

Raising employability for ICT and the digital economy

POLICY DEVELOPMENT

PRACTICAL MEASURE/INITIATIVE

 SPAIN

Timeline

2015 Implementation	2016 Implementation	2017 Implementation
2018 Implementation	2019 Implementation	2020 Implementation
2021 Implementation	2022 Implementation	2023 Implementation
2024 Implementation		

ID number 28192

Description

There are multiple initiatives to raise the skills of young people and workers (employed or unemployed) in ICT and the digital economy. Different public bodies are involved, in some cases in partnership with industry.

Red.es, a public entity for the promotion of the information society, is currently in charge of the following schemes:

Digital professionals youth employment - this scheme is part of the digital agenda for Spain 2013-15, and is jointly funded by the European Social Fund (ESF) 2014-20. It aims to offer training targeted at the digital industry to young unemployed people (registered in the national youth guarantee system), and facilitate their access to jobs in connection to the digital transformation of companies. Training projects must include a commitment to hire a certain percentage of trainees in ICT and the Digital Economy: 33 projects were approved for a total of EUR 19.95 million.

Funding scheme to promote continuing training and improvement of employability in the field of ICT and the digital economy - the call for proposals for this scheme was published in April 2018. It is intended to develop training projects that improve the employability of the employed, unemployed and inactive adults including the most disadvantaged, favouring both access to and greater stability in employment, and career advancement. Its nearly EUR 11 million budget comes from the European Social Fund (ESF) for the 2014-20 programming period (Operational programme for employment, training and education). Both training actions and training and coaching staff are funded.

SEPE, with the support of Fundae, are running the following schemes:

Call for proposals for the training of workers in professional skills related to technological changes and digital transformation - the call was published in May 2018. The social partners, through their joint sectoral commissions (CPS), agreed the training actions that could be funded according to present and future needs of each sector. They have identified up to 226 new training specialities derived from technological and digital evolution, which were not part of the Catalogue of training specialities. This call, with a budget of more than EUR 50 M and 330 projects proposed for approval, finances three types of training action:

acquisition of technological or digital competences, crosscutting to the different productive sectors; acquisition of technological or digital competences specific to a given sector; professional competences in the key sectors for technological development (telecommunication operators, consultancies and engineering companies). The scheme is targeted at employed workers in general. However, in the crosscutting schemes, women, people with disabilities, workers with low qualification levels and those over 45 years of age are prioritised, while in the sectoral schemes, each sector has defined its own priority groups. The following technologies are considered priority areas in this call: broadband communications (hybrid networks, interactive television, telephony 5G, optical fibre); cybersecurity, robotics and management and maintenance of 3D printers; artificial intelligence, virtual reality; drones; automotive with electric motor or autonomous driving; cloud computing; internet of things and home automation; advanced analytics (big data, business intelligence, R language, report analytics, Python language, among others); cognitive computing; location services; electronic administration; advanced design; and development of information systems.

Call for grants for the financing of training schemes - with a budget of EUR 350 million, this call considers training actions aimed at anticipating the qualification needs of the production, with priority for the internationalisation of companies, entrepreneurship, innovation, technological development of production processes, digitalisation, and energy efficiency, among others. Around 25% of the training specialities to be offered are related to digitalisation and technological development.

The Spanish School of Industrial Organisation Foundation (*Escuela de Organización Industrial - EOI*), and its associated foundation, runs Training pathway on digital transformation for employment - this scheme, implemented in partnership with Google, is aimed at improving the employability of young people who have dropped out of school from an early age, and have lost their jobs or have difficulties finding their first job. It also enables young people with high education levels to reskill. The training itinerary starts with a 40 hour MOOC on the Google platform, followed by a mentoring phase. The total budget for this scheme is EUR 1.4 million.

New specialisation courses are being developed in education, in relation to the incorporation of digital technologies into all economic activities, taking into account the industry 4.0 revolution. The need for specific qualifications is being assessed, as well as the impact that the progressive incorporation of these technological processes has on existing degrees. One of the challenges is also to overcome the gender gap in the access to STEM degrees: vocations among girls are being promoted through providing information and female role models in the project Scientix and the website ChicaSTEM, both managed by the National Institute of Education Technologies and Teacher Training (INTEF). The National Institute of Qualifications (INCUAL), technical body responsible for the design and development of occupational standards which serve as the basis for the training offers (VET diplomas and professional certificates), has opened a transversal observatory to gather intelligence on the impact that the industry 4.0 has on professional qualifications, in order to update them and, if necessary, design new ones.

2015 Implementation

2016 Implementation

2017 Implementation

2018 Implementation

2019 Implementation

Schemes managed by Red.es are still running, until 2020.

