desk research by five countries that prepared the Country Reports (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland). These Country Reports do not provide definition of a "smaller learning unit" or "micro-credential" as established in national legislation was identified. The only exception is the Romanian Country Report, as the Law No 199/2023 includes both notion of "smaller learning units" and "micro-credentials"; the Law also lists characteristics of smaller learning units that could lead to micro-credentials and provide a general description of principles of implementation. None of the Country Reports mentioned national level guidelines or recommendations regarding the implementation of smaller learning units leading to micro-credentials[66]. The lack of national level understanding to some degree can attribute to the low response rate in most of the project partner countries to the questionnaire on micro-credentials by HEIs. Response rate is higher in countries where a concept of micro-credentials and/ or smaller learning units is clearer.[67]

Identifying all the possible micro-credentials in HE within project partner countries is outside this project scope. The focus of the study was to identify where and what information on smaller learning units implemented by HEIs was provided. In total, 146 questionnaires were completed by representatives of HEIs of seven countries (Armenia, Bosnia and Herzegovina, Bulgaria, Ireland, Latvia, Poland, Romania) and 28 structured interviews were carried out with the representatives of HEIs.

Since the legal framework of only one country defines micro-credentials and smaller learning units, overall lack of national level guidance regarding implementation of learning units leading to micro-credentials could be a contributing factor of not only to the low response rate to the OCTRA 2 project survey of HEIs, but also may clarify the fact that only 40% (58 of 146 respondents) of respondents confirm that the HEI they represent implement smaller learning units. Four project partners (Armenia, Latvia, Poland, Romania) further confirmed during in-depth case studies that several the representatives of HEIs who initially considered that learning leading to micro-credentials was not implemented by respective HEI, confirmed that this statement, in fact was not true. Consideration should also be made that in some cases questionnaires reached a person who was not directly involved in the implementation of smaller learning units in the HEI; therefore, the respondents might not have full understanding of the learning offer of the HEI.

As for the information provision on learning leading to micro-credentials provided by HEIs, the results of the survey indicate that fragmentation on the information is also present regarding smaller learning units, as was observed in the case of study programmes and courses. However,

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in the context of smaller learning units, fragmentation of information could be considered greater as there is a possibility that information on this type of education offer is not present on the HEIs' website at all (albeit not a great one as only 12% of respondent HEIs does not provide this information on HEIs' website), the rest 88% of respondents at least provide a link to information on smaller learning unit posted on other sources. As for language in most cases information is provided only in national languages (54% of respondent HEIs), in some cases information for study courses available in foreign language if the course is available in this language, but rarely entire information is available in foreign language (19% of respondent HEIs). Hence, rarely information on all smaller learning units is provided in a foreign language.

When asked what type of smaller learning units HEI provided, responses point out that HEIs do not limit education offer of non-degree programmes to only parts of the study programmes (13% of respondents indicated that this type of learning is part of the study programme), but also provide learning outside existing HE study programmes (86 % of respondents mentioned that these are either only standalone learning units, or both standalone learning units and parts of the study programme). The in-depth case studies further explored the overall type of implemented smaller learning units and reasoning behind providing this type of learning. The following examples of micro-credentials were mentioned during the interviews by the representatives of HEIs:

- Study courses;
- Study modules;
- Professional development programmes for teachers to acquire right to work as teacher or to change speciality within a field;
- Professional development programmes that are developed in collaboration/ by request by companies or analysis of labour market needs;
- Professional development programmes by request of state agencies;
- Education programmes that are implemented according to external regulation for certification (professional development courses that are necessary to continue working in specific profession);
- Leisure education programmes[68];
- Study courses that are developed as international qualifications (certificate of a qualification according to other countries' NQF and quality assurance);
- Learning support courses;
- Learning experiences for acquisition of transversal competences;
- Participation at Master classes;
- Blended intensive programmes.

Non-specific learning opportunities mentioned:

- All additional courses leading to a certificate through which the provider verifies and validates the learning outcomes;
- Longer and shorter courses;
- Non-formal education programmes.

Answers indicate a wide variety of non-degree learning opportunities provided by HEIs; in-depth case studies highlighted two main reasoning for providing this type of education offer:

1. outside demand: students, labour market and public in general;

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[68] It should be mentioned that Recommendation (2022) puts an accent on role of micro-credentials in professional care and social integration, less the role of micro-credentials in leisure activities is emphasised.

2. external regulation applicable in specific fields (education, construction, medicine etc.).

The results of study on micro-credentials reveal that the information provided on the learning units depends on the learning unit – survey results point out that in many cases HEIs design smaller learning units in a way that it is possible to indicate workload (these might be credit points, but not always ECTS), content and field, although small percentage (17%) also provide information on the type of quality assurance that underpins smaller learning units. When learning unit is regulated by external regulation or it is a part of study programme, the description is more robust and precise. If it is a stand-alone unit of learning only short description on the content could be provided. Hence, there is no consistency of information provision even on smaller learning units provided by the same HEI, which applies both to the place where information is provided and the content of the information.

Recognition, stacking, combining is one of the characteristics of micro-credentials to be highlighted when looking at this type of credentials in context of lifelong learning. Both the survey and in-depths case studies of HEIs on the micro-credentials addressed this question, both on the information provision and implementation. Most of surveyed HEIs (65 % of survey respondents) provide this information somewhere on the HEI's website. Similar results were gathered in the survey of the HEIs on course catalogues, but the information about micro-credentials is not always in the same place as information on study programme, study courses or modules. The interviewed representatives of HEIs speculated that information on possibilities to recognise, stack, combine micro-credentials in some cases could be too complicated for a general public, especially when different approaches to validation can be used not only on the international, but also on national level, as various evaluation procedures and credit transfer systems have been implemented on a national level.

The results of the desk study of OCTRA 2 project clearly indicate that, despite the introduction of a European approach to micro-credential (rather recently), national level approaches should also be developed. The national approaches to micro-credentials are expected to provide a clear guidance to HEIs concerning their implementation and information provision on smaller learning units to foster transferability and transparency of micro-credentials, for this type of learning to reach the full potential as highlighted in Recommendation (2022). Concerns regarding overregulation in the implementation of smaller learning units have been a topical issue, but the findings of OCTRA 2 project indicate that national approaches should be clearer and more unified not only for the transparency and efficiency of this type of learning, but also acknowledge that a need for it is seen by HEIs, either to have a guidance in implementation or attracting funding and other resources (additional personnel). In this regard, the objectives of Recommendation (2022) clearly provide guidance that could help reaching national level understanding for distinguishing smaller learning units that lead to micro-credentials and those which do not, in the same time avoiding overregulation.

