Case study Spain

Microcredentials for labour market education and training

First look at mapping microcredentials in European labourmarket-related education, training and learning: take-up, characteristics and functions

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CHAPTER 1. Introduction

The objective of this research is to provide a better understanding of the role played by microcredentials in supporting labour-market-related and employment-relevant education, training and learning in Spain. At the moment of writing this report, microcredentials are neither included in the education nor the employment systems. Yet, intense regulation activity is under way to create three complementary systems for microcredentials in the vocational education, in the higher education and in the employment systems respectively. The Draft Organic Law for Planning and Integrating Vocational Training (1), that regulates microcredentials in the formal vocational training system in and out of the education system, was passed by the Ministers Council on 7 September 2021 and is expected to be passed by the Parliament soon. The draft RD establishing the organisation and quality of university studies (2), that regulates microcredentials in university studies, has been subject to public consultation. Finally, the employment authorities are also in the process of designing a system to implement microcredentials outside the education system, which is likely to be put into action later.

The project findings aim to offer knowledge about the current situation, i.e., the characteristics of the vocational training system in education and employment, in which microcredentials will be embedded, as well as that of the university before these reforms eventually take place. On this basis, the report primarily aims to analyse new knowledge on the characteristics of the forthcoming microcredentials systems, their integration in the qualifications system and their added value to individual learners, training providers and employers.

⁽¹) Ministerio de Educación y Formación Profesional (MEFP) (2021), *Anteproyecto de Ley Orgánica de Ordenación e Integración de la Fomación Profesional*, https://www.lamoncloa.gob.es/consejodeministros/resumenes/Documents/2021/150 621-texto-anteproyecto.ley-fp.pdf.

⁽²⁾ Ministerio de Universidades (2021), Proyecto de Real Decreto XXXX/2021, de XX de mayo de 2021, por el que se establece la organización de las enseñanzas universitarias y del procedimiento de aseguramiento de su calidad. Link to the draft of the norm https://www.universidades.gob.es/stfls/universidades/Servicios/articulos/transparenci a_gobierno/participacion_publica/audiencia/ficheros/ProyRDOrganizEnsenanUniv.pd f and to the public consultation process: https://www.universidades.gob.es/portal/site/universidades/menuitem.21ef60083f296 675105f2c10026041a0/?vgnextoid=218cc5c576389710VgnVCM1000001d04140aR CRD.

1.1. Methodology for the case study

This report was developed based on desk research and seven interviews with relevant high level stakeholders of the three systems involved in microcredentials (3): the Ministry of Education and Vocational Training (MEFP), an employers' organisation representing private training providers (both in education and employment systems); the Ministry of Universities, a regional Foundation in charge of the quality assurance of higher education (Madridmasd), Coursera online education platform; the Ministry of Employment and the Social Economy (national Public Employment Service (SEPE (4)) and the national Foundation for Training for Employment (FUNDAE (5)).

In addition, the survey conducted in the context of the report for 'Mapping microcredentials in European labour market related education, training and learning' has been another source of information. In total, there were four organisations representing employees and 24 training providers who have completed the survey. There responses were taken into consideration when writing this report. However, there were no respondents from employer organisations and national authorities who filled out the survey.

In the beginning of the research, the main difficulty encountered was the limited information about microcredentials in Spain, due to the absence of such a system in Spain. Thus, public documents, such as reports, plans or strategies, only rarely refer to microcredentials, nor do normative texts. As a consequence, there is a lack of relevant statistics, such as the number of courses leading to microcredentials or the number of students who are obtaining them.

After this introduction, chapter 2 will present the context in which the envisaged reforms regulating microcredentials will be implemented. Chapter 3 will analyse the forthcoming reforms and chapter 4 will describe the added value of microcredentials, as expressed by interview and survey respondents.

⁽³⁾ See the list and details of the interviews in Annex 1.

⁽⁴⁾The public employment service Estatal (SEPE), https://www.sepe.es/.

⁽⁵⁾ Fundación estatal para la formación para el Empleo, https://www.fundae.es/. Fundae is a public foundation, composed of social partners and public sector bodies, such as the National PES, Ministry of Work and Ministry of Culture and Sports. Fundae is responsible for the management of life-long learning for employed workers.

CHAPTER 2. Analysis of the take up, characteristics and functions of microcredentials

As stated above, microcredentials are not yet regulated in Spain. The goal of this chapter, therefore, is to present a context in which the envisaged reforms regulating microcredentials will be implemented. It will include an overview of the country context, including the current and future state of national qualifications system; relevant stakeholders and their understanding of microcredentials and their roles in the envisaged reforms.

The education context in Spain is shaped by a higher than needed share of the active population (20-64 years) with both low and high educational attainment level; and by a lower than needed level of medium educational attainment. There are 10.5 million workers (45.84% of active population) in Spain without an accredited vocational education. The Spanish government predicts that the current share of low qualified workforce will more than halve by 2025 (from 35% in 2021 to 16% in 2025); that the current share of medium qualified will double (from 25% to 50%); and that the current share of highly qualified will shrink slightly (from 40% to 34% in the same period) (6).

Low-skilled workers face higher unemployment rates than average (22.0% vs 15.8%; 2020Q4), and lower employment rates (55.8% vs 66.2%; 2020Q4; Eurostat, LFS). However, high-skilled persons face also employability challenges due to the mismatch between the skills acquired in the education system and those demanded in the labour market. As it was mentioned by one of the interview respondents, the system for identification and anticipation of skill needs does not adequately shape the skills provided by universities.

National Qualifications System

The current Spanish National System of Qualifications and Vocational Education and Training (Sistema nacional de cualificaciones y formación profesional) is regulated by Organic Law 5/2002 on Qualifications and Vocational Training. It is based on the concept of 'qualification' (cualificación), defined as 'the set of competences with significance for employment, acquired through a formal, nonformal training processes or through labour market experience that are subject to the corresponding evaluation and accreditation procedures'. The system is made

⁽⁶⁾ Spanish Government (2021), Presentation of the Draft Organic Law on Vocational Training.

of tools and activities aimed at promoting and developing a vocational training offer that responds to the changing needs of the labour market. It also aims to promote the assessment and recognition of those competences acquired through work experience.

The main tool of the system is the National Catalogue of Vocational Qualifications or Qualifications Catalogue (*Catálogo Nacional de Cualificaciones Profesionales*), regulated by Royal Decree 1128/2003. This Qualifications Catalogue is managed by the education authorities, through the National Institute for the Qualifications, INCUAL. It groups the most relevant qualifications in the Spanish production system into 26 professional families and five levels, three of which relate to lower vocational training and the other two to tertiary education. As of May 2021, the Catalogue includes 687 qualifications and 2 290 competences. This Catalogue is the basis upon which the formal vocational training offer is elaborated, both within the education system (the training leads to a vocational qualification) and out of the education system (the training or the recognition of labour market experience leads to a vocational certificate (*Certificado de Profesionalidad*) (⁷). All training modules linked to the competences that make up a qualification are gathered in the Modular Catalogue of Vocational Training (*Catálogo Modular de Formación Profesional*).

In addition, national employment authorities are responsible for managing the subsystem of non-accreditable training for employment, i.e., non-formal training for employment, that leads to accrediting diplomas or attendance certificates. This training responds to the Catalogue of Training Specialities (*Catálogo de especialidades Formativas*) (8), managed by the national Public Employment Service (SEPE).

The Catalogue of Training Specialities managed by SEPE differs from the Qualifications Catalogue managed by INCUAL in that the Qualifications Catalogue

⁽⁷⁾ In January 2020, the competences in the field of accreditable Vocational Training for Employment outside the education system (i.e. vocational training for the employed and unemployed workers and the above-mentioned vocational certificates certificados de profesionalidad-) were transferred from the Ministry for Employment and the Social Economy to the Ministry for Education and Vocational Training, with the aim of unifying vocational education and training under one sole ministry (RD 498/2020, of 28 April, establishing the basic organic structure of the ministry for Education and VET).

⁽⁸⁾ Regulated by TMS/283/2019, of 12 March. The Catalogue of Training Specialities, as regulated in 2019, includes both formal training for employment (leading to vocational certificates -certificados de profesionalidad-, which after RD 498/2020 is now managed by the Ministry for Education and VET) and non-formal training, leading to accrediting diplomas or attendance certificates. https://www.boe.es/buscar/act.php?id=BOE-A-2019-3642.

includes the core or structural skills of occupations, while the Catalogue of Training Specialities includes additional skills required for occupations that change more rapidly. An example would be a skill needed to paint with a specific product or tool offered by a manufacturer. Training based on the Catalogue of Training Specialities is usually more focused on concrete skills demanded by the labour market, which often requires and is essential to update background or core skills, defined by the Qualifications Catalogue.

Finally, it is worth mentioning the Spanish Qualifications Framework for lifelong learning (Marco español de cualificaciones para el Aprendizaje a lo largo de la vida or MECU), that was first drawn up in 2009 by the Ministry of Education and VET. It organises qualifications (degrees, diplomas and certificates) according to eight levels and comprises from the most basic to the most complex learning. It, therefore, covers general and adult education, vocational education and training, and higher education. It includes both qualifications obtained in the education system and qualifications obtained outside the education system through inservice training, work experience, or collaboration with NGOs (9). However, the development and implementation of the Spanish Qualifications Framework is still in progress and a Royal Decree that shall establish the foundations for its implementation is currently under preparation. This norm is expected to regulate the assignment of qualifications to the eight above mentioned levels. The intention is to assign formal education qualifications to the levels of the Spanish Qualifications Framework in the first place. The assignment of qualifications related to the validation of non-formal and informal learning is expected to be more complicated. In this regard, a public consultation with the bodies and organisations involved in the design of qualifications in their respective sectors is foreseen (10).