Schemes managed by SEPE and Fundae:

Call for proposals for the training of workers in professional skills related to technological changes and digital transformation, managed by SEPE and Fundae: funded courses under this scheme ran until the middle of 2020. Finally, nearly 330 projects were approved, targeting around 170 000 participants.

Another call for grants is funding training programmes that target workers for sectoral and cross-sectoral skills. Applications for these grants were submitted at the beginning of 2019, and courses may run until the middle of 2020. Over 700 projects have been approved to cover more than 800 000 participants. There was no data yet regarding their impact on digital skills.

During the reporting period, 210 new training specialities were included in the Catalogue of training specialities, 62 within the IFC sector branch (computing and communications), all related to technological matters such as industrial digitisation, big data, internet; another 23 referred to other industrial sectors.

The State Public Employment Service of Spain (SEPE), the State Foundation for Training in Employment (Fundae) and several large technology companies - Amazon, Cisco, Cloudera, everis, Accenture Foundation, Telefónica Foundation, Google, Huawei, IBM, LPI-Linux Professional Institute, Oracle, and SAP - signed, in autumn 2019, agreements to make an important package of training resources in digital skills, developed by these technological companies, publicly available through SEPE and Fundae web pages, completely free of charge.

Through Fundae's and SEPE's corporate websites, employed and unemployed workers, freelancers and especially SMEs can have access to a great array of courses, with different levels, languages, and durations, engaging in themes such as cybersecurity, the internet of things, programming languages and methodologies, digital marketing, electronic commerce, and cloud computing.

These agreements, enabled by the action framework agreed between the State Public Employment Service (SEPE) and Fundae, open a collaboration space to respond to social and business demands and tackle the requirements that the fast technological transformation is producing. The initiative is in line with work undertaken under the *2019-21 Action plan for youth employment* which includes specific goals to offer training for core skills to unemployed young people and digital skills at basic and higher levels.

INCUAL was developing several occupational standards and qualifications. Although two 'specialisation courses' were approved in 2019, none of them are directly related to digital skills yet, but the following specialisation courses are in process for its approval and publication: Digitisation of industrial maintenance; Cybersecurity in operating technology environments; Cybersecurity in information technology environments; Smart manufacturing.

The Spanish School of Industrial Organisation Foundation (EOI) was still running Training pathway on digital transformation for employment, in collaboration with Google Activate and with the support of the European Social Fund. This scheme, implemented in partnership with Google, is aimed at improving the employability of young people who have dropped out of school from an early age, and have lost their jobs or have difficulties finding their first job. It also enables young people with high education levels to reskill. The training itinerary starts with 40 hours of massive open online courses (MOOCs) followed by 20 hours of tutoring. Accessible on the *Google Activate* (Activate yourself) platform, the MOOCs include topics such as digital consulting, SEO and SEM consulting, big data, artificial intelligence/machine learning, robotics and cybersecurity. The MOOC has reached up to 21 countries in the America. Once the MOOC is completed, participants can choose an expert that will tutor them for their final project. The programme is active in 36 Spanish provinces, including in rural areas where digitalisation represents a great plus for their economic development. The total budget for this scheme is EUR 2.9 million from 2017 to 2021. So far, more than 60 000 students have registered in the MOOC, of which more than 11 000 have already completed their training and have received their joint EOI-Google diploma. In phase two, 450 unemployed young people between 16 and 30 years old are receiving individual mentoring sessions. Gender distribution is 54% women and 46% men. The figures for student integration into the labour market show the success of the scheme, with an employability success of 87.5% for women and 77 for men (2018 data). The scheme is helping to reduce the gender gap in the technology sector. The European Commission included this scheme in its assessment of progress on structural reforms (Country Report Spain 2019).

Schemes run by other bodies: Big tech companies are also carrying out different kind of actions to promote both employment of young people and their acquisition of digital skills. For example, Fundación Telefónica has started the project Madrid42, in line with a similar French experience (École 42) to develop digital skills in an innovative way. Another experience is Together for the employment of the most vulnerable digital solutions. This comprises companies, social organisations and public, in which digital solutions are jointly created, offered free of charge as software as a service (SaaS) from a platform hosted in the cloud resource of one of them, to improve employment opportunities for groups in vulnerable situations. One of these experiences received the VET excellence awards in 2019 during the European skills week.