Information valued by ENIC and NARIC experts

Several key elements were identified during the non-structured interviews with national ENIC/NARIC experts in each project partner country (see Chapter II) that would foster a better understanding and use of course catalogues in credential evaluation. The main conclusion drawn was the necessity to create an open and ongoing dialogue between HEIs and national ENIC/NARIC office, which would be valuable for both sides. By having a strong dialogue, common terminology may be established and understanding of concept of a course catalogue and its role in promoting transparency of the issued qualifications may be ensured.

The list of aspects of qualifications submitted for evaluation, which are considered by ENIC and NARIC office experts was prepared in the OCTRA project. This list was compared to the

list of elements compiled using various sources, i.e. results of previous projects managed by the project coordinator (AIC), based on Council of Europe and UNESCO Revised Recommendation on Criteria and Procedures for the Assessment of Foreign Qualifications (2010)[69] and European Area for Recognition Manual (2012[70] and 2023[71]). **Ten elements**, which overlapped in both lists, as well as **full title of the qualification**, are suggested to be included in all online course catalogues for them to foster mobility and transparency of qualifications for credential evaluation:

1. **Level of the study programme and the study course** – can either be identified by Bologna cycle, by using EQF level.

2. **Formal rights** persons are granted by successfully completing study programme, i.e. access to further studies (level of studies) or labour market.

3. **Workload** – expressed in measurable way (national credits, hours or other way that can be measured) and how the credits correspond to ECTS.

4. **Information on external quality assurance** – quality assurance/accreditation of HEI, study programmes or programme groups according to the national system and regulations, including information on the status of both awarding institution and study programme.

5. **The status of awarding institution** – legal status, type of institution, whether the institution is a recognised institution in the home country.

6. **The composition of the study programme** – data on compulsory and elective study courses, number of credits for each course not only study programme, practical training, theoretical training, exams and other elements that are essential to identify particular programme.

7. **Access and admission requirements** – minimum level of qualification or professional activities that are required for accessing and enrolling study programme/course.

8. Graduation requirements.

9. Nominal length of the full-time programme.

10. **Speciality or field of study** – information needed both about study courses (general or specialised courses, ISCED-2011 code) and study programme.

Six elements of information were proposed as optional for the inclusion in course catalogues:

1. Learning outcomes;

2. Grading system;

3. Certificates issued to graduates;

4. Form of studies;

5. Detailed information on awarding institution;

6. Description of study programme, content and objectives, language of instruction, teaching methods.

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[69] Revised Recommendation on Criteria and Procedures for the Assessment of Foreign Qualifications. Adopted by the Lisbon Recognition Convention Committee at its fifth meeting, Sèvres. Strasbourg/Paris: 23.06.2010. Available here: https://www.enic-naric.net/fileusers/FINAL_REVISED_Recomm__for_Rec_Foreign_Qualif_29%2006%2010_(PUBLISHED)(1).pdf

[70] Lisbon Recognition Convention Committee and European Area for Recognition Manual (2012). Available here: http://ear.enic-naric.net/emanual/

[71] Lisbon Recognition Convention Committee and European Area for Recognition Manual (2023). Available here: https://www.nuffic.nl/sites/default/files/2023-08/1.%20EAR%20Manual%202023_2nd%20edition.pdf

During the OCTRA 2 project, interviews with ENIC and NARIC experts regarding evaluation and recognition of micro-credentials were not carried out as, in most project partner countries only recognition of full qualifications is carried out by ENIC and NARIC experts. In two project partner countries (Romania and Ireland[72]) NQF include qualifications that could be considered a partial qualifications or micro-credentials. However, revised EAR Manual (2023) provides list of five elements that are needed for the initial evaluation of micro-credential:

1. Level of smaller learning unit;
2. Quality assurance underpinning smaller learning unit;
3. Learning outcomes;
4. Workload;
5. Assessment criteria.

Information useful for the evaluation of smaller learning units, although shorter, closely resembles, list of elements necessary for evaluation of credentials issued for successfully completing full study programme. Thus, in context of evaluation of micro-credentials, all five information elements proposed by the EAR Manual (2023), in the OCTRA 2 project team's opinion, should be published when providing information on smaller learning units leading to micro-credentials.

National level recommendations on online course catalogues and information provision on learning units leading to micro-credentials

Based on the information provided in the Country Reports, six project partners (Armenia, Bosnia and Herzegovina, Bulgaria, Latvia, Poland, Romania) proposed national level recommendations for the development and/or improvement of the course catalogues and information provision and micro-credentials in their countries.

Armenia

Recommendations on course catalogues may refer to the national ministry, quality assurance agency and HEIs:

- National regulations should be more specific regarding importance of study programmes and course catalogues published on the websites of HEIs to ensure transparency and consistency of the educational process.

- There should be common guidelines for development of study programmes and course catalogues including content, format, frequency of update, languages.

- National Centre for Professional Education Quality Assurance Foundation (ANQA, quality assurance agency in Armenia) should revise national standards for quality assurance accordingly to comply with the Standards and Guidelines for Quality Assurance in the European Higher Education (2015).

- HEIs should develop catalogues of their study programmes and courses in national and foreign languages and publish them in an easy to find area of their websites.

Recommendations on micro-credentials may refer to the national ministry and HEIs.

The Armenian HEIs can benefit by incorporating micro-credentials into their academic offer as they are important from many aspects:

- Flexible learning, specialised skills, lifelong learning.
- Stacking.
- Recognition and validation.

The national ministry can play a crucial role by:

- Establishing a regulatory framework that defines parameters within which micro-credentials operate namely, duration expressed in credits, assessment methods, formal rights and relationship between micro-credentials and formal qualifications. The framework must include credit transfer and recognition policies and guidelines as well as quality assurance standards.

- Mapping the existing short courses offered by the Armenian HEIs and organisations, their effectiveness in addressing skill gaps, enhancing employability, and meeting the needs of learners and job market.

- Initiating and supporting development of technological platforms that facilitate creation, delivery, and verification of micro-credentials.

- Allocating funds or providing incentives to HEIs and organisations to develop and offer micro-credentials to wider public.

- Collaborating with stakeholders which would foster development of micro-credentials and ensure that micro-credentials are relevant and valuable in job market.