2.1. How familiar are the stakeholders with the term microcredentials?

The degree of familiarity of the stakeholders interviewed with the term microcredentials is varied. Those with responsibilities in the fields of education or employment, who are already using the term in forthcoming regulations (see more details below), are highly acquainted with the term, concept, the strategies followed

⁽⁹⁾ Eurydice: Spanish Ministry for Education and Vocational Training. https://www.educacionyfp.gob.es/mc/mecu/presentacion.html.

⁽¹⁰⁾ Eurydice: National Qualifications Framework. https://eacea.ec.europa.eu/national-policies/eurydice/content/national-qualifications-framework-79_en.

by the European Commission and other EU countries. In contrast, other stakeholders, such as training providers, are less familiar with the term.

It should be taken into account that this case study has prioritised interviewing stakeholders with existing experience related to microcredentials. That said, the familiarity with the term of microcredentials can be considered still moderate beyond interviewed experts. The main reason is the novelty of the term. The survey conducted in the context of the report for 'Mapping microcredentials in European labour market related education, training and learning' shows that three out of four trade unions were familiar with the term 'microcredential'.

2.2. How are microcredentials defined by different stakeholders?

As stated above, there is no (yet) official definition(s) for microcredentials in Spain. This section presents the foreseen definitions for microcredentials in the draft regulations of the education authorities (vocational education and training on the one hand and higher education on the other) and in the initial design foreseen by the employment authorities. Additionally, we have collected the understandings about microcredentials by other stakeholders. Beyond the differences, all definitions understand microcredentials as a proof of learning outcomes that a learner has acquired following a short learning experience.

Ministry of Education and VET: In the draft regulation, microcredentials are considered as a proof of learning outcomes that a learner has acquired following a short learning experience. Outcomes refer to concrete skills, defined in the future national Catalogue of Vocational Competence Standards (*Catálogo Nacional de Estándares de Competencias Profesionales*) which will replace the current Qualifications Catalogue (*Catálogo de Cualificaciones*) described above. Thus, micro-trainings will be related to competence standards, a smaller reference than the current qualifications. Accordingly, microcredentials will be a part of modular VET studies that will serve to advance towards a non-formal vocational certificate and later, through further aggregation of microcredentials, to a VET diploma. Thus, microcredentials are understood as an element or part of the VET formal studies (see more details below in section 2.3).

Ministry of Universities: In the draft regulation (article 37.8), microcredentials are understood as short duration courses provided by universities below 15 ECTS. These courses are part of lifelong learning and have the purpose of updating or training in new skills or knowledge but are not part of a diploma. They are open to graduate or undergraduate students of all ages. In contrast with the definition of the Ministry of Education and VET, microcredentials are not defined by the Ministry

of Universities as part of graduate studies, and therefore will not serve to advance towards a graduate diploma (see more details below).

Employment authorities: as reported by interviewed stakeholders of the national Public Employment Service (SEPE) and the national Foundation for Training for Employment (FUNDAE), the employment authorities also envisage microcredentials as a proof of learning outcomes that a learner has acquired following a short learning experience. In a future system, learning outcomes would be associated with the skills defined in the Catalogue of Training Specialities (Catálogo de Especialidades Formativas) managed by SEPE, following non-formal training. Microcredentials would thus be understood as a proof of the skills of a worker that have a value in the labour market.

In addition to these definitions (not widespread as the new regulations -or the incipient design by employment authorities- are yet in process), this report has collected other understandings by other interviewees (who were not aware of the forthcoming regulation to be approved by the Government).

Madrimasd (regional Foundation in charge of the quality assurance of higher education) shares the same understanding as Fundae. According to Madrimasd, learning outcomes are considered as a set of skills that are relevant for the labour market, such as the use of a technology. Thus, this concept is closely linked with life-long learning or with training for (post)graduate students, such as expert diplomas issued by universities, and clearly differentiated from a full degree such as a bachelor, master or doctoral degree. Accordingly, accreditation of the institution and of the training programme is an essential feature of microcredentials for Madridmasd.

The Spanish confederation of training companies, CECAP, is not familiar with the term "microcredentials" and thus does not define it. However, it does have a vision on the future of training that is in fact close to microcredentials approach. According to this vision, in the coming years access to training would become more flexible, involving lower access requirements. The vision also envisages that training will be increasingly provided through shorter programmes, in contrast with graduate studies or longer programmes, enabling the combination of these shorter programmes (or microcredentials) into a macrocredential, or the recognition by qualification systems. In addition, the validation of professional skills acquired through working experience will become more important and be integrated both with microcredential and qualification systems. These credentials (including microcredentials) would be acknowledged -following CECAP's vison- by education institutions and employers in all countries of the EU and neighbours. This vision is

similar to the one described in (EC, 2020) (11) and indeed to the one defined by education authorities.

Coursera: Microcredentials are also regarded as a proof of learning outcomes that a learner has acquired following a learning experience, for example those provided through Coursera platform. Coursera considers that microcredentials tend to be much more focused on concrete skills for an occupation compared with academic degrees. In contrast to Madrimasd's concept of microcredentials, external accreditation of the institution and of the training programme is not seen as a requirement by Coursera. In fact, this is seen as a potential obstacle, given the long time required by bureaucratic procedures to accredit institutions or training programmes. That said, Coursera partners are usually trusted institutions, such as universities, higher education institutes or industry leaders.

2.3. Are microcredentials or similar credentials referred to in policy discussions and strategic documents? What are the main activities related to microcredentials that are taking place in different contexts? What are the recent developments related to microcredentials?

At the time of writing this report current intense regulation activity shall pave the way to the development of two complementary microcredential systems in the vocational training and higher education systems. The first two regulations that consider microcredentials will be approved in the coming months by the government. Additionally, the employment authorities are designing a system for microcredentials in the field of non-formal training for employment that may see the light later.

2.3.1. Recent developments related to microcredentials by vocational education and training authorities

As advanced, the Ministry of Education and VET has prepared a draft for a new Organic Law on VET that defines and regulates microcredentials as a part of the formal VET system. The final draft (12) was approved by the Council of Ministers

⁽¹¹⁾ European Commission (2020). A European approach to microcredentials. output of the microcredentials higher education consultation group. December 2020.

⁽¹²⁾ Ministerio de Educación y Formación Profesional (MEFP) (2021), *Anteproyecto de Ley Orgánica de Ordenación e Integración de la Fomación Profesional*.

on 7 September 2021 (¹³) and sent to the Parliament, where, being an organic law, it needs absolute majority to be approved.

The Draft Law transforms the current VET system, by unifying vocational education and training in and out of the education system. All training shall be accreditable, accumulable and capitalizable. They should be organised from micro-trainings to vocational training qualifications, depending on whether the training addresses one competence standard, various training modules or a complete training cycle. All training will be embedded in training pathways leading to accreditation, certification and qualifications acknowledged in Spain and the EU. As mentioned above, a new national Catalogue of Competence Standards (smaller units than the qualifications) will replace the current national Qualifications Catalogue, which will enable micro-trainings and microcredentials. A new Catalogue of Modular VET will be linked to the Catalogue of Competence Standards.

The new VET system will be organised in a continuum of five levels (A,B,C,D,E), depending on the scope and duration of the training, that goes from micro-trainings (grade A), training modules (grade B), vocational certificates (certificados de profesionalidad (14)) (grade C), VET qualifications (initial, intermediate or higher VET, grade D) and specialisation courses (grade E). A, B and C grades correspond mostly to training out of the education system and D and E to training in the education system. Training of grade A is the basic unit within the system, is accumulable and leads to a partial accreditation (microcredential) of a competence, and may include one or several learning outcomes of a training module included in the Catalogue of Modular VET. The achievement of all microcredentials of a training module will lead to a B grade accreditation.

Additionally, the Draft law creates a new Catalogue of Vocational Training Offer (*Catálogo de Ofertas de Formación Profesional*) that shall include, for the first time, all vocational education and training, including micro-training leading to microcredentials.

Also, a new national Register of Vocational Training (Registro Estatal de Formación Profesional) and a register of accredited vocational competences acquired through non-formal or informal ways (Registro Estatal de Acreditaciones

https://www.lamoncloa.gob.es/consejodeministros/resumenes/Documents/2021/150 621-texto-anteproyecto.ley-fp.pdf.

⁽¹³⁾ La Moncloa, https://www.lamoncloa.gob.es/consejodeministros/referencias/Paginas/2021/refc202 10907.aspx#edu forpro.

⁽¹⁴⁾ The management of Vocational Certificates (*Certificados de Profesionalidad*) used to be a competence of employment authorities until April 2020. See footnote 7.

de Competencias Profesionales Adquiridas por Vías No Formales o Informales) shall allow citizens to be registered to prove their accredited training.

As regards to the training centres, the draft law envisages that the current two networks of VET centres within the education system (mostly devoted to D and E grades) and authorised VET providers (mostly to A, B and C grades) (see 2.5) will become complementary.