2020 Implementation

Red.es

Red.es put out to tender a *training and employment guidance service* targeting unemployed workers and another tender for the hiring of unemployed young people; both included the provision of free training courses aimed at the acquisition and improvement of ICT skills, personal skills and employability, in the digital transformation of the economy, as well as guidance. The aim is to support young unemployed people not in education and training within the national youth guarantee system. The courses focus on cybersecurity, big data, full stack web programming, cloud systems, digital marketing and video game programming, 3D design and virtual reality. Each course comprises a minimum 250 teaching hours: 220 hours dedicated to the specific content of the course subject; and 30 hours to skills supporting employability, such as digital skills and professional competences, improving a CV, and making attractive presentations. The budget for both tenders is EUR 36 million, jointly financed by the European Social Fund (ESF) for the 2014-20 programming period, specifically under the Operational programme for youth employment (POEJ) and the Operational programme for employment, training and education (POEFE). More specifically, EUR 11 million (30 months contract) are allocated for training courses for the unemployed, focusing on cybersecurity, big data, cloud systems, full stack web programming, digital marketing, industry 4.0 and IoT. Training is free of charge with a minimum of 250 hours of training, 30 of which must be for an employability module. Another EUR 25 million are allocated for developing training activities in classroom and online mode, for the acquisition and improvement of ICT skills and the provision of a career guidance service.

A funding scheme to promote continuing training and improvement of employability in ICT and the digital economy is being implemented in 2020 and 2021, involving 30 projects and 637 courses to train more than 6 000 people.

The *Digital professionals youth employment* scheme projects finished in 2019; 265 courses were implemented, involving more than 4000 participants, of which 38% were hired.

SEPE and Fundae

Fundae continued in 2020 to manage several calls for subsidies published by SEPE aimed at training employed workers; they complement those corresponding to the 2016 and 2018 financial years, in which digitalisation is considered a priority area, and the specific call for professional skills related to technological changes and digital transformation (ICT call). As part of the actions launched through the ICT call (75% implementation rate by Q1 2021) 127 000 participants were trained (80% for sectoral skills, 15% on transversal skills).

New collaboration agreements were signed in 2020 with technology companies, extending this opportunity to other private and public entities which can also provide their training resources, openly and free of charge, to companies and workers. Around 625 training resources from 28 tech companies and public entities were already available through the *Digitalizate* (Go Digital) web access. This web space received nearly 2 million visits in 1 year.

The Spanish School of Industrial Organisation Foundation (EOI)

In February 2020 and 2021, the third and fourth editions of the EOI-Google project Training pathway in digital transformation for employment were launched. So far, around 65 000 learners have registered in the MOOC, of which 31 235 have already completed their training and have received their joint EOI-Google diploma. 329 out of 554 students enrolled in phase 2 'tutorials' have so far completed their training in different digital areas (big data, robotics, cybersecurity). The project has a wide geographic impact, (80% of the total provinces in Spain) as it is developed in many rural localities facing difficulties in accessing this type of training programme. The gender distribution is 54% women, 46% men. The project was featured in the 2020 Education and training monitor of the European Commission.

The EOI is currently involved in other smaller projects jointly funded by the ESF for the digitalisation of young people, women, and business managers, such as the Digital talent scheme, the Digital talent scheme for long-term unemployed women, the Digital immersion in industry 4.0 scheme for managers of industrial SMEs, and the DigitalXBorder scheme, aimed at CEOs.

The Ministry of Education and Vocational Training (MEFP)

The plan for the modernisation of VET (line 3.2) includes a 30-hour *training module on digitalisation applied to the productive sector*, associated with a unit of competence certifiable and accumulable within the national qualifications framework (the national catalogue of occupational standards, CNCP). The plan is to make it available to 125 000 people annually for 4 years, through calls for subsidies; implementation has started.

The Ministry of Education and Vocational Training (MEFP) published a royal decree granting subsidies to three social organisations (CEOE, CEPYME, UGT) for the delivery of the training programme. These partners have a great capillarity in the productive sector and in the labour market, through their sectoral and/or territorial organisations or other associated training bodies operating in the national territory and different sectors of activity. Subsidising these training activities has been possible thanks to the social dialogue on vocational training established within the Social dialogue roundtable for vocational training bringing together the Ministry of Education and Vocational Training and the social partners. The activities cover dissemination and information activities in the sectors and national territories to reach and train 125 000 workers (a minimum 20% should be women). The first pilot programmes cover a 30-hour training course delivered as virtual tutored training, the syllabus and training content is approved by the ministry and the learning outcomes are certifiable in the CNCP. The target group are employed or self-employed individuals (including workers who have a temporary relationship with the armed forces), selected by the beneficiary specified in the terms of the call. Priority is given to those affected by a temporary employment regulation plan.

In 2020, several IVET specialisation courses focusing on digitalisation were approved (cybersecurity in operating technology environments; cybersecurity in information technology environments; digitalisation of industrial maintenance; smart manufacturing).