Bosnia and Herzegovina

The complex structure of the country can be a limiting factor for the introduction of micro-credentials in HE education system, but for the welfare of its own society, the country should not wait for good practice examples to be taken over. Therefore, HEIs should be encouraged to introduce micro-credentials, as well as work on proposing legislation changes concerning micro-credentials together with competent education authorities. Micro-credentials can have additional value for HE, but they are also very important tools to bring closer education and labour market and assist HEIs in responding appropriately for demands of national labour market. At national level the succeeding recommendations are proposed:

- To combine lifelong learning and HE by the introduction of micro-credentials/smaller learning units.

- To assure stackability of micro-credentials/smaller learning units which might even lead to awarding of full qualifications.

- To consider the issuing of a supplement of micro-credentials.

- To assure that micro-credentials are quality assured especially related to learning outcomes and ECTS.

- To provide micro-credentials both as the part of existing study programmes and as the response to the labour market (in this case their stackability should assured).

Bulgaria

The Bulgarian project partner proposes that, as micro-credentials are to be part of HE environment, in case of recognition they should meet the requirements towards all other

learning units and elements of a completed foreign study programme, including integrity within the qualification acquired and above all transparency.

The conclusions, recommendations and guidelines in favour of credential evaluation, formulated within the OCTRA project up to now in terms typical learning units, of study programmes and their modules, are generally applicable to micro-credentials, too. Descriptions of micro-credentials should also include detailed description, recommended elements of information, questions to be considered when developing micro-credentials, steps to improve course catalogues in the context of micro-credentials.

Latvia

Recommendations on online course catalogues:

- Wider development of online course catalogues would be fostered if a clear definition of course catalogue would be provided, as well as if information on how course catalogue could promote transparency of issued qualifications had been introduced in HE environment is ensured.

- Recommendations or template providing clear outline on information to be published in the course catalogues should be designed and discussed among HEIs.

- Layout template could be introduced – case studies showed that HEIs provide information in different forms and even use slightly different terminology.

National level recommendations on implementation of micro-credentials and information provision on smaller learning units leading to micro-credentials:

- Further discussions are necessary to reach common understanding of the term "micro-credential" on a national level (what term to use and how to interpret it).

- Some legal regulation is needed in order to ensure possibility to allocate state funding for provision of meaningful smaller learning units, which would benefit learners in their career; in addition, definition or explanation of micro-credential on national level should be provided in legal acts.

- To avoid the risk of overregulating, perhaps HEIs would more appreciate national level guidelines on the implementation and development of information about micro-credentials (using principles established in Recommendation (2022)) instead of stipulating implementation practices of micro-credentials in legal acts, as current legal framework already supports autonomy of HEIs as regards offering smaller learning units.

- Current validation and recognition practices of informal, non-formal learning as well as ECTS credits can be used to recognise micro-credentials; thus, having clear guidelines on information provision and implementation of smaller learning units leading to micro-credentials would facilitate national recognition practices.

- Since the lack of national level understanding on features of micro-credential may be observed, information provided by HEIs on learning units leading to micro-credentials also lacks consistency; therefore, further discussions among the stakeholders and guidance for HEIs are needed to ensure transparency and comparability of micro-credentials.

Poland

Recommendations on online course catalogues:

- A general recommendation at the state level – the existing national provisions on information requirements applicable to HEIs should be reviewed to ensure availability of information important for different groups of recipients.

- Such a review needs to be done in cooperation with HEIs and should take into account not only the content but also the form of presentation, including current limitations of BIP websites.

- Moreover, the review should focus rather on the organisation and completeness of information than adding new information requirements without improving those already in force.

- Fragmentation of information on the same programme/field of study as well as duplication of the same information in different places of the website should be avoided. The links to relevant content should be provided instead.

- Course catalogue should be presented as a separate entity or tab in HEIs' websites, with entrance link easy to find for users both from the main website and in the menu.

- Information on study programmes should be always accessible to general public, not only to registered students and/or staff.

- Taking into account the limited resources and motivations shaping HEIs language policy, as well as modern possibilities of automatic translation, the scope of the key content should be considered to be provided in a popular foreign language.

- Considering the structures of information offered in national and foreign language(-s) – the same structure and labels help in efficient navigation and content search even if certain part of information is only available in national language. Linking should be promoted between the same elements of content offered in Polish and English versions of the website.

- Ensuring availability of information on study programmes from earlier years should be considered (cost of storage, update vs. usefulness for different groups of recipients).

Recommendations on publishing information about micro-credentials:

- At the state level the existing national provisions on information requirements applicable to HEIs should be reviewed to ensure availability of information about micro-credentials for different groups of recipients.

- Such a review should be done in cooperation with HEIs and should take into account not only the content, but also the form of presentation.

- Moreover, the review should focus rather on the organisation and completeness of information than adding new information requirements without improving those already in force.

- The information about micro-credentials should be placed alongside with education offers on the HEIs websites. Such information should contain the following elements: title, short description, NQF/EQF level or Bologna cycle, learning outcomes, mode of learning, field of study, possibilities for further learning/combining/stacking, type of quality assurance used to underpin the micro-credential/smaller unit of learning, as well as ECTS credits/number of credits, specific admission requirements, assessment, grading scale (if applicable).

- Presentation of micro-credentials should be considered as a separate entity/tab within the HEI website, with entrance link easy to find for users both from the main website and in the menu.

- Information on micro-credentials should be accessible to general public, not only to registered students/staff.

- Taking into account the limited resources and motivations shaping HEIs language policy, as well as modern possibilities of automatic translation, it is necessary to consider the scope of the key content to be provided in a popular foreign language.

- Considering the structures of information offered in national and foreign language(-s) – the same structure and labels help in efficient navigation and content search even if certain part of information is only available in national language. Linking between the same elements of content offered in Polish and English version of the website should be promoted.

- HEIs could consider ensuring availability of information on micro-credentials from earlier years (cost of storage, update vs. usefulness for different groups of recipients).

Romania

Based on the information of the survey of HEIs and case studies of course catalogues, publishing information on the website should be understood as providing publicly accessible online information that can be used at any time by anyone (both students and credential evaluators).

Even the procedures of HE quality assurance are stipulated by the national legislation, information on external quality assurance is not provided in all course catalogues and, as a consequence, the system may not be as clear to foreign students or credential evaluators; thus, publishing information on quality assurance in course catalogue would be beneficial in order to comprehend the status of acquired qualifications.