2.3.2. Recent developments related to microcredentials by employment authorities

At present (15), SEPE (National PES) and FUNDAE are responsible for the management of non-formal none accreditable training for employment. This training responds to the Catalogue of Training Specialities (Catálogo de Especialidades Formativas) managed by SEPE. The Catalogue of Training Specialities takes into consideration the skills gaps identified by SEPE, through a department called the Observatory of Occupations. In addition, Fundae carries out a parallel process of identification of skill gaps, through Sectoral Joint Committees (Comisiones Paritarias Sectoriales). Currently, training aimed to address the identified skills gaps leads to accredited diplomas or attendance certificates. However, in the future system that is currently being prepared by employment authorities (SEPE and FUNDAE) this training shall lead to microcredentials. This system will be regulated by the forthcoming reform of the Law 30/2015 (16), which regulates the Professional Training System for employment in the workplace.

The future microcredentials within the employment system will be associated with the skills defined in the Catalogue of Training Specialities (Catálogo de Especialidades Formativas). As briefly mentioned above, this catalogue is easier to be updated in line with the emerging skills demanded by the labour market than the Qualifications Catalogue. It is also important to easily update (part of the catalogue) microcredentials and thus preserve their value, linked to changing labour market demands. The Catalogue of Training Specialities is currently open

⁽¹⁵⁾ After the competences for formal vocational training for employment (i.e., outside the education system) leading to vocational certificates (*certificados de profesionalidad*) were transferred from the Ministry of Employment and Social Economy to the Ministry of Education and Vocational Training. See footnote 7.

⁽¹⁶⁾ Law 30/2015, of September 9, which regulates the Professional Training System for employment in the workplace (Ley 30/2015, de 9 de septiembre, por la que se regula el Sistema de Formación Profesional para el empleo en el ámbito laboral). https://www.boe.es/diario_boe/txt.php?id=BOE-A-2015-9734.

access (¹⁷) and the future (catalogue) of microcredentials should be public as well. The catalogue is structured into occupations, but also includes transversal skills, such as soft skills. Microcredentials are expected to follow the same approach.

In practice, microcredentials will be obtained through training schemes that currently exist within the system of training for employment. On the one hand, through granted and subsidised training provided by companies to their workers (for more details see section 2.5 below) and, on the other hand, through subsidised training for unemployed workers provided by regional PES. Thus, microcredentials within the employment system will be designed for both employed and unemployed people.

The duration of a training leading to microcredentials should be open, according to interviewees and they should be issued by SEPE, Fundae, regional PES or companies that provide training to workers through granted training schemes. However, this issue is not defined yet, or the format of microcredentials, or whether they will be issued as a diploma or a digital credential. There are many details yet to be defined about the future microcredentials within the employment system.

In addition, microcredentials within the employment system would likely be acknowledged by collective agreements and thus play a role in setting professional status and salaries, in a similar way as formal or academic education does now.

Another related issue is the role of industry leaders as training providers, which should be enhanced. In the future, large companies that play a leading role in their sector or region could provide training and microcredentials to their workers, to other companies' workers and to unemployed people as well. This would increase quality of training, offer training which is defined by industry leaders and thus better adapted to labour market demands, and allow labour market stakeholders to connect with unemployed workforce.

This system is expected to be complementary to the sub-systems set up by the Ministry for Education and VET and the Ministry for Universities and it is likely that they will operate separately in the future. Although this makes sense, as the three systems (employment, VET and higher education) respond to different needs, the use of the same term 'microcredential' to define different concepts in the three systems simultaneously might lead to confusion among agents, which could reduce the understanding of its meaning and thus the value for stakeholders.

https://sepe.es/HomeSepe/Personas/formacion/catalogo-especialidades-formativas.html.

⁽¹⁷⁾ Catalogue of Training Specialities available at:

2.3.3. Recent developments related to microcredentials by higher education authorities

The Ministry for Universities opened to public consultation a draft of a Royal Decree establishing the organisation of university education and the quality assurance procedure, which regulates microcredentials (18). The approval process of this regulation is also in progress.

At present, universities organise training programmes, differentiated and usually shorter than bachelor, master or doctoral degrees, which are aimed to provide a set of skills to professionals of a specific field. These programmes, such as expert diplomas, are considered as microcredentials by some interviewed stakeholders. These programmes may or may not have been accredited by external agencies. Under the future norm only university programmes below 15 ECTS will be considered as microcredentials (see definition in section 2.2). This norm will also define other university programmes (only open to graduate students): expert diplomas (*Diploma de Experto*) below 30 ECTS, specialisation diplomas (*Diploma de Especialización*) between 30 and 59 ECTS, and Masters of Lifelong Training (*Máster de Formación Permanente*) of 60, 90 or 120 ECTS (¹⁹). In contrast to the Ministry for Education and VET, that will set up a national Register of Vocational Training (that will include micro-trainings), the draft regulation of the Ministry for Universities does not foresee such a register within the higher education system.

2.4. What is the extent to which microcredentials are used in the labour market related education, training and learning?

As mentioned, microcredentials are not yet regulated in Spain, so, strictly speaking, microcredentials are not yet delivered and consequently there are no

⁽¹⁸⁾ Original title in Spanish "Proyecto de Real Decreto XXXX/2021, de XX de mayo de 2021, por el que se establece la organización de las enseñanzas universitarias y del procedimiento de aseguramiento de su calidad". Link to the public consultation process:

https://www.universidades.gob.es/portal/site/universidades/menuitem.21ef60083f296 675105f2c10026041a0/?vgnextoid=218cc5c576389710VgnVCM1000001d04140aR CRD.

⁽¹⁹⁾ Finding from the interview and draft of the norm, https://www.universidades.gob.es/stfls/universidades/Servicios/articulos/transparenci a_gobierno/participacion_publica/audiencia/ficheros/ProyRDOrganizEnsenanUniv.pd f.

records on them. Yet, two thirds of Spanish VET providers surveyed (²⁰) identify part of the training they offer to be microcredentials. In particular, the Professional certificates (e.g., CertiProf), were selected by 54% of surveyed VET providers as microcredentials (²¹). Others offer academic certificates (21%) or vendor-specific/neutral certificates (26%). A large share of the respondents stated that the microcredentials they offer include a title (82%), awarding body (71%), workload (53%) and relationship to existing qualifications (47%). Employee organisations that were surveyed (²²) do not offer microcredentials, although one respondent indicated that they offer academic certificates.

2.5. Who are the main actors providing learning activities leading to microcredentials and issuing microcredentials?

Following the recent developments described in section 2.3 about the forthcoming regulations, this section presents the actors who will provide learning activities leading to microcredentials and will issue microcredentials, relating them with the existing actors in the current VET system.

The Draft Law for VET (article 77) regulates the Centres of the VET system and defines them as 'those established and managed by competent public authorities and those authorised by these authorities to deliver vocational education and training offers in any of the degrees (A, B, C, D, E) provided for in this Law, given that they officially conclude in the accreditations, certificates and professional training qualifications established in this Law'. These centres integrate those devoted to VET outside the education system and managed by national and regional employment authorities and those inside the education system and managed by national and regional education authorities.

^{(&}lt;sup>20</sup>) There are a total of 24 VET providers - 9 of which are public, 9 private for profit and 6 private non-profit.

⁽²¹⁾ The results of the survey to VET providers should be interpreted carefully, as the number of respondents is low (24 responses). As a reference, the number of CECAP associates is 1,100 associated training providers. In addition, according to the responses, 54% of them report to offer "Professional certificates (e.g., CertiProf)", a term that might have been understood as "Certificado de Profesionalidad", formal qualifications obtained out of the education system that are longer and different to the future microcredentials in the education and employment systems.

⁽²²⁾ Four trade unions have completed the survey.

2.5.1. Providers of training (leading to future microcredentials) outside the education system

These are public and private authorised vocational training centres that currently deliver non-formal non-accreditable (what will be A and B degrees) training. Additionally, a network of accredited training centres delivers formal and accreditable training that leads to a Vocational Certificate (certificado de profesionalidad, future grade C) (23). As mentioned above, these accredited centres and the training leading to professional certificates used to be a responsibility of employment authorities until it was transferred to the Ministry for Education and VET in April 2020. Accreditation requires complying with some specificities that vary depending on the training speciality delivered. All these authorised and accredited training providers must be registered at present in the National Register of Training Centres (Registro Estatal de Entidades de Formación (2^{24})) in any of the activities included in the National Catalogue of Training Specialities managed by SEPE. These training centres can provide training in person and online. In the future, the Central Register of Entities and Authorised Centres delivering vocational training (Registro Central de Entidades y centros autorizados de Formación, art 20 of Draft Law on VET) will substitute the current Register.

These training centres are an essential part of the current VET system outside the education system. They carry out training for employed and unemployed people funded and managed by national and regional PESes and Fundae.

Fundae manages the funding available to companies to fund non-formal non-accreditable training activities that they organise, through training for employment (through rebates in employers' social security contributions, called *formación bonificada* or *formación programada por las empresas*). This funds between 10% to 20% of training costs. Training for employees is delivered directly by the company or by external authorised public or private training providers. This training is very flexible and adapted to the needs of employers. As a result of the reform that the employment authorities are preparing, this granted training may lead to microcredentials. Yet, this flexibility might also make it challenging to apply a microcredential approach, by making it more difficult, for instance, to comply with external quality assurance criteria of training programmes specifically designed to

⁽²³⁾ Order TMS/369/2019, that regulated the National Registry of Trainings Providers within the VAT for employment.