Various qualifications related to digitalisation were developed in 2020 or are in the elaboration phase by INCUAL: assembly and maintenance of network equipment and base stations for 5G telephony; administration of databases; installation and maintenance of connected systems devices; deployment, training and monitoring of artificial intelligence tools and platforms for intelligent data processing; management of the installation, deployment and operation of artificial intelligence systems based on machine learning; and design of interfaces, interaction and user experience in digital devices.

In July 2020, the government adopted a new roadmap, the Digital Spain 2025 agenda, to implement the actions of the national recovery and resilience plan, aiming to strengthen the digital skills of workers and citizens as a whole.

2021 Implementation

The acquisition and development of digital skills is one of the key priorities of the national recovery and resilience plan. Green and digital transitions go hand in hand to boost economic recovery and the creation of quality employment, modernise the production model and reinforce the social and territorial structuring of the country, fighting the problem of rural depopulation in Spain.

Component 19: the National digital skills plan (*Plan Nacional de Competencias Digitales*), which is part of the national recovery and resilience plan, specifically addresses this priority, from the digitalisation of school to university, including upskilling and reskilling at work to ensure digital inclusion and progress in the development of basic citizenship skills.

Almost EUR 1 000 million are being distributed among the Autonomous Communities for the digitalisation of the education system, including the distribution of digital devices, the installation of interactive classrooms and teacher training in the use of these technologies. The education ministry was reviewing existing, and developing new, occupational standards. In 2021, new VET specialisation programmes, related to digitalisation and the use of new technologies were approved, such as video game development and virtual reality; 5G network implementation; building information modelling (BIM); AI and big data; hybrid and electric vehicle maintenance; additive manufacturing; composite materials in the aerospace industry).

Additional funding from the 2021 budget was allocated to the Autonomous Communities for the running of upskilling and reskilling programmes linked to strategic sectors, including advanced information technology; automated machine tools and robotics; energy based vehicles and new equipment, as well as for the care of people and for areas at risk of depopulation.

Red.es

Red.es is in charge of two schemes within the national youth guarantee system, framed as the Digital talent initiative (*Talento Digital*): a training and employment guidance service targeting unemployed workers, and a training and employment guidance service targeting unemployed young people not in education and training. Both schemes, apart from providing guidance, include more than 300 free training courses to acquire and improve ICT skills and personal and employability skills in the digital transformation of the economy.

The budget for both tenders was EUR 36 million, jointly financed by the European Social Fund (ESF) for 2014-20, specifically under the Operational programme for youth employment (POEJ) and the Operational programme for employment, training and education (POEFE). The courses focus on cybersecurity, big data, full stack web programming, cloud systems, digital marketing, industry 4.0 and IoT, video game programming, 3D design and virtual reality. Each course comprises a minimum of 250 teaching hours: 220 hours dedicated to the specific content of the course subject and 30 hours to skills supporting employability, such as digital skills and professional competences, improving a CV and making presentations. The programme also offers 12 hours for employment guidance and includes a commitment to hiring a certain percentage of unemployed people in ICT and the digital economy. Both tenders of training and employment guidance services were awarded, and promotional campaigns were started to promote the first training courses for the target learners. The implementation period is 30 months.

Red.es' initiative to promote lifelong learning and improve employability in ICT and the digital economy, launched in April 2018, ended this year, having comprised 27 projects and included 14 000 learners in more than 500 courses.

SEPE/Fundae

The long duration of the COVID-19 pandemic, together with other circumstances, affected the capacity of training providers to fulfil their commitments on the provision of subsidised training within the scope of the vocational training system for employment. The Regulation was, therefore, amended to allow extending the deadlines for the execution of the subsidised activity because of the extraordinary and

justified circumstances (Order TES/26/2022).

Within the framework of component 19 of the national recovery and resilience plan, a new call for State-wide subsidies aimed at acquiring and improving professional skills related to technological changes and digital transformation, aimed primarily at the employed, was published in April by SEPE in collaboration with Fundae. The overall budget is EUR 50 million, and its actions can be carried out until March 2023, although this period may be extended if exceptional circumstances (like the COVID-19 pandemic) make it necessary.

The training actions are intended to meet training needs of a transversal nature for all productive sectors to acquire basic, intermediate or advanced technological or digital skills, in face-to-face, e-learning and mixed (face-to-face and e-learning) delivery modalities. Besides employed workers, unemployed and public sector workers can participate up to a limit. The unemployed may benefit from grants and subsidies to facilitate their access.

This call for proposals follows the line initiated by a similar call in 2018, which is 88% complete (with a new deadline set for March 2022), having so far reached 137 000 participants, more than 80% of which correspond to sectoral programmes, around 15% to cross-cutting programmes and 5% to programmes in the core sectors defined in the call.