In terms of improvement of course catalogues, HEIs also may contribute to providing and publishing more information on recognition in course catalogue; thus, facilitating credential evaluation process.

Micro-credentials are still innovative not only for Romanian HEIs, but for many European countries, too. The Law No 199/2023 on HE guides the development of an ecosystem for micro-credentials in Romania, using a number of standard elements to describe a micro-credential: the learning outcomes, workload needed to achieve the learning outcomes and the type of assessment.

To build trust and enhance flexibility, more information on learning outcomes, assessment and type of quality assurance used to underpin the micro-credential should be provided. All parties involved should be able to understand the content of micro-credentials and verify their authenticity. This would make their "portability" possible between and within education and training sectors, in the labour market and across countries.

Romanian HEIs can benefit more by incorporating micro-credentials into their academic offer – especially the current postgraduate programmes – and providing publicly available information on recognition/stacking/combining of micro-credentials.

Summary of national recommendations

Three project partners see benefits of developing a common template, structure, or layout for course catalogues. Four project partners suggested that common or national level recommendations (in the absence of national legislation) should outline common

understandings on the term of course catalogue, as well as the use of terminology regarding course catalogues. Three project partners expressed an opinion that discussion with HEIs should be promoted about a need to translate more of the course catalogues in other commonly used language(-s). One project partner enforces the need to further incorporate principles set out in international documentation governing HE quality assurance in national practices and legislation.

Although three project partners proposed making an agreement on a common template or layout, in practice a common template may be implemented only by HEIs that currently are developing or planning to design a course catalogue, while HEIs with already functional course catalogue may be reluctant to make additional investments. A common or similar information layout can be agreed upon as far as individual HEIs website architecture allows it. In the opinion of the project team, a discussion on information that should be included in course catalogue should be arranged to improve existing course catalogues (with accent on providing information on external quality assurance), as well as provide a guidance for HEIs that are elaborating publicly available course catalogues or to HEIs that plan to update or improve their course catalogues.

The use of language in course catalogues also is an issue that should be addressed. Both considering a unified terminology, as well as providing a translation into commonly used foreign language should be promoted. The application of various terminology within country leads to confusion and different interpretations. The aim of an international competitiveness of the EHEA started by Bologna Process[73] cannot be reached if a common language is not used. The recommendation to provide information in commonly used foreign language is also supported by the Guide: "The Course Catalogue should be published on the institution's website, indicating the course/subject titles in the national language (or regional language, if relevant) and in English, so that all interested parties can easily access it."[74] The language use is further emphasised by Erasmus+ Programme Guide 2022[75] where providing an updated course catalogue for international students can be covered by an organisational support grant.

In general, the exercise of in-depth case studies of course catalogues may be very valuable because the analysis of particular examples revealed advantages and drawbacks of course catalogues that are already in use. The fiche elaborated during the project could be used by HEIs or other institutions wishing to conduct self-evaluation of their course catalogue or data sources.

All six Country Reports provided national level recommendations on smaller learning units leading to micro-credentials. Since in all but one country the national level legislation does not define micro-credentials, or their features or principles, this type of learning is likely to follow different approaches to changing or not changing existing national legal provision could be observed. On one hand, it may be perceived that there is no need for legal amendments to be proposed as in practice HEIs have established functional system of providing smaller learning units. On the other hand, some amendments are needed either regarding implementation of this type of learning or information provision on smaller learning units because access to micro-credentials, validation procedures and funding issues of these qualifications should be improved. Information gathered and presented in the Country Reports indicated that recent additional attention paid to smaller learning units, especially those leading to micro-credentials,

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[73] Bologna Process – Key documents. Available here: https://pjp-eu.coe.int/bih-higher-education/bologna-process.html

[74] ECTS users' Guide (2015). Available here: https://op.europa.eu/lv/publication-detail/-/publication/da7467e6-8450-11e5-b8b7-01aa75ed71a1

[75] Erasmus+ Programme Guide (2022). Available here: https://erasmus-plus.ec.europa.eu/document/erasmus-programme-guide-2022

have highlighted several aspects, which require further national level discussions and guidance. Survey data also points out that there are benefits and better understanding of this type of learning if some type of legal provision is established on a national level.

The results of the desk study clearly point out that further national level discussions are necessary to provide guidance to HEIs on implementing smaller learning units leading to micro-credentials, which would build trust and transparency of this type of credentials. National level recommendations provided in the Country Reports also reflect the necessity for further national level discussions and guidance that would not only concentrate on the implementation, issuing and information provision on smaller learning units leading to micro-credentials, but also on general discussions about benefits and basic characteristic that distinguish smaller learning units leading to micro-credentials from other non-degree learning opportunities.

Availability of qualitative, consistent, and understandable information on learning opportunities (qualifications) may be considered as a cornerstone for the trust in the type of learning leading to micro-credentials. The results of the desk studies and national recommendations provided in the Country Reports clearly indicated inconsistency of information provision in terms of micro-credentials. Just as with information on historic study programmes and courses, information on smaller learning units is not readily available and provided by HEIs, in some cases information is no longer available as soon as offer is no longer active. This is a reason why some improvements on existing or need for new legal regulations or at least recommendations mandating HEIs to provide consistent information on all education offer, especially smaller learning units leading to micro-credentials are necessary, especially in the context of credential evaluation.

Credential evaluators firstly look at the information that can be easily accessed and compared. For this reason, it is important to provide information using already established and widely used parameters. Therefore, information provided on smaller learning units leading to micro-credentials should closely reflect the information that should be made available on study courses and programmes (if applicable). Thus, HEIs could follow OCTRA project guidelines on course catalogues for the use in credential evaluation and provide as much information as possible, but information (data fields) underlined in Recommendations (2022) should be considered mandatory:

- Title of the learning opportunity;
- NQF/EQF level or Bologna cycle (also suggest by EAR Manual (2023));
- Short description;
- ECTS / number of credits (if applicable) (suggest by EAR Manual (2023) as workload);
- Learning outcomes (also suggest by EAR Manual (2023));
- Field(-s) of study;
- Specific admission requirements (if applicable);
- Mode of learning (in-person / online / blended);
- Assessment (if applicable) (also suggest by EAR Manual (2023));
- Grading scale (if applicable);
- Possibilities for further learning / combining / stacking;
- Type of quality assurance used to underpin the micro-credential / smaller unit of learning (also suggest by EAR Manual (2023)).