^{(&}lt;sup>24</sup>) Regulated by Order TMS / 369/2019, of March 28, which regulates the national Register of Training Entities of the vocational training system for employment in the workplace. The regional employment authorities in the Autonomous communities (Spanish regions) manage their regional registers, which are merged in the national one.

tailor skill needs of a team within a company, or to provide standardised contents that adequately fit into a microcredential.

Nowadays a challenge of this granted training is to reach SMEs (finding from interviews and Fundae evaluations (²⁵)). While big companies usually manage granted training efficiently through their HR departments, SMEs would need the support of private training centres or training consultancies. The microcredential approach might contribute to increasing the consulting role of private training centres for SMEs in the future. Fundae has funded training 4 619 901 training activities organised by 339 846 companies for 2 958 959 workers in 2019 (²⁶). The average duration was 14.3 hours per training activity, which is close to the duration attributed to short micro-trainings/credentials.

Additional to these grants to companies, Fundae and PESs also subsidise non-formal non-accreditable training for employed and unemployed individuals through grants to authorised training centres, that deliver the training. Similar to granted training for companies, this training must be included in the Catalogue of Training Specialities managed by SEPE, so the features of these courses, such as the requirements for teachers, hours of training, type of training (online, classroom, blended), etc. are clearly defined. The features of this training are less flexible and defined in more detail than the training delivered by companies, which makes them closer (or easier to link) to the microcredential approach, especially compared with granted training which is tailored to the needs of each company. At present, these non-formal courses subsidised by SEPE and Fundae are not accredited. But as interview respondents shared, this may change in the forthcoming reform. In 2019, SEPE and FUNDAE provided training for 157 000 occupied workers and, together with the regional PES, to 260 000 unemployed people. Altogether, this involves 23.3% of unemployed persons who had been unemployed for at least 4 months $(^{27}).$

⁽²⁵⁾ For example, at https://www.fundae.es/docs/default-source/publicaciones-y-evaluaciones/evaluaciones/informe-formaci%C3%B3n-programada-y-pif-2017_2018-comunicacion.pdf.

⁽²⁶⁾ This means an increasing trend in the previous years (2 647 573 workers trained in 2017 and 2 814 139 in 2018). The figures for 2020 are affected by the pandemic and reflect a notable reduction: 2 474 699 (-16.4% less than in 2019) workers of 299 727 companies (-11.8%) participated in organised 3 853 854 (-16.6%) training activities, with an average duration of 13.8 hours (-0.5 hours). Expenditure was EUR 414 972 425 (-24.2%). Source: Fundae, available at https://www.fundae.es/publicaciones/home/datos-estad%C3%ADsticos---home/navega-por-tu-ccaa/informe-ccaa-formaci%C3%B3n-empresas.

⁽²⁷⁾ Annual Report 2019, SEPE, available at: https://sepe.es/HomeSepe/que-es-el-sepe/comunicacion-institucional/publicaciones/publicaciones-oficiales/listado-pub-sepe/informe-anual.html.

In 2019, 15 589 training providers were registered (7 718) or accredited (13,192) with the National Register of Training Centres. CECAP (Confederación Española de Centros de Formación), Spanish Confederation of Training Centres (28), is the main business association of private training centres and has more than 1 100 associated training providers from sectors such as hostelry, ICT, tourism, hairdressers, languages, driving schools or even preparation for civil service examinations (oposiciones). Thus, some of the training courses provided by private centres may fit into the future microcredential approach developed by employment authorities.

2.5.2. Providers of training (leading to future microcredentials) within the education system

The vocational education and training centres are included in the national Registry of non-university training centres (*Registro Estatal de Centros Docentes no universitarios*) (²⁹), that deliver training equivalent to the future grades D and E within the education system. The Draft Law on VET includes this register in article 19. According to statistics provided by the Ministry for Education and VET, in 2020, there were 3 823 private (1 259) and public (2 564) centres delivering formal VET (initial, intermediate and higher).

2.5.3. Universities, besides the programmes of full degrees, such as a bachelor, master or doctoral degree

As already mentioned, the draft Royal Decree prepared by the Ministry for Universities defines microcredentials as courses provided by universities below 15 ECTS, delivered to graduate or undergraduate students, and not included as part of graduate or VET diplomas. The courses of these future microcredentials will be delivered face-to-face, online or blended (interview). Thus, face-to-face and online universities will be also providers of training activities leading to microcredentials.

2.5.3.1. The case of online learning platforms

A specific kind of training centres closely linked to universities, though not only, are online learning platforms, such as Coursera. Online education has grown in Spain over the recent years and particularly during 2020 in the context of the COVID-19 pandemic. In Spain there are several popular online learning platforms, such as

⁽²⁸⁾ CECAP (Confederación Española de Centros de Formación), https://cecap.es/.

⁽²⁹⁾ Available at: https://www.educacionyfp.gob.es/contenidos/centros-docentes/buscar-centro-no-universitario.html.

Coursera (³⁰), Edx (³¹), Miriadax (³²) or Udacity (³³). The National Distance Education University (UNED) (³⁴) has also a platform for open online courses (³⁵). Miríadax, an initiative of Telefónica Educación Digital, is the main platform for MOOCs in Latin America. Akademus is a platform where private training centres and teachers can share their courses, which offer content focused on skills related to the labour market (³⁶). Google Campus has a physical campus in Madrid, focused on training activities for start-ups (³⁷).

As part of this case study the author has conducted an interview with Coursera, which has provided details about the platform and their views on microcredentials. Coursera provides a variety of certificates associated with learning experiences. These include individual guided projects (under two hours of duration), courses (4-6 weeks), specialisations (3-6 months), Professional Certificates (3-9 months), Master Track Certificates (3-12 months) and degrees (1-4 years). Credentials on Coursera are increasingly stackable and modular. Currently, the certificates provided by Coursera are neither acknowledged by the Spanish higher education system nor linked to the credit system.

Coursera partners, who are mainly responsible for the development of learning contents, are usually trusted institutions, such as universities, higher education institutes or industry leaders. Universities and higher education institutes, such as top-level business schools, usually already have institution-based accreditation. In Spain, Coursera works with five partners: two universities (UAB, 52 courses, and University of Barcelona, 17 courses) and three prestigious business schools (ESADE, IE and IESE, with 4, 36 and 15 courses).

Therefore, some of the Coursera certificates could be considered as microcredentials in the future university system. However, Coursera learning experiences and certificates have not necessarily received programme-based accreditation by an accreditation agency (such as ANECA, the national agency, or Madrimasd, a regional one). In addition, they are not linked to the credit system in Spain, or often even to certificates issued by Spanish universities. This is mainly

⁽³⁰⁾ Coursera online learning platform, https://www.coursera.org/.

⁽³¹⁾ EdX online learning platform, https://www.edx.org/es.

⁽³²⁾ Miriadax online learning platform in Spanish language, https://formacion.miriadax.net/.

⁽³³⁾ Udacity online learning platform, https://www.udacity.com/.

^{(&}lt;sup>34</sup>) The National Distance Education University (UNED) is a Spanish public university that provides distance education at national and international levels. UNED Abierta provides digital badges for some of the courses offered.

⁽³⁵⁾ UNED Open Courses, https://iedra.uned.es/.

⁽³⁶⁾ Akademus, online learning platform, https://www.akademus.es/.

⁽³⁷⁾ Google for startups, https://www.campus.co/intl/es_es/madrid/.

due to the novelty of these courses and the burdensome accreditation procedures. Therefore, Coursera learning activities could, strictly speaking, be considered only as 'certificates' but not 'microcredentials' in the forthcoming regulation.

Coursera also works with many companies across the world to provide upskilling and reskilling services through online training solutions to employees (³⁸), offering services very similar to those funded by Fundae. Likewise, Coursera has developed a programme for unemployed people affected by the pandemic funded by the regional government of Catalonia and provided access to more than 4,000 courses (³⁹). At the local level, the municipality of Las Rozas (in Madrid metropolitan area) (⁴⁰) and of Ponferrada (North West of Castille and Leon) have offered 5,000 scholarships each (⁴¹). Nevertheless, this ecosystem will probably change to adapt to the forthcoming regulations by education authorities.

2.6. Who are the main users of microcredentials?

There is no data about users of microcredentials or users who participate in training activities that are relevant to the microcredential approach. Literature suggests that in advanced economies it tends to be high-skilled 40-50 years old employees in higher-end professional occupations who benefit from and complete microcredentials (EC, 2020). However, it is not possible to compare this observation to Spain. CECAP does not count data on students taking part in courses delivered by private training centres.

Coursera has provided the research team with some data on their users. In Spain there are around 1.5 million users of Coursera, with an average age of 35 years old and 47% of them are female (⁴²).

Users of future microcredentials within the VET system will likely be current VET students, which include both young students and adult learners. In Spain the VET education is divided into three levels: initial, intermediate and higher levels. Most students are in intermediate and higher levels. Men account for 55,3% of students and women for 44,7%. The distribution of students by age varies across education levels. Students over 24 years of age make 20.9% of all students in the

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⁽³⁸⁾ Coursera for business: https://www.coursera.org/business/products-ft?utm_campaign=c4b&utm_content=in-demand-skills-hp&utm_medium=website&utm_source=enterprise#product-skills.