In March 2021, the State Public Employment Service (SEPE), with Fundae, launched a training programme (through public subsidies) for the tourism industry, within the framework of the national recovery and resilience plan (component 23), with a total budget of EUR 40 million and which will continue until 2022.

Designed to finance upskilling and reskilling training for people employed in the tourism sector (the hotel and catering industry, travel agencies, car rental, road passenger transport, air transport, manufacturers of cooked products for home sale and gambling games of chance), the training programmes (specialities) address the needs identified in State sectoral collective bargaining, through the joint sectoral commissions in each area. The courses are included in SEPE's national Catalogue of training specialities. Among the specialities identified by the joint commissions, around 10% are related to the sector's digitalisation, such as big data, cybersecurity, use and management of GPS, digital tachograph or online marketing.

These programmes target employees in the tourism sector and, up to a limit, unemployed workers, who may receive travel, accommodation and food allowances. Workers in temporary lay-offs (*Expediente de Regulación Temporal de Empleo -ERTE*) and targeted groups (the low qualified and women) signalled by the corresponding joint sectoral commissions have priority in receiving training.

Implementation of the 2018 call for grants addressing workers' skills needs continued, with an implementation level of 87.8% and over 700 000 participants; however, data on the types of skills was not available yet

For the *Digitalízate* (Go digital) programme, a total of 18 new agreements were signed in 2021. A total of 46 private and public entities, including leading worldwide tech businesses, shared their training resources openly and free of charge. Workers and SMEs had free access to over 1 050 resources and the web page has had nearly 4 million visits since its creation in December 2019.

The Spanish School of Industrial Organisation Foundation (EOI)

The fourth edition of the EOI-Google project: *Training itinerary in digital transformation for employment*, came to an end. Over 33 300 participants completed their training and received their joint EOI-Google diploma. The fifth edition is continuing.

The EOI is currently involved in another similar project with CISCO, targeting young and long-term unemployed people, called the Digital talent programme (*Programa de Talento Digital*). It is made up of three phases, which participants must complete sequentially. The first phase consists of 15 hours of online cybersecurity training.

Participants receive individualised face-to-face and online tutorials in the second phase (around 40 hours), including tech, digital and employability skills (cybersecurity, big data, web and mobile development, artificial intelligence/machine learning, internet of things/Industry 4.0, robotics, and digital marketing). Students with the best evaluations in this phase will go on to the third and final phase, where they take a 60 hour training course to acquire the Cisco certification. The objective is to promote the training of young people and long-term unemployed workers and support their access to the new emerging labour market, based on technology and digital skills, through upskilling and reskilling their ICT skills. The programme is endowed with EUR 600 000 and aims to reach 300 people.

The Digital immersion in industry 4.0 scheme targeted industrial managers in SMEs in 2021. It addressed the automotive components sector. The scheme offered an immersion in disruptive technologies together with success stories in the industry. Its sectoral approach and the participation of the main federations of each industrial branch allowed sharing of experiences of innovation and of adaptation to the current context.

The DigitalXBorder scheme aimed at CEOs has already held twenty-five editions. Around 250 CEOs or executives have been trained (in virtual mode), and three programmes are scheduled for 2022 for executives in three different cities.

As the national reference centre, EOI was involved in other high impact projects in 2021, such as the specific training for 540 VET teachers in cybersecurity. Thanks to a collaboration agreement with the Ministry of Defence, EOI developed a specific 250 hour training programme (for security operations centre (SOC) analysts) to improve the employability of soldiers who finish their service and enter civilian life.

2022 Implementation

The Ministry of Education and Vocational Training (MEFP)

At the beginning of 2022, the Official State Gazette published the criteria and territorial distribution of the funds managed by the Autonomous Communities to develop actions to retrain and improve the qualifications of the active population in the budget for the financial year 2021. This is a measure included in the national recovery plan, component 20. 'Strategic promotion of vocational training'. The training is linked to occupational standards in strategic sectors, to the care of people and to areas at risk of depopulation, for an amount of nearly EUR 87 million.

A network of digital training centres, fostered by the education ministry, was set up to ensure that even those in rural areas have also access to digital and ICT skills training. The network had an initial budget of EUR 58.7 million for 1 047 classrooms, distributed to the Autonomous Communities.

At the end of the year, the Royal Decree that regulates direct grants to social partners for the digitisation of the different productive sectors (CEOE, CEPYME and UGT) was published. The aim is to train workers with intermediate levels of competence and responsibility in the different productive sectors in digitisation, push digitisation for economic and social growth, and create and maintain a knowledge-based workforce.