OCTRA 2 team is aware that creation and maintenance of such databases may be limited by financial and human resources; therefore, HEIs have to make decisions on various aspects – on general offer of learning opportunities, information quality and structure and duration of information availability.

Proposed guidelines on course catalogues for information provision on study programmes, courses and micro-credentials for the use in credential evaluation

The trust and recognition of credentials are based on variety of aspects, e.g., status of issuing institution, quality assurance and transparency of credentials. The desk study showed that information on quality assurance of issuing institution and international practices of quality assurance usually may be found outside HEI's website by professionals working with credential evaluation on a regular basis. Ensuring information on quality assurance practices is highly essential when exploring the information on smaller learning units leading to micro-credentials, especially if the learning experience is designed as standalone learning unit, which is not a part of existing externally quality assured HE study programme. To facilitate trust in and recognition of issued credentials, transparency of information is essential, especially in terms of credentials that may not have status of state recognition, e.g., micro-credentials. The easiest way to build trust and foster recognition of credentials and micro-credentials is transparency of information that is provided in a similar and comparable manner on learning opportunities leading either to credentials or micro-credentials.

Based on the conclusions of the studies conducted in all the OCTRA and OCTRA 2 project partner countries, the project team prepared a set of guidelines about online course catalogues which may reflect information on HE study programmes, study courses and smaller learning units leading to micro-credentials. Ensuring transparent and comparable information about the provided micro-credentials by HEIs is valuable not only for credential evaluators, but also for recognition of micro-credentials both by other HEIs and labour market representatives at national and international level. These guidelines are targeted for the use of HEIs and institutions maintaining national online information sources on HE qualifications, including micro-credentials at HE level.

Since additional data on course catalogues gathered in OCTRA 2 project is consistent with the previous findings, OCTRA 2 project team agreed that the guidelines on improvement of course catalogues elaborated during OCTRA project were still valid. In addition, course catalogues could also be used to reflect information on smaller learning units leading to micro-credentials, but if the same structure is used, information on micro-credentials should include not only the information fields on the content of the learning, but also further implementation possibilities, i.e. stacking, combining and recognition both for future learning and if possible, for labour market (especially in cases when smaller learning units are designed by the demand of labour market or adhere to external/labour market quality standards).

In the context of the OCTRA and OCTRA 2 projects, publishing information on a website should be understood as providing publicly accessible online information that can be used at any time by anyone (both students and credential evaluators and representatives of labour market); thus, ensuring transparency of information on all types of learning and credentials.

Online course catalogues

Regarding the conclusions of OCTRA and OCTRA 2 comparative studies, the project teams propose the following **definition of online course catalogues**:

> Online course catalogue is a publicly available data system developed and maintained by a higher education institution, which includes organised, detailed and descriptive information on the higher education institution and study

components that form study programmes offered by the higher education institution.

Course catalogues may include information on various conceptual layers – institutional, study programme and course/module layer. The type and detail of provided information varies by the conceptual layers. These conceptual layers should be interlinked when possible.

Course catalogue for the purpose of credential evaluation should include at least these elements of information on study programmes to ensure transparency:

1) Full title of the awarded qualification.
2) Level of the study programme and the study course (Bologna cycle, NQF/EQF level).
3) Workload.
4) Nominal length of the full-time programme.
5) The composition of the study programme.
6) Profile – speciality or field of study.
7) General access requirement to the programme.
8) Graduation requirements.
9) Function of the qualification (formal rights the qualification gives to the holder for further studies and labour market).
10) The status of the awarding institution and recognition of the awarding institution in home country.
11) Information on the external quality assurance of the institution and the study programme and/or programme group.

Course catalogue for the purpose of credential evaluation should include at least these elements of information on study courses/modules to ensure transparency:

1) Title of the study course/module.
2) Level of the study course/module (Bologna cycle, NQF/EQF level).
3) Description of study course/module (including learning outcomes, recommended literature)
4) Workload.
5) Course/module design.
6) Profile – speciality or field of study.
7) Course prerequisites.
8) Evaluation and assessment.
9) Function of study course/module (formal rights the study course/module gives to the holder for further studies and labour market).

National guidelines or recommendations should be provided by a competent institution for HEIs on the development of course catalogues – layout, content and template. The project OCTRA working group proposes for countries adopting the OCTRA project guidelines to the national requirements and context, which would promote international comparability of qualifications.

Providing information is only the first step, there are several questions to be considered when developing a course catalogue:

- Can the information be found?

- Can the information in terms of terminology be understood nationally?
- Can the information in terms of terminology be understood internationally?

The OCTRA project working group recommends that course catalogues should:
- be easy to find on HEIs main website,
- be easy to navigate (interlinked),
- provide information in commonly used terminology,
- available in commonly used international language.

The HEIs or other institutions wishing to improve their course catalogues or information sources could take **several steps**:

1. Self-evaluation of the course catalogue – the information or aspects (layout, design, language) that are important for the staff of HEI or are required by law/recommendations should be considered publishing in the course catalogue. HEI may create a checklist including essential features of course catalogue and then conduct an in-depth study of the existing database. OCTRA project team proposes to refer to the fiche elaborated during the project (see Annex 3).

2. Users' survey – understanding the needs of users and the purpose of database is crucial to make the source "user-friendly"; HEIs may develop a short online questionnaire (posted on their course catalogue or website) to gather opinion of frequent users. HEIs may also use the questionnaire or topics included in the OCTRA Report for this exercise.

3. Analysis of gathered data.

4. Practical measures to improve the course catalogue.

Information on micro-credentials/smaller learning units

Discussions on micro-credentials rarely address the subject of publishing information and role of information provision in evaluating and recognising micro-credentials. OCTRA 2 project study results show that information provision by HEIs on smaller learning units leading to micro-credentials is fragmented and may not be accessible in long-term. Although the guidelines primarily are meant for the HEIs, the document may be used as a reference by wide range of audience, e.g. providers of smaller learning units leading to micro-credentials, in order to foster transparency and comparability of the of issued credentials.

There are two topics that should be explored in the context of information provision on smaller learning units leading to micro-credentials. First, content of the information. Content of the information on this type of learning can be modelled in line with Recommendations (2022) for providing information that should be included in the credential. Second, platform where information could be published. OCTRA 2 project study results indicate that course catalogues have potential to be a platform where information on smaller learning units leading to micro-credentials could be provided. However, information on this type of learning should be clearly separated from the information on Bologna cycle study programmes and courses.