⁽³⁹⁾ The Government offers more than 4,000 free courses online through Coursera, https://punttic.gencat.cat/article/el-govern-ofereix-mes-de-4000-cursos-gratuits-en.

⁽⁴⁰⁾ https://www.lasrozas.es/hacienda-economia-y-empleo/Coursera.

⁽⁴¹⁾ Training and Future, https://formacionyfuturo.ponferrada.org/.

⁴² Data provided by Coursera as of 31 March 2021.

intermediate level and 33.7% in the higher level (see Table 1 and Table 2). According to the interview respondents, this has been an incentive for the integration of VET in education and in the employment system in the Draft Law for VET.

Table 1. Distribution of VET students in Spain by education level and gender, 2019-

	Initial	Intermediate	Higher	Total
Total	76 440	368 359	446 706	891 505
Men	53 691	206 863	232 113	492 667
Women	22 749	161 496	214 593	398 838

Source: Ministry of Education and VET statistics.

Table 2. Distribution of VET students in Spain by age, gender and education level, 2019-20

	18 or less	over 19	19-24	25-29	30-34	35-39	40 or more
Initial							
Total	95,1	4,9					
Men	95,3	4,6					
Women	94,6	5,5					
Intermediate							
Total	45,1		34,0	5,5	4,1	3,7	7,6
Men	49,7		35,5	4,4	3,0	2,6	4,7
Women	39,2		31,9	6,7	5,5	5,1	11,4
Higher							
Total	8,6		57,8	12,3	7,1	5,7	8,6
Men	8,4		61,6	12,0	6,3	4,8	7,0
Women	8,8		53,8	12,5	8,0	6,7	10,3

NB: Age of students of initial level is not detailed over 21 years old.

Source: Ministry of Education and VET statistics.

Users of microcredentials within the training for employment system will be both employed and unemployed individuals. As mentioned in 2.5.1, tentatively, PESs trains about 200,000 unemployed each year and Fundae about 3 million employed workers through funding to companies. Employed workers trained through activities funded by Fundae in 2020 were very diverse: 55% men and 45% women; 30.1% with low level of education, 28.6% with medium level and with 37.6% higher education. About one third of workers trained were ages of 36-45 and additional

30% were 46-55 years old with young workers aged 16-25 accounting for only 5.6% and above 55 years old accounting for 9% (⁴³).

Users of microcredentials within the future university system will be both graduate and undergraduate students. The policy approach of the reform aims to design microcredentials for young workers (university students or recent graduate) who want to complement their university studies, as well as for workers of all ages who want to improve or update their knowledge or skills through short university courses. Universities might also be able to design microcredentials to respond to specific needs of companies or even design tailor made courses in response to the needs of one specific company to train their employees. In this regard the Spanish system provides a wide autonomy to universities (interview finding).

2.7. What are the main characteristics of microcredentials?

There is an agreement among the stakeholders interviewed for this case study on the set of important characteristics that microcredentials should have and will have in the forthcoming regulations:

- (a) microcredentials certify the completion of a learning experience, such as a course, of a shorter duration compared to bachelor or formal VET studies. In the future regulation of VET, microcredentials will indeed be the smallest unit within VET qualifications, with a duration of 20-30 hours; in the case of universities microcredentials will be below 15 ECTS;
- (b) the outcomes of the courses leading to microcredentials should be focused on the acquisition of skills that are generally demanded by the labour market. Indeed, future microcredentials within the VET system will be offered in line with the future Catalogue of Competence Standards (for more details see section 2.3), which is designed by education authorities in response to the identification of skills demanded by the labour market. Likewise, future microcredentials within the employment system will be also linked to the Catalogue of Training Specialities, designed by SEPE in line with the skills demanded in occupations in the labour market. Future microcredentials offered by universities will be decided by each university as they do not have to respond to labour market demands, although most of them will likely do. The focus on professional skills shortens the duration of learning experiences

⁽⁴³⁾ Fundae statistics, 2018-2020, https://www.fundae.es/docs/default-source/publicaciones-y-evaluaciones/s%C3%ADntesis-est/2020/1-4_perfil-sociolaboral-de-los-participantes-formados.pdf.

- compared with other education programmes, such as grades or master programmes offered by universities;
- (c) flexibility, related to the access requirements and the structure of content. This involves modularity and stackability; students might take only parts of a wider training programme. Microcredentials offered within the VET system will necessarily be part of the VET curricula and will be part of a continuum education pathways. In the case of future microcredentials within the employment system, flexibility could be higher, as for example, microcredentials will be related to the Catalogue of Training Specialities, easier to update than the Qualifications Catalogue. The future microcredentials offered by universities will be open to both graduate and undergraduate students. Each university will be autonomous to design the content of future microcredentials;
- (d) content and methodology although a flexible structure is a key characteristic of microcredentials, content of programmes must be coherent and follow a methodology;
- (e) quality assurance, including programme and institution-based accreditation, as well as ways to check the authenticity of the credential. The programme and institution-based accreditation is the key to differentiate between a microcredential and a micro-training. The future microcredentials within the employment system will strengthen quality assurance procedures for training providers. The future microcredentials offered by universities will be quality assured by universities and those within VET by the quality assurance system of general VET education.

2.8. Are there any sectors and occupations where microcredentials are prevalent, relevant and important?

The Draft Law for VET identifies 11 strategic sectors, plus two transversal sectors (digitalisation and environmental sustainability) for VET, which should be taken into account in the future offer of microcredentials within the VET system (interview finding). The 11 sectors are:

- (a) advanced information technology;
- (b) automated and robotic machine tool;
- (c) aeronautical equipment;
- (d) rail freight transport;
- (e) vehicles based on new equipment and technologies;

- (f) farm machinery;
- (g) new materials;
- (h) biopharmacy and advanced medical products;
- (i) consumer chain;
- (i) tourism and hospitality;
- (k) personal care services.

Interview respondents point to some sectors as potentially relevant for microcredentials, once they will be regulated.

Provision of training for certain digital skills often follows the microcredential approach. One example of this are the certification courses provided by big ICT companies, such as Cisco or Microsoft. However, the use of microcredentials for digital skills varies depending on the needs of the employer. Although certification by large ICT companies' might be very valuable for ICT specialists, the need for employers to certify the digital skills of an average worker (of all qualification levels) is low. One example is *Digitalizate* (44) programme, an online training platform created by SEPE and Fundae which offers online courses designed by industry leaders. Training offered through Digitalizate platform will probably lead to microcredentials within the employment system in the future.

The Spanish VET providers who responded to the survey stated that the most frequent fields of education where microcredentials are issued include information and communication technologies (53%), followed by engineering, manufacturing and construction and generic programmes and qualifications (35% each).

Other sectors currently following a microcredential approach are subject to sector specific regulation. One example is driving licenses, issued by the Spanish Traffic General Directorate (DGT), which are required for concrete occupations, such as truck drivers. Another example includes certifications to work in restaurants regarding food handling. Language learning also sometimes follows microcredential approach. Similarly, soft skills, such as leadership or communication, highly demanded by the labour market and usually trained in some master programmes, could benefit from microcredential approach.

In the case of Coursera, the most demanded fields of study among users are business, technologies and data sciences. The most demanded MOOC is Machine Learning by Stanford University (⁴⁵). The demands for specific fields of study in Spain are very similar to the demands in other European countries.

(44) Free online courses in digital transformation and others, https://www.fundae.es/digitalizate.

⁽⁴⁵⁾ Machine Learning Course by Stanford, https://www.coursera.org/learn/machine-learning.

2.8.1. Sectoral analysis of current training offers

This subsection assesses the sectors which have a higher probability of using microcredentials in the future (once regulated), relying on the information of the existing types of training within VET for employment. The sectoral analysis is developed based on the concept of 'professional family', included in the Qualifications Catalogue (see Chapter 2), which groups the most relevant qualifications in the Spanish production system into 26 professional families. The analysis covers three types of training (see 2.5.1):

- (a) participants of training courses granted by FUNDAE (training aimed primarily at employed people);
- (b) participants of training courses subsidised by state and regional PES (training aimed primarily at unemployed people);
- (c) vocational certificates (Certificados de Profesionalidad).

As seen in former sections, the average duration of training courses undertaken by employed workers is less than 15 hours (see 2.5.1), thus perfectly deliverable in the future through microcredentials. We have also seen that the Draft Law for VET considers the possibility of getting a vocational certificate through stackable microcredentials (grade A, see 2.3.1).

The following section summarises the three types of training activities individually. Then, a combined analysis is presented to offer some conclusions on the sectors with higher probabilities of using microcredentials in the future.

2.8.1.1. Participants in training courses aimed mainly at occupied workers (granted by FUNDAE)

The analysis of the number of (mainly) employed participants in training courses funded by FUNDAE allows to highlight professional families, or sectors, that clearly outstand within the whole list of 26 professional families (the list below includes 28 rows: 26 professional families plus two additional categories, "Further training" and "Unclassified professional skills").

Security and environment and administration and management are clearly the two most extended trainings, accounting for 28.3% and 26.2% of the participants respectively, that received training funded by FUNDAE in 2020 (Table 3). The next most important sectors are trade and marketing, IT and communications and sociocultural and community services, accounting each for around 7% of the total (46).