This project called 'Digital modular offer for employed persons associated with units of competence of the national catalogue of occupational standards' is framed in component 20, investment 01 and project 02 of the national recovery plan. The action was aimed at 125 000 workers from any field or sector and without the requirement of belonging or affiliation to any of the beneficiary organisations.

Both these actions are included in Spain's NIP.

The digital vocational training plan (*FP Digital*), which aims to digitise VET programmes and introduce digital skills into the curriculum of different qualifications, is one of the actions included in Spain's NIP and also in the national digital competence plan.

Coordinated between the Ministries of Education and Vocational Training, Universities,

and Industry, Commerce and Tourism, the plan includes:

- (a) design of new digital qualifications required by the job offer;
- (b) teacher training in applied digitisation, in collaboration with the Ministry of Economic Affairs and Digital Transformation;
- (c) inclusion of an applied digitisation module in digital training in the curriculum of both intermediate and higher qualifications of the catalogue of vocational training;
- (d) promotion of integrated and national reference centres in the digital sector;
- (e) innovation projects between centres and companies in the digital field;
- (f) training of trainers for specialisation programmes with the greatest demand for the industrial sector (between the Ministry of Industry, Commerce and Tourism, through the EOI as the national reference centre and the Ministry of Education and Vocational Training).

Digital competence is essential for society to be better educated, more highly skilled, work fairer, and more modern. The education ministry implemented this digitalisation through the plan for the digitalisation and digital competences of the education system (*#DigEdu Plan*) included in Spain's NIP.

This plan includes 4 lines of action aimed at schools and members of the school community:

Line 1. Development of digital competence in education

This line includes developing pupils' digital competence through the curriculum, training and certifying teachers' digital competence based on the Spanish framework of reference for teachers' digital competence, and transforming Spanish schools into digitally competent organisations through the design and implementation of school digital plans.

Line 2. School digitalisation.

Actions include improving the availability of digital means for teaching and learning, further reducing the digital gap among students, and improving the digital endowment of classrooms in schools and the technical training of teachers. This line has been boosted by the Recovery and Resilience Mechanism with the acquisition of more than 300,000 portable devices to reduce the digital gap for students, the installation, updating and maintenance of interactive digital systems (IDS) in more than 240,000 classrooms in schools, and the technical training of teachers in the operation of the equipment received by schools through regional cooperation programmes.

Line 3. Creation of educational resources in digital format

This line includes the website Educational Resources for Online Learning (REAL), which offers teachers, families and students different types of open educational resources (OER) available for online use as well as resources for the safe use of digital media AseguraTIC.

Line 4. Advanced digital methodologies and competences

The most relevant actions in this line revolve around the 'Aula del Futuro' project, the school of computational thinking and artificial intelligence, the school programme code 4.0 aimed at teaching students to become literate in programming and robotics, and the European project for school collaboration eTwinning, with more than 80 000 registered Spanish teachers and 4 000 Spanish school projects developed each school year.

Red.es

During 2022, Red.es continued the initiatives within the national youth guarantee system, framed as the Digital talent initiative (Talento Digital), the training and employment guidance service targeting unemployed workers, and the training and employment guidance service targeting unemployed young people not in education and training. For the training actions and guidance service for the unemployed so far there were 68 courses (completed: 54 / in progress: 14) and 21 more courses are

planned until April 2023. For the training actions for youth employment so far there are 118 courses of which 80 are complete and 38 are in progress. 54 courses more are planned until April 2023.

SEPE/Fundae

Training activities from different calls for proposals continued during 2022.

The training programme for the tourism industry, launched by SEPE with Fundae in March 2021 within the framework of the national recovery and resilience plan (component 23), continued in 2022 with a 72% implementation level and 85 000 participants trained during 2022.

SEPE and Fundae's call to improve technological and digital skills launched in April 2021 within the framework of component 19 of the national recovery and resilience plan, had a 100% implementation level with more than 90 000 participants in total (75 000 in 2022), of which about 40% received training on basic digital or technological skills.

The 2018 call for grants addressing workers' general skills needs continued, with 90% implementation level and over 700 000 participants in total, of which 44 000 were trained during 2022; data on the types of skills is not yet available.

A call for the concession of public subsidies for the execution of state-wide training programmes, aimed primarily at employed workers of the tourism sector was published on the 29th of December 2022. This call of the State public employment service was approved within the framework of the recovery and resilience plan. Its aim is the acquisition and improvement of professional skills of workers from the tourism sector for their adaptation to changes in the productive system and the possibilities of professional promotion and personal development of workers while responding to the impact of the crisis triggered by the COVID-19 pandemic. This call contributes to the fulfilment of one of the national recovery plan's objectives which states that at least 825 000 people have completed training programmes in order to acquire skills for digital, ecological and productive transformation.