Content of the information on smaller learning units leading to micro-credentials

Regarding the purpose of the smaller learning units leading to micro-credentials and their evaluation, two aspects should be taken into account determining the content of the information that should be provided on micro-credentials:

- Content of the information on micro-credentials;
- Purpose of the awarded micro-credential (future possibilities in education and labour market).

In terms of evaluation of the credentials, the provisions of the Recommendation (2022) should be considered because the document lists the main elements of smaller learning units leading to a micro-credential. This list could be used as a reference by HEIs as regards information that should be published on smaller learning units to foster national and international recognition of micro-credentials offered by HEIs. Information provided on smaller learning units leading to micro-credentials closely resembles information that should be provided on study programmes and courses (see guidelines on online course catalogues) in order to ensure transparency, transferability and easier evaluation of micro-credentials. OCTRA 2 project team proposes including the following elements of information regarding smaller learning units leading to micro-credentials:

1. Title of the learning opportunity (including title of the issued credential);
2. NQF/EQF level or Bologna cycle;
3. Short description;
4. Type of quality assurance used to underpin the micro-credential/smaller unit of learning.
5. Workload expressed in measurable manner (if possible, in ECTS/number of credits);
6. Learning outcomes;
7. Field(-s) of study;
8. Specific admission requirements (if applicable);
9. Mode of learning (in-person/online / blended);
10. Assessment (if applicable);
11. Grading scale (if applicable);
12. Possibilities for further learning/combining/stacking.

The major rationale for the interest about micro-credentials is their flexibility, correspondence to various personal and labour market needs ensuring various lifelong learning pathways. Therefore, general information on validation practices, possibilities to stack or combine micro-credentials or micro-credential interconnectivity (further education possibilities), should be also provided by HEIs. This information may be difficult to fully comprehend by learners, but it is crucial for fair credential evaluation. In addition, availability of this type of quality assured information would encourage people to make grounded decisions and plan their education pathways in a well-informed way. HEIs should be encouraged to provide general description on succeeding aspects:

1) National practices of recognition of non-formal and in-formal education[76] (if applicable);
2) The HEI's procedures for implementing validation of non-formal and in-formal education (if applicable);
3) Credit transfer system and procedures of implementing these practices in HEI;
4) Possibilities of stacking or combining smaller learning units for education opportunities in other study programmes offered by HEI;
5) Further application(-s) of micro-credential in other education institutions and/or labour market (if applicable);
6) Information on recognition of smaller learning units (stacked micro-credentials);
7) Information about student support and information systems to encourage enquiry and engagement at local level.

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[76] Depending on the national situation – either provide description and implementation practices used by HEIs or/and provide link to national platforms describing or organising recognition of non-formal and in-formal learning.

Considering the wide range of credentials offered by HEIs, smaller learning units leading to micro-credentials should be clearly identified by HEIs for the learners and credential evaluators to gain objective information about credentials.

Online information provision platform

According to the results of study , fragmentation, inconsistency and short-term availability of the information could be named as main challenges in terms of providing information about micro-credentials. Two aspects of the technical solutions for ensuring information on micro-credentials should be taken into account:

1) Online platform(-s) where the information is made publicly available;
2) Availability of historic information.

In OCTRA 2 project team's opinion, national level discussions or agreement should be initiated on not only what information should be provided by HEIs, but also where the information should be presented. Depending on the national situation there are at least three options that should be explored regarding providing information:

1. Creating dedicated section on HEI's website or online course catalogue for ensuring publicly available information both on smaller learning units leading to micro-credentials, as well as recognition practices of this type of learning (stacking, combining, further education possibilities);
2. If relevant interlinking, selecting or creating a national platform and considering possibilities of connecting this platform to Europass platform as proposed by the Recommendation (2022);
3. If applicable considering the use of an international information platform, especially on how access to information on smaller learning units leading to micro-credentials could be reflected on HEI's website and HEI's/national practises of recognition of micro-credentials.

Further development or adaptation of HEIs existing online reference platforms to accommodate information provision on smaller learning units leading to micro-credentials should be considered. Using already existing online platforms would ensure that information on all learning opportunities provided by HEI could be found using one access point. Since not all smaller learning units do and should lead to a micro-credential, HEIs should be encouraged to develop a section of their website dedicated to smaller learning units that lead to micro-credentials. The section should also provide information on eligibility rights of awarded micro-credentials (further education possibilities/stacking/combining). A dedicated section of website would also allow publishing information on issued micro-credentials in a longer term; thus, ensuring accessibility of historic information for the purposes of credential evaluation.

In the regard of choosing external information platform, the following questions should be pursued:

- Will using external information platform create extra workload for HEI's staff because extra workload may hinder long-term maintenance of the information?
- Will using external information platform require extra funding for HEIs to connect with external platform for data exchange?
- Can the chosen platform be considered a trusted information source?
- Is it possible to adapt the chosen platform to encourage and to share necessary information in a transparent, user-friendly and systematic manner?
- Will the platform ensure availability and sustainability of information in a long-term?

- What is the purpose of platform – sharing trusted information, advertising, implementing online education etc.?
- Does the platform have or can develop data exchange with Europass platform[77]?
- Does the external platform accept data exchange with HEIs internal data systems?

Similar to other qualifications, simplicity and speed of procedures of credential evaluation are highly dependent on information that is made available on the issued credential. In case of micro-credentials there is smaller likeliness to have national level database on previously issued micro-credentials. The OCTRA 2 project team highly recommends encouraging HEIs to ensure the availability and long-term maintenance of information on smaller learning units leading to micro-credentials.

In case of information provision on learning units leading to micro-credentials similar **steps** like for Bologna cycle qualifications could be taken by HEIs wishing **to develop or update their practices**:

1. Self-evaluation of the information provision practices. The analysis could include the following questions: Where is the information traditionally provided? How long is the information provided? Does the provided information include all aspects that are necessary to issue a micro-credential? Fiche in the Annex 6 could be used to perform self-evaluation of information provision practices.

2. Learner's survey. Two aspects should be explored: 1) How and where the learners have found information about the learning opportunities? Exploring information sources may aid in choosing information provision platform that would both address the need for reliable information source and provide information in a source that is attractive for candidates. 2) What is the motivation of learners for applying to particular opportunities? Analysing motivation of candidates could determine what information is sought; thus, designing information that would both build trust in the offered learning and providing information that attract potential learners.