⁽⁴⁶⁾ The 2019 ranking looks very similar to 2020 so it does not seem to be influenced by the pandemic: administration and management plus security and environment were again the main sectors, accounting both for almost 50% of the total. The next most

Table 3. Number of employed participants trained per professional family (sector) of the action, FUNDAE (2020)

Professional Family	Participants	Share
Security and environment	1 215 552	28,3%
Administration and management	1 122 132	26,2%
Trade and Marketing	361 788	8,4%
IT and communications	338 522	7,9%
Sociocultural and community services	307 812	7,2%
Further training	258 154	6,0%
Food industries	168 823	3,9%
Vehicle transport and maintenance	122 702	2,9%
Health	114 387	2,7%
Hostel and Tourism	50 820	1,2%
Installation and maintenance	44 315	1,0%
Building and civil works	42 288	1,0%
Mechanical manufacturing	30 397	0,7%
Energy and water	22 377	0,5%
Agrarian	14 842	0,3%
Electricity and electronic	14 583	0,3%
Unclassified professional skills	12 688	0,3%
Graphic arts	10 533	0,2%
Personal image	9 779	0,2%
Chemistry	8 212	0,2%
Textile, clothing and leather	4 847	0,1%
Image and sound	4 449	0,1%
Physical and sports activities	3 451	0,1%
Extractive industries	2 167	0,1%
Maritime fishing	1 042	0,0%
Glass and ceramics	832	0,0%
Wood, furniture and cork	785	0,0%
Arts and crafts	469	0,0%
Total	4 288 748	100,0%

NB: the table includes the 26 professional families plus 'Further training' and 'Unclassified professional skills'.

Source: FUNDAE statistics. Original title of the table in Spanish: 'Número de participantes formados por familia profesional de la acción'.

2.8.1.2. Participants in training courses funded by state and regional PES (training aimed primarily at unemployed workers).

The number of participants that completed training activities funded by PES is another relevant source of information. This training is delivered mainly to unemployed individuals.

Interestingly, there are coincidences but also differences between the training undertaken by (mostly) unemployed and the training undertaken by (mostly) occupied workers (presented in the previous section). Administration and

important sectors were again trade and marketing, sociocultural and community services, Further training (*Formación complementaria*, not linked to a concrete professional family) and IT and communications.

management, trade and marketing, IT and communications or further training appear in the two cases within the top sectors in the ranking. However, security and environment, the first sector in 2020 among trained occupied workers appears only in the 11th position in PES ranking.

It should be taken into account that the number of (unemployed) participants that completed training actions funded by SEPE is just 169.624, compared with FUNDAE figures which is above 4 million.

Table 4. Number of participants who completed a training activity funded by PES aimed primarily at unemployed individuals, 2019

Professional Family	Participants	Share
Sociocultural and community services	41 478	24,5%
Administration and management	18 472	10,9%
Complementary training	16 244	9,6%
Hostel and Tourism	13 637	8,0%
Trade and marketing	11 505	6,8%
IT and communications	11 073	6,5%
Vehicle transport and maintenance	7 200	4,2%
Mechanical manufacturing	6 574	3,9%
Personal image	6 255	3,7%
Electricity and electronic	5 361	3,2%
Security and environment	5 252	3,1%
Agrarian	4 754	2,8%
Installation and maintenance	3 936	2,3%
Building and civil works	3 689	2,2%
Physical and sports activities	3 208	1,9%
Health	2 458	1,4%
Energy and water	2 021	1,2%
Food industries	1 912	1,1%
Image and sound	1 092	0,6%
Graphic arts	1 075	0,6%
Wood, furniture and cork	661	0,4%
Textile, clothing and leather	550	0,3%
Maritime fishing	493	0,3%
Chemistry	459	0,3%
Arts and crafts	145	0,1%
Extractive industries	112	0,1%
Glass and ceramics	8	0,0%
Total	169.624	100%

NB: the table includes the 26 professional families plus 'Further training'.

Source: Ministry of Work annual statistics. Original title of the table in Spanish: 'Formación dirigida prioritariamente a trabajadores desempleados: Acciones formativas realizadas y participantes que terminan acción formativa, según duración de la acción formativa, por familia profesional'.

2.8.1.3. Vocational certificates (certificados de profesionalidad)

The list of the top 20 vocational certificates, among the existing 583, accounted in 2019 for 57.3% of the persons that had completed any of them. The most issued

vocational certificates (in number of persons that have completed the certificate) in 2019 were health care to dependent persons in social institutions and social health care for people at home, accounting for 15.5% and 11.8% respectively (see Table 5). The next most popular certificates were teaching vocational training for employment, auxiliary operations of administrative and general services and administration and management activities. Some of them can also be found in the top lists of (mostly) employed individuals (FUNDAE) and that for (mainly) unemployed individuals, such as training in Administration and management. It should be taken into account that the data of vocational certificates is not presented following the professional family classification, but by the name of the course.

Table 5. Vocational Certificates. List of the 20 most issued vocational certificates in 2019

Vocational Certificates	Men	Women	Total
Health care to dependent persons in social institutions	2 188	16 053	18 241
Social health care for people at home	694	13 150	13 844
Teaching vocational training for employment	1 839	3 021	4 860
Auxiliary operations of administrative and general services	770	2 571	3 341
Administrative management activities	437	1 873	2 310
Auxiliary activities in nurseries, gardens and garden centers	1 288	784	2 072
Surveillance, private security and protection of people	1 533	464	1 997
Auxiliary warehouse activities	1 450	512	1 962
Promotion of educational free time activities for children and young people	423	1 514	1 937
Cleaning of surfaces and furniture in buildings and premises	695	1 200	1 895
Kitchen room	739	958	1 697
Basic kitchen operations	761	885	1 646
Sanitary transport	1 191	453	1 644
Pest control services	1 430	184	1 614
Data and document recording and processing operations	378	1 183	1 561
Basic operations of restaurant and bar	742	777	1 519
Installation and maintenance of gardens and green areas	874	641	1 515
Assembly and maintenance of low voltage electrical installations	1 277	35	1 312
Surveillance, private security and explosives protection	951	328	1 279
Administrative activities in the relationship with the client	255	1 014	1 269
Total Top 20 Vocational Certificates	19 915	47 600	67 515
Total Vocational Certificates	48 034	69 714	117 748

Source: SEPE. Yearly Book 2019 (*Informe Anual 2019*, pages 90-91), https://sepe.es/HomeSepe/que-es-el-sepe/comunicacion-institucional/publicaciones/publicaciones-oficiales/listado-pub-sepe/informe-anual.html.

2.8.1.4. Conclusion: top professional families across three sources of information The analysis of the three rankings shown above enables us to find out some professional families (sectors/occupations), that clearly stand out and should be

regarded as potential sectors/occupations where microcredentials could be prevalent in the future (Table 6):

- (a) administration and management, such as auxiliary operations of administration and general services or administration and management activities:
- (b) sociocultural and community services, such as Health care to dependent persons in social institutions or at home;
- (c) IT and communications.
- (d) trade and marketing;
- (e) to a lesser extent, security and environment, first among (mostly) occupied workers (Table 3), 11th in the ranking of trained unemployed workers (Table 4), and among the top 7 vocational certificates as surveillance, private security and protection of people (Table 5).

Table 6. Top 7 professional families in number of persons trained: (mostly) employed, unemployed and Vocational Certificates

	Mostly employed individuals (Fundae)	Mostly unemployed individuals (PES)	Vocational Certificates (Ministry for Education and VET)
1	Security and	Sociocultural and	Health care to dependents in
2	environment Administration and management	community services Administration and management	social institutions Social health care for people at home
3	Trade and Marketing	Complementary training	Teaching vocational training for employment
4	IT and communications	Hostel and Tourism	Auxiliary operations of administrative and general services
5	Sociocultural and community services	Trade and marketing	Administrative management activities
6	Complementary training	IT and communications	Auxiliary activities in nurseries, gardens and garden centres
7	Food industries	Vehicle transport and maintenance	Surveillance, private security and protection of people
Total persons in top 7	3 772 783	119 609	46 665
Share within category	88.0%	70.5%	39.6%

NB: Data of vocational certificates (*certificados de profesionalidad*) is provided by the title of the certificate, not by professional family. The share within category refers to the share of the number of persons that have received training in the top 7 list within the total number of persons that have received that type of training (Fundae, PES, Vocational Certificates).

CHAPTER 3. Analysis of microcredentials and evolving qualifications systems

As mentioned above, microcredentials are not yet regulated in Spain. However, the forthcoming regulations envisage legal changes where microcredentials in the VET education, in the employment and in the university systems will be embedded in their respective qualifications systems.

3.1. How are microcredentials linked to and/or integrated into qualifications system? How do they operate outside national qualifications system?

As described in the introduction to Chapter 2, the Draft Law on VET merges formal VET both in the education and out of the education system and sets up the future Catalogue of Competence Standards that will substitute the current Qualifications Catalogue. Thus, competence standards will be the basic unit of accreditable education - microcredentials (grade A) within VET programmes in the education system, with a duration of 20 – 30 hours. The Draft Law on VET envisages that microcredentials will be accumulable for the completion of modules (grade B) and Vocational Certificates (*Certificados de Profesionalidad*, grade C). Grades A, B and C are provided for outside the school system. Eventually, a person with a grade C could join VET training (initial, intermediate and higher) and Specialization Courses (grades D and E) in the school system.