The *Digitalizate* (Go digital) programme has continued its progress: a total of 14 new agreements with different institutions were signed in 2022. At the beginning of 2023 a total of 57 private and public entities, including leading worldwide tech businesses, openly shared their training resources in digital skills - and other kinds of skills too since 2021 - free of charge on Fundae and SEPE's webpages. Workers and SMEs have free access to over 1 550 resources, and the web page has had more than 5 million visits since its creation in December 2019.

Seeing the success of this initiative, the project went a step forward and the portal *Digitalizate Plus* was launched. *Digitalizate Plus*, created thanks to the funds from the Recovery and Resilience Facility, is a training platform where anybody can access all the training Fundae offers through the different calls for proposals published every year, and the training contents from *Digitalizate*.

The platform also includes new services and applications to guide people in choosing what training might be more interesting for them. It includes a user registry, and information and tools for specific groups.

Within the framework of the national recovery plan, component 23 'New public policies for a dynamic, resilient and inclusive', SEPE is testing a new way of financing (through microcredits) digital training highly demanded by companies and productive sectors. The purpose of the SEPE's microcredit experimental pilot project is to develop an atlas of credentials that includes digital training that is highly demanded by the productive world and offers good job opportunities.

This project foresees using a counterfactual methodology through experimental and control groups to verify the labour market insertion entry achieved after the training. Catalonia and Madrid are the Autonomous Communities to carry out the pilot, focussing on training areas identified as priorities and with recruitment needs. Each of

these regions is to receive EUR 2 million to start these actions. The plan aim is to give autonomy and flexibility in the choice of training, to test the usefulness and agility of offering these microcredits to people who need training without having to wait for specific calls to be published and to identify the level of demand and effectiveness of certain training or accreditations.

The evaluation of these projects as new initiatives seeks to make it possible to compare their respective results so that, eventually, they can be extrapolated to the whole of the National Employment System, and contribute to confirming the regulation and practical application of the Microcredit project of component 23 of the national recovery plan.

Besides, within the framework of the national recovery plan, SEPE is carrying out a project for rural women's digital literacy, which aims to mitigate the digital divide and the gender gap and has so far enabled 8 000 women in rural areas to develop basic skills in line with the European digital competence framework for citizenship, DigComp.

The Spanish School of Industrial Organisation Foundation (EOI)

The Fifth edition of the EOI-Google project: *Training itinerary in digital transformation for employment*, (included in Youth Guarantee) came to an end. 50 700 participants completed their training and received their joint EOI-Google diploma. The sixth edition is continuing.

The European Commission selected three participants from this programme to show the achievements of the "European Pillar of Social Rights and its impact on the lives of young people across the EU. The video is focused on the Pillar's principle 'active support to employment'.

The second and third editions of the Digital talent programme (*Programa de Talento Digital*) project with CISCO is ongoing. It is made up of three phases, which participants must complete sequentially. Students with the best evaluations in the second phase, go on to the third and final phase, where they take a 60-hour training course to acquire the Cisco certification. The objective is to promote the training of young people and long-term unemployed workers and support their access to the new emerging labour market, based on technology and digital skills, through upskilling and reskilling their ICT skills. The programme is endowed with EUR 600 000 and aims to reach 300 people.

EOI has also been running training programmes for young people, included in the Youth Guarantee scheme, to adapt their knowledge to the needs of the labour market, breaking the existing gap between initial training and the real market needs. The training topics have been developed based on the strategic objectives for improving the competitiveness and sustainability of the Spanish economy in the next decade. Budget EUR 500 000, 12 nationwide programmes and 215 students.

DigitalxBorder. During 2022, 3 editions of DigitalxBorder were carried out and the first phase of this programme, which involved training 900 CEOs between 2018 and 2022, was closed but the initiative will continue in 2023.

The Digital Generation (Generación Digital) initiative, led by the secretary of state for digitisation and artificial intelligence (SEDIA) of the ministry of economic affairs and digital transformation, in collaboration with EOI, is part of component 19 of the national recovery plan, national digital capacities plan, specifically within the programme for the digital transformation of SMEs and training in digital skills for SMEs.

The objective of this initiative is to offer a training and mentoring programme to people from the management teams of SMEs and their workers, as well as unemployed young people who want to prepare themselves to contribute to the digital transformation of those companies.

The call to select the training providers of programmes designed by EOI-SEDIA, throughout the national territory was launched in November 2022. Training will start at the end of April 2023.