3. Analysis of gathered data.

4. Practical measures to improve the course catalogue or other relevant information source.

The OCTRA 2 project team is aware of practical issues (limited resources, rapid technical developments) related to the design and maintenance of online platforms. With the respect of the autonomy of HEIs, the OCTRA 2 project team encourages HEIs (and other providers of micro-credentials) to refer to these guidelines in order to facilitate transparency and recognition of their qualifications.

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[77] Recommendation (2022) encourages use of Europass platform for sharing information and issuing credentials on an international level. But it should be noted that at the moment Europass platform does not have capability to provide information on learning opportunities in more than one language. It should also be underlined that developing connection with Europass platform can be time consuming and costly as well as there is a high possibility of format changes for the data exchange. Therefore, connection to the Europass platform might be better planed for a national level platform that can ensure long-term maintenance of the data exchange.

ANNEXES

Annex 1. Structure of OCTRA 2 Country Reports

Annex 2. Questionnaire of HEIs on course catalogues

Annex 3. In-depth case studies – fiche for course catalogues

Annex 4. Questionnaire of HEIs on micro-credentials

Annex 5. Questions of interviews with HEIs on micro-credentials

Annex 6. Fiche of information provision on smaller learning units leading to micro-credentials

Annex 1. Structure of OCTRA 2 Country Reports

List of acronyms and abbreviations

Terminology (if applies)

Chapter I. Analysis of Country Reports

1. Outline of HE systems in the project partner countries

   - Description of National Qualification Framework and its relation to EQF

   - Information on higher education cycles and use of ECTS

   - Micro-credentials in HE system

2. Legal framework on publicly available information about study programmes and courses

   - Legal framework regarding providing "publicly available information" on study programmes and courses/course catalogues.

   - Existing recommendations on provision on "publicly available information" on study programmes and courses/course catalogues

   - Analysis of national level legislation regarding smaller learning units

3. NQDs and alternative information sources on qualifications

   - Content, languages and layout of the national qualifications databases/registers (if applicable)

   - Inclusion of learning outcomes and ECTS in the NQDs (if applicable)

   - Correspondence of information in the NQDs with the selected HEI course catalogues (if applicable)

   - List and links of other national information sources on HE qualifications

4. Results of HEIs survey

5. Results of the in-depth case studies

Chapter II. Information on qualifications valued by credential evaluators

National conclusions

National recommendations on improvements of course catalogues (including information provision on micro-credentials) for the use in credential evaluation

Annex 2. Questionnaire of HEIs on course catalogues

This survey is conducted as part of case studies within Erasmus+ project "Online course catalogues and databases for transparency and recognition" that aims to increase a dialogue with higher education institutions by agreeing on a template of course catalogues and improvement of National Qualifications Databases that would guide to structured and transparent learning outcomes of higher education qualifications facilitating the automatic recognition.

According to ECTS User's guide, course catalogue includes general information on the institution, its resources and services, as well as academic information on its programmes and individual educational components.

Survey should take up to 20 minutes to complete.

1. Name of the organisations_____

2. Does your institution have a course catalogue?

   a. Yes

   b. No (if "no" all further questions do not apply)

   c. In development

3. Your course catalogue is available in:

   a. National language

   b. Other language(-s) _____

   If "b" – is entire course catalogue available in other language:

      A – entire course catalogue

      B – part of course catalogue (please specify what is available in other language) _____

4. Is your course catalogue available online?

   a. Yes

   b. No

   c. In development

   d. Other _____

5. Is your course catalogue available for public use? (multiple answers)

   a. Yes, entire information is available to public

   b. Yes, part of the information is available to public

   c. Yes, entire or part of the information is also available in national/international platforms

      Please name the national platform(-s)_____

      Please name the international platform(-s)_____

   d. No, it is available only for registered students and staff

   e. No, only available for staff

6. Does your course catalogue include all available study courses?

   a. Yes

   b. No

      If "no" – what courses are included in the course catalogue?

_____
_____

7. Does your course catalogue include information on quality assurance/accreditation of study programme or field of study?

    a. Yes

    b. No

8. What information is included in course catalogue? (multiple answers)

    a. Title of the course

    b. Short description of the course

    c. ECTS / number of credits

    d. Learning outcomes of course

    e. Field(-s) of study

    f. Specific admission requirements (if applicable)

    g. Mode of study (full-time/part-time/e-learning etc.)

    h. Examination regulations

    i. Grading scale

    j. Obligatory or optional mobility windows

    k. Work-based learning

    l. Access to further studies after attainment of particular qualification

    m. Information of course interconnectivity (show as part of specific study programmes)

9. Is the workload of study programmes and study courses measured in ECTS?

    a. Yes

    b. No

10. Is ECTS used as a credit system for the transfer of credits for student learning outcomes acquired in another institution within the country?

    a. Yes, information on recognition is available in course catalogue

    b. Yes, but information on recognition is not available in course catalogue

    c. No

Thank you for completing the questionnaire!

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Annex 3. In-depth case studies – fiche for course catalogues

Higher education institution: _____

Study programme: _____

General information on course catalogue

Evaluation of course catalogues		Yes / No	Description
Overall availability of information	Information is presented with links and additional information is easily accessible		
	Information is presented and some additional information is provided		
	Only title and short description of the course is available		
Course catalogue can be found	Link available on main page		
	Links available on faculty/ study field page		
	Links are hard to find		
Languages	National language		
	English		
	Other		

Information on institution

Content	Yes / No	Description
Name and address		
List of programmes offered		
Admission requirements, including language requirements, and registration procedures		
Arrangement of validation of prior learning (formal, informal and non-formal), and credit transfer		
Arrangements for available academic guidance		
Practical information for incoming mobile students		
Other		

Information on study programmes / study fields

Content	Yes / No	Description
Qualification awarded (and professional qualification if applies)		
Workload in ECTS / other credit points		
Level of qualification (NQF, EQF or/and Bologna cycle)		

Field(-s) of study (main field)		
Type of study (academic or professional study programme)		
Quality assurance or accreditation		
Admission requirements		
Information on validation of prior learning		
Graduation requirements		
Learning outcomes		
Matrix of learning outcomes		
Programme structure diagram with credits (ECTS or other)		
List of compulsory courses		
Mode of study (full-time/part time/e-learning etc.)		
Mode of teaching		
Examination regulations and grading scale		
Obligatory or optional mobility windows		
Obligatory or optional course windows		
Work placement(-s)		
Work-based learning		
Programme coordinator (name, contact information)		
Occupational profiles of graduates		
Length of study programme (minimum time required to receive qualification)		
Other…		