Future non-formal microcredentials within the employment system will not be linked to and/or integrated into the Catalogue of Competence Standards but, as it happens currently, into the Catalogue of Training Specialities managed by the national PES. See in the introduction to Chapter 2 the differences between the two catalogues. In the future, part of the Catalogue of Training Specialities will be focused on pathway specialities, i.e., a set of training actions that will make up a training pathway. This may eventually be a reference for stackable microcredentials.

On its side, as in the draft Royal Decree prepared by the Ministry of Universities, microcredentials within the tertiary education will be as well the basic accreditable unit, but contrary to the VET system, microcredentials will not be a part of graduate studies and will thus not serve to students to advance towards graduate studies. Universities will be responsible for managing their contents,

delivery formats, providers (it could be other Spanish or foreign universities, VET training centres, online platforms) or duration (as long as they take less than 15 ETCS). Microcredentials are understood as a training complementary to the regular formal tertiary learning offer.

Three out of four surveyed trade union representatives consider that it is very important for employees that microcredentials are referenced to and/or integrated into the national qualifications system/framework/catalogue. One out of four surveyed training providers thought that one of the reasons behind lack of trust in microcredentials is that they are not compatible with the national qualifications system/framework/catalogue.

3.1.1.1. How are microcredentials linked to credit systems?

As mentioned above, the forthcoming Royal Decree prepared by the Ministry for Universities sets that future microcredentials within the university system will be below 15 ECTS and its duration must be defined using the ECTS system. However, microcredentials will not be integrated into larger diplomas, such as graduate or master's degrees, nor will they be acknowledged to complete or advance in them. Future microcredentials offered by universities might be delivered online, using existing platforms such as Coursera. Each university will be autonomous in deciding this.

At present, before this reform is implemented, in practice, micro-trainings might serve to obtain credits within university studies. Bachelor and master programmes offered by universities can provide some credits for learning obtained from other programmes, such as other universities or higher education centres. This would be close to microcredentials approach. In such cases, the universities must issue a memory detailing the study programme that needs to be checked and approved by a national or regional Agency for Quality Assessment and Accreditation. However, in practice this process is too burdensome for it to apply to micro-trainings designed to respond quickly to labour market (or even specific companies') needs that might lead to microcredentials. This explains why, for example, students enrolled in the Autonomous University of Barcelona (UAB) can obtain a Coursera certificate of a MOOC designed by UAB itself but cannot receive credits from UAB for this. In the future system, there will be a link between microtrainings/credentials and ETCS, but they will not be integrated into larger diplomas.

3.2. Can microcredentials be accumulated and combined with other qualifications?

As stated above, the forthcoming regulations are clear on this. The Draft Law on (formal) VET envisages that microcredentials are accumulated and combined with other microcredentials or qualifications both out the education system (grades A,B and C) and in the education system (grades D and E).

On its part, the accumulation and combination of microcredentials acquired through non-formal training within the employment system will most probably also be possible, but no more information was available while drafting this report. Finally, in the university system, microcredentials will be complementary, but will not be accumulated and combined with other qualifications.

CHAPTER 4. Analysis of microcredentials and the added value for end users

4.1. Is there a need for microcredentials? Why do different stakeholders need microcredentials?

This case study has identified several needs for microcredentials. These needs vary across stakeholders, in line with their main benefits (see section 4.2).

By allowing the access to shorter, more flexible training, microcredentials can better target groups of persons in vulnerable situations, including learners with limited opportunities and those from disadvantaged backgrounds. With a low entry barrier, microcredentials could be the initial step for learners who might traditionally have been discouraged to enter the education system (EC, 2020). This is particularly relevant in Spain due to the high share of low-skilled adults and/or with low employability. Compared to the EU, the differences are striking. While the share of those aged 15 to 64 years with lower secondary education (ISCED 2011 levels 0 to 2) has decreased by almost five percentage points in the past five years (from 43.5% in 2015 to 38.2% in 2020 to 41.2%), it is 13 points above the EU-27 level (38.2% vs 25.1%). Meanwhile, the share of those with upper secondary and post-secondary non-tertiary education (levels 3 and 4) was 25.8% in Spain in 2020 and 46% in the EU-27, almost 20 percentage points higher. On the contrary, the share of those with tertiary education (levels 5 to 8) is well above the EU-27 (36% and 29% respectively).

As mentioned in Chapter 2, the Spanish government envisages that the current share of low qualified will halve by 2025; that the current share of medium qualified will double; and that the current share of highly qualified will decrease slightly. It is estimated that 10.5 million active persons in Spain have attained at most upper secondary education and do not have a professional qualification (⁴⁷).

From the point of view of the companies, microcredentials may address their needs to quickly update and upgrade competences of their workers along with the changes in the labour market. Ideally, training providers may design suitable and timely training offers.

In this regard, the forthcoming regulations promoted both by the Ministry for Education and VET and the Ministry for Employment and the Social Economy aim

⁽⁴⁷⁾ Spanish Government (2021), Presentation of the Draft Organic Law on Vocational Training.

to respond to these challenges, facilitating the access to education for low-skilled adults and also to workers in need of updating/upgrading their competences.

More in general, microcredentials may address the need for life-long learning of workers who lack the time needed to participate in longer VET qualifications. Microcredentials allow for a targeted acquisition of skills and competences during the course of life, while not replacing traditional qualifications. Continuous learning recognised through microcredentials can fill existing and emerging skills gaps (EC, 2020). This is clearly considered in the forthcoming reform within the university system, which does not consider microcredentials as part of graduate studies but as a complementary (shorter) education for graduate (and undergraduate) students. This reform aims to bring university closer to society, enhancing its role in lifelong learning.

Most of the surveyed VET providers consider that the need for microcredentials will grow in the future mainly due to the need to upskill and reskill the workforce in a context of changing labour market needs and to provide access to education and training to a greater diversity of learners. Indeed, the flexibility of microcredentials is seen as their main advantage, as it makes them more suited for upskilling and reskilling needs with a format that allows for speedy response to labour market needs. This view is also coherent with the findings from the interviews.

What are the main benefits / added value of microcredentials for end users (e.g. learners, education and training providers and employers)? What value do microcredentials bring to the overall qualifications system?

4.2.1. Benefits of microcredentials for employers

The main added value of micro-trainings (and once the intended reforms are implemented, of microcredentials) for employers is the usefulness of the skills acquired by workers for the work. Micro-training/credentials tend to be much more focused on concrete skills for an occupation than longer mainstream courses. Microcredential offerings (and other types of short learning experiences and certificates) are growing because there is a large gap between what education institutions provide and what employers look for. This gap is influenced by the fast development of technology, especially by digitalisation and automation. Lately, the pandemic has accelerated this pace of change, posing additional challenges to companies and increasing their training needs for which there is not always an

adequate offer provided by the VET system, or might not be flexible enough (interview finding).

Microcredentials to be implemented within the VET system will be in line with labour market demands, as they will be integrated in the Catalogue of Competence Standards (for more details see section 2.3). Microcredentials will also expand the added value of non-formal training that is currently being offered within the employment system, framing it into the structured framework of the Catalogue of Training Specialities of SEPE. This will enable comparisons among different microcredentials, facilitate the understanding of their content and related skills by users and thus increase its value. The forthcoming reform within the university system is in line with this approach. Indeed, universities will be allowed to design micro-trainings/credentials in line with the skill needs of one sector of activity or even of one concrete company. This can also have a potential effect of building bridges for enhanced cooperation between universities and the private sector.

4.2.2. Benefits of microcredentials for learners

The main added value of microcredentials for learners is improved employability of low-skilled workers or workers with outdated skills, which is directly linked to the added value for employers. For workers, the flexibility of the microcredential approach (online or face-to-face) makes it easier to participate in training and enables life-long learning.

In this context, one of the main benefits for workers is the actual recognition of competences acquired by workers. Microcredentials may be included in collective agreements and be defining criteria of professional categories and, as a result, of wages and working conditions (interview finding).

Microcredentials can also contribute to more inclusive labour markets by making it more flexible (and cheaper) to access training, especially for those who do not have a degree. This is particularly relevant in the case of future microcredentials to be offered within the employment system. Shorter than other trainings, microcredentials will be more accessible to low-skilled workers, especially those who are employed and do not have enough time to obtain longer VET qualifications. Within the education system, adults without a qualification can start getting stackable credentials, be encouraged by initial successes and continue in a training path.

As mentioned above, formal education programmes sometimes do not provide the professional skills demanded by the labour market. Thus, microcredentials can complement formal education by offering in demand skills. Future microcredentials in the employment system and the university shall follow this approach. In this regard, future microcredentials to be offered by universities

can also play a role in developing the system for lifelong learning, motivating (under)graduate workers of all ages to keep in contact with their (or other) universities along with their working lives and continuously update and improve their skills (interviews).

Moreover, the future reform of VET promoted by the Ministry for Education and VET enhances the collaboration with the university system, promoting the collaboration between teachers, the shared use of facilities or the recognition of qualifications. There is a big potential for collaboration between both systems, for example university graduates will be able to benefit from short courses (microcredentials) offered by the VET system, which are often more applied than university education (interview finding). Likewise, the fact that future microcredentials to be offered by universities will be open also to undergraduate persons will enable VET graduates and students to access microcredentials at the university. Beyond the benefits for learners, this enhanced cooperation between university and VET can also serve to enhance mutual understanding between graduates of both systems, which can turn afterwards into synergies at the workplace.