Information on study courses

Content	Yes / No	Description
Course title		
Study programme the course is included		
Field(-s) of study (area/branch)		
Level of programme (Bologna cycle or EQF level)		
Workload in ECTS or other credits		
Language of instruction		
Aim of the course		
Course contents (description)		
Learning outcomes		
Requirements to pass the course (tests, essays, attendance etc.)		
Assessment methods		
Assessment criteria		

Includes information on validation of prior learning		
Course interconnectivity (information on other courses that further explore the same route of study/speciality)	78	
Visibility of course interconnectivity (information on study programmes that can include particular course)		
Other		

Other information

Other important elements for recognition (if any)	Description

Annex 4. Questionnaire of HEIs on micro-credentials

This survey is conducted as part of case studies within ERASMUS+ project "*Online course catalogues and databases for transparency and recognition 2*" (OCTRA 2), which objective is to promote a dialogue between credential evaluators at ENICs and NARICs and HEIs by agreeing on a template for the structure of course catalogues, including smaller learning units (i.e. micro-credentials) that would guide to structured and transparent descriptions of HE qualifications.

According to Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability 2022/C 243/02:

"'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."

Survey should take up to 10 minutes to complete. The questionnaire is anonymous, and names of HEIs are collected only for the internal management of the survey.

Name of the organisations_____

1. Does your institution provide micro-credentials?
   a. Yes
   b. No (if "no" all further questions do not apply)

2. Is the information of these learning opportunities available on your institution's website?
   a. Yes
   b. No

3. If information is available on outside information sources, does organisation's website provide information on these learning opportunities?
   a. Yes, full description and options
   b. Yes, with short description and links
   c. Yes, as links
   d. No

4. If information is available on other information sources, please list them:
   _____

5. Does organisation's website provide information on:
   a. Recognition of micro-credentials
   b. Stacking of micro-credentials
   c. Combining micro-credentials
   d. No information on recognition/stackability/combining micro-credentials is provided.

6. Is information on micro-credentials provided:
   a. Only national language(-s)
   b. On all micro-credentials in national language(-s) and foreign language(-s)
   c. In national language(-s) and foreign language for micro-credentials that available in foreign language(-s)

7. Are workloads measured in ECTS / other credit points?
    a. Yes (specify if other credits____)
    b. No

8. What information is provided about micro-credentials?
    a. Title of the learning opportunity
    b. Short description
    c. ECTS / number of credits (if applicable)
    d. Learning outcomes
    e. Field(-s) of study
    f. Specific admission requirements (if applicable)
    g. Mode of learning (in-person/online/blended)
    h. Examination (if applicable)
    i. Grading scale (if applicable)
    j. Possibilities for further learning/combining/stacking

Thank you for completing the questionnaire!

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Annex 5. Questions of interviews with HEIs on micro-credentials

Aim of the interviews is to gain a deeper insight into purpose and availability of micro-credentials in higher education, as well as way how information on these learning opportunities is presented.

1. What type of leaning opportunities can be considered a micro-credential in organisation you represent?

2. Do you know why this type of learning opportunities were included in your organisation's curriculum? (Example: demand from students and/or labour market; demand from public; possibility to educate wider audience on topical issues; profit; other…)

3. In your opinion – is information on these learning opportunities sufficiently represented and explained on organisations website?

4. Does description provide information on recognition/stackability of micro-credentials? In your opinion/experience – is this information understood by people involved in this type of education experience?

Annex 6. Fiche of information provision on smaller learning units leading to micro-credentials

Faculty of the higher education institution (if the information provision is decentralised): _____

Information provision

Evaluation of course catalogues		Description (key questions for guidance)
Information provision platform	Information is provided in course catalogue	• Is it possible to distinguish information on smaller learning units from full formal study programmes or parts of full study programmes? • Does the existing structure of the course catalogue allow to provide necessary information? • Is there possibility to provide information on recognition practices? • How long information on smaller learning units is available?
	Information is provided on HEI's/ faculty's website	• Is it possible to distinguish information on smaller learning units from full formal study programmes or parts of full study programmes? • Does the existing structure of the course catalogue allow providing necessary information? • Is there possibility to provide information on recognition practices? • How long information on smaller learning units is available?
	Information is provided on an external platform	• What are the benefits of using external information platform? • What are potential risks of using an external information platform? • Does the existing structure of platform allow providing necessary information? • Is information linked to HEI's/faculty's website?
Duration of information provision	Information is provided in course catalogue	• How long information on smaller learning units is available? • Is it possible to provide historic information on smaller learning units that no longer are offered by HEI?
	Information is provided on HEI's/faculty's website	• How long information on smaller learning units is available? • Is it possible to provide historic information on smaller learning units that no longer are offered by HEI?
	Information is provided on an external platform	• How long information on smaller learning units is available? • Is it possible to provide historic information on smaller learning units that no longer are offered by HEI?

Information on smaller learning units leading to micro-credentials

Content	Yes / No	Description
Title of the learning opportunity (including title of the issued credential		
NQF/EQF level or Bologna cycle		

Content	Yes / No	Description
Short description (also include purpose of the learning; short description of the learning and information if this is part of the existing study programme)		
Workload expressed in measurable manner (hours, if possible, in ECTS/number of credits)		
Learning outcomes		
Field(-s) of study		
Specific admission requirements (if applicable)		
Mode of learning (in-person/online/blended)		
Assessment (if applicable)		
Grading scale (if applicable)		
Possibilities for further learning/combining/ stacking		
Type of quality assurance used to underpin the micro-credential / smaller unit of learning (if possible, link to information on the type of the quality assurance)		

Information on practices of recognition of prior learning implemented by HEI

Content	Yes / No	Description
National practices of validation of non-formal and in-formal education (if applicable)		
Procedures for implementing validation of non-formal and in-formal education in the HEI (if applicable)		
Credit transfer system and procedures of implementing these practices and costs		
Possibilities of stacking or combining smaller learning units for education possibilities in other study programmes offered by HEI		
Further application(-s) of micro-credential in other education institutions and/or labour market (if applicable)		
Information on validation and recognition of smaller learning units (stacked micro-credentials)		

Other information

Other important elements for recognition (if any)	Description