In the medium and long-term, the microcredential approach based on online learning can make the education model in universities more flexible and decentralised. The future reform of microcredentials within the university system enables universities to offer microcredentials based on online learning. Universities might open part of their curricula to courses provided by other universities and industry leaders, enabling more flexibility to students to shape their own learning. In other cases, universities might make use of good quality contents from other universities and industry leaders and adapt them to the national and local context, increasing the quality of education. For learners, especially those in less populated areas and/or with limited offers for higher education, this can involve a chance to access a higher quality and wider education at a lower cost, making education more affordable and inclusive. In all cases learners will have more chances to access a wider education offer.

The results of the survey also confirm the findings from the interviews and the literature. Three out of four surveyed trade union representatives consider that it is very important for employees that microcredentials are referenced to and/or integrated into the national qualifications system/framework/catalogue. In addition, union representatives consider that flexibility in terms of the timeframe to complete a learning activity, low cost of microcredentials and the inclusion of microcredentials in the training and continuous professional development programme at the workplace are the most important factors that would influence a wider uptake of microcredentials by employees. They also consider that

microcredentials have advantages over traditional forms of qualifications and other forms of competence recognition, as their flexibility is more suited for upskilling and reskilling of employees and the format of microcredentials allows for speedier response to the needs of the employees.

Furthermore, surveyed VET providers stated that the main purposes of microcredentials are to provide basic employability skills for individuals (88% of respondents) and to upskill and reskill workers, employed (77%) or unemployed (71%). The main reasons to offer microcredentials are to respond to the needs of learners and employers for specific education and training opportunities.

4.2.3. Benefits of microcredentials for training providers

For training centres outside the education system (see 2.5.1), microcredentials can result in an improved quality of their training and thus their competitiveness. However, this depends on the added value that microcredentials can provide for employers in a concrete field and the level of expertise (interview finding). In addition, training centres can play an important role as training consultants for SMEs, guiding them on microcredentials which are the most suitable and relevant for them, given the skills demanded in their sector and the trends of change (interview finding). One current challenge is to expand the system of training for employment in SMEs.

It is likely that training centres outside the education system will continue to offer learning activities as they currently do after the reforms in VET, employment and university systems. One key challenge will probably be to set a common and global standards about non-formal learning experiences provided by the employment system that enable employers to compare and adequately assess their added value for their business needs. Another challenge might be the profitability for private training centres of these short and rapidly changing training courses (interview finding).

For universities, microcredentials provide a chance to innovate and test new content and learning approaches, increase the number of students and increase the visibility of formal education programmes, such as masters, which can serve to attract future students (48). For example, MOOCs currently enable universities to develop new content to better adapt to labour market demands without making

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⁽⁴⁸⁾ Universia (2018), What are microcredentials and what are their advantages for the University? (¿Qué son las micro credenciales y qué ventajas suponen para la Universidad?), https://www.universia.net/es/actualidad/orientacion-academica/queson-micro-credenciales-que-ventajas-suponen-universidad-1161282.html.

the investment of developing a whole new programme (interview finding) (⁴⁹). Moreover, as mentioned above, microcredentials can be used by universities to improve the quality and flexibility of formal education programmes.

Likewise, training centres within the education system (see 2.5.2) will be able, according to the Draft VET Law, to collaborate with universities in the framework of microcredentials. This collaboration might result in exchanges among teachers and students of the two systems or in sharing of facilities.

4.3. Are microcredentials trusted among different stakeholders? What are the main reasons for trust / distrust in microcredentials? What are the conditions for ensuring the trust in microcredentials?

There is limited data on how employers interpret and value alternative credentials, and factors that may impact their perceptions. (EC, 2020). One of these factors is understand that employers do not always what category certificates/qualifications microcredentials represent, which might reduce the value of a microcredential in a recruitment situation (MicroHE Consortium, 2019; interview finding). In this regard, the lack of familiarity with the term 'microcredential' within the private training centres is relevant (interview finding). Surveyed VET providers referred to a variety of training courses they provide as microcredentials, while in fact they are not as such. Also, 72% of them stated that the novelty of the concept and lack of a common definition (56%) are behind the lack of trust in microcredentials.

In this context, the fact that VET, university and employment authorities are in the process of regulating microcredentials, a lack of a shared definition of microcredential may lead to misunderstanding between these stakeholders. Different definitions do indeed respond to different roles of microcredentials in each system; yet, beyond operative differences, a shared and common framework could facilitate understanding and thus increased trust in microcredentials.

The level of detail in the description of the content of microcredential also plays a role, as it enables employers to assess to what extent the skills acquired by workers are useful for them. In this regard, future microcredentials to be offered both by the VET and the university systems will probably be good at this point.

^{(&}lt;sup>49</sup>) El País, 23 June 2020, https://elpais.com/economia/2020/07/23/actualidad/1595495304_025886.html?rel=listapoyo.

Another key factor for ensuring trust in microcredentials is quality assurance, including the programme-based and institution-based accreditation. Again, future microcredentials within the VET and university systems will be trusted by employers as part of the official education system. In the case of future university microcredentials, the trust of employers will differ depending on the specific content of the course and the prestige of each university, similar to graduate diplomas nowadays. Still, all of them will be universities, which guarantee a quality assurance standard. There are around 80 universities in Spain on which 50 are funded by the government and 30 are private universities.

Beyond the future microcredentials within the VET and university systems, the wide range on training providers outside the education system (see 2.5.1) raises questions on how to ensure quality and trust. As mentioned in section 2.5.1, training providers within the employment system need to get authorised or certified, which guarantees quality. Yet, keeping the quality and transparency standards may be challenging in the context of microcredentials. Only one third (33%) of surveyed training providers stated that microcredentials are trusted by employers, although over half of them (54%) think they are trusted by education and training providers and 46% by learners. In their view (56% of surveyed training providers), employers do not recognise microcredentials.

Digital format for microcredentials facilitates storage, sharing and portability, offering advantages to learners, employers and education institutions. There are currently projects to advance in the development of digital format solutions for microcredentials, such as the Europass Digital Credentials Infrastructure (EC, 2020). As mentioned above, both the Ministry for Education and VET and the Ministry for Universities envisage to develop digital credentials for future microcredentials to be offered within both education systems. Currently university diplomas can be consulted through e-government portal (*Carpeta Ciudadana*) (50) and be shared with employers or academic institutions (interview finding).

At present, a small share of surveyed training providers (17%) linked the limited availability of digital solutions for issuing, storing and sharing microcredentials to the reasons for not trusting microcredentials.

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⁽⁵⁰⁾ E-government portal, https://sede.administracion.gob.es/carpeta/clave.htm.

CHAPTER 5. Main findings and conclusions

The relevance of microcredentials in Spain is high, taking into account the high share of low-skilled adults and/or with low employability. Moreover, employers demand more flexibility in training provision as well as better adaptation of training delivered to the needs of a rapidly changing labour market. In this context, three parallel processes to regulate microcredentials are under way in Spain led by the VET, higher education and employment authorities.

These three processes are complementary to each other and rely on different definitions of microcredentials that respond to different roles of microcredentials in each system. Yet, beyond operative differences, a shared and common definition or framework comprising of the three systems involved could facilitate understanding and thus increased trust in microcredentials. It would be recommendable that, while maintaining these differences as necessary, a common concept would be communicated.

While the process related to microcredentials in the formal VET (in and out of the education system) and the process related to microcredentials in higher education are well advanced, the process led by employment authorities to implement microcredentials in non-formal VET training in the labour market is the less developed. Yet, it is of utmost relevance that workers (occupied or unemployed) and employers can rely on an effective training system that responds to their needs. Accumulable, flexible and quality microcredentials can play a role. For such a system to be trusted, it needs to be perfectly coupled with the existing mechanisms to anticipate and detect skills needs (also by companies) and VET providers need to adapt to it. Quality assurance, including programme-based and institution-based, may be a challenge in the context of microcredentials, in particular among the wide range of training providers within the employment system.

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List of interviewees

No.	Name and surname of the interviewee, position	Type of interviewee (stakeholder group)	Country/region /sector (Organisation)	Date of the interview
1	Federico Morán, Director	National (regional) authority	Madrimasd Foundation. Madrid Regional Government (regional QA agency)	13 May 2021
2	Rocío Blanco Gil, Director	Employers' organisation	CECAP	24 May 2021
3	Anthony Tattersall, Vice President	Enterprise, EMEA	Coursera	25 May 2021
4	Mariano Carballo Fernández, Director, Technical Cabinet, General Secretariat for Vocational Training (⁵¹).	Ministry	Ministry of Education and VET	1 June 2021
5	Margarita de Lezcano- Mújica Núñez, Advisory Member, Technical Cabinet, General Secretariat for Universities (⁵²).	Ministry	Ministry of Universities	1 June 2021
6	Manuela Hernán Fernández. Directorate of Planning, Valuation and Evaluation for Training (⁵³).	National authority	Fundae	1 July 2021
7	Maru Menéndez González-Palenzuela, Deputy Director General of Active Labour Market Policies (⁵⁴).	National authority	SEPE (National PES)	16 July 2021

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