As the National Reference Centre, EOI has made significant contributions to the development of various important initiatives in the year 2022. To enhance the skills of 500 VET teachers, EOI provided specialised training in the fields of cybersecurity, IoT, and AI & Big Data. Additionally, the centre developed training manuals to support this specialised training. In collaboration with the Ministry of Defence, the EOI designed a 250-hour training programme for security operations centre (SOC) analysts to help improve the employment opportunities of soldiers transitioning to civilian life.

2023 Implementation

The publication of Royal Decree 659/2023, of 18 July, which developed the organisation of the Spanish VET system by the education ministry plays a pivotal role in advancing ICT and the digital economy.

It introduced mandatory 30-h modules on digitalisation in intermediate and higher VET programmes, called 'Digitalisation applied to the productive system'. These modules focus on the practical application of digital tools across industries and are designed to ensure that students are not just familiar with technology but can apply it in real-world scenarios. They will be available from the academic year 2024/25.

The first call for aid for digital training centres aimed at local entities was resolved in 2023 and granted EUR 3.5 million, part of component 19 of the national recovery and resilience plan, for establishing 146 classrooms in municipal environments.

Red.es

Due to the success of DigitalxBorder, a new edition of this programme was launched in 2023, with the aim of developing 10 editions in regions in transition (those regions whose GDP per capita falls between 75 and 90 percent of the EU average) and working with 250 executives of these companies in the first half of the year. During the month of January the first of these editions began, in the Region of Murcia. More continued in February.

2024 Implementation

The education ministry collaborated with the association representing the digital industry sector in Spain (AMETIC) on various initiatives related to the development of digital skills and vocational training in advanced technologies. One of these initiatives was the granting of the Digital Skills Awards Spain, organised by AMETIC, to recognise outstanding projects in the development of digital skills.

Royal Decree 658/2024, of 9 July, amending Royal Decree 659/2023, of 18 July, included on its Annex IV the modular structure of the intermediate and higher VET digitalisation modules.

In 2024, two new specialisation courses were created in collaboration with industry experts. These courses are linked to digital content creation (410 hours) and the positioning of websites and social media management (710 hours), both belonging to the vocational sector branch of Commerce and Marketing. Both training programmes are intended for individuals holding a Higher VET diploma or, alternatively, those who can demonstrate knowledge that ensures their competence to successfully undertake these courses.

The training action 'Digital modular offer for employed persons associated with units of competence of the national catalogue of occupational standards', framed in component 20, investment 01 and project 02 of the national recovery plan, enabled trained 53 528 individuals before the end of 2024, which have also accredited their digital competences.

The 2024 call for Digital Training Centres aimed to create 365 more classrooms to reach 1 558 in the network of Digital Training Centres. Funding was expected to benefit over 55 500 individuals over the age of 55 with a low level of education by providing them with essential digital skills. These centres offer individuals training

opportunities regardless of residence, enabling them to conduct secure online communications and transactions using their electronic devices. Funding also supported municipalities in providing physical spaces for training sessions to ensure continuous up-skilling and re-skilling, and mentors and trainers.

Bodies responsible

- Ministry of Education and Vocational Training (until 2023)
- Ministry of Education, Vocational Training and Sports
- National Institute of Qualifications (INCUAL)
- National Institute of Qualifications (INCUAL)
- Red.es
- The Spanish School of Industrial Organisation Foundation (EOI)
- State Public Employment Service (SEPE)
- State Foundation for Training in Employment (Fundae) until 2022

Target group

Learners

Young people (15-29 years old)

Learners with disabilities

Adult learners

Unemployed and jobseekers

Persons in employment, including those at risk of unemployment

Low-skilled/qualified persons

Learners from other groups at risk of exclusion (minorities, people with fewer opportunities due to geographical location or social-economic disadvantaged position)

Education professionals

Teachers

Trainers

Guidance practitioners

Entities providing VET

Companies

VET providers (all kinds)

Thematic categories

Governance of VET and lifelong learning

Optimising VET funding

Engaging VET stakeholders and strengthening partnerships in VET

Modernising VET infrastructure

Modernising infrastructure for vocational training

Improving digital infrastructure of VET provision

Modernising VET offer and delivery

Modernising VET standards, curricula, programmes and training courses

Acquiring key competences

Reinforcing work-based learning, including apprenticeships

Transparency and portability of VET skills and qualifications

Developing and applying qualifications smaller/shorter than full

Teachers, trainers and school leaders competences

Systematic approaches to and opportunities for initial and continuous professional development of school leaders, teachers and trainers

Supporting lifelong learning culture and increasing participation

Financial and non-financial incentives to learners, providers and companies

Providing for individuals' re- and upskilling needs

Lifelong guidance

Ensuring equal opportunities and inclusiveness in education and training

European and international dimensions of VET

International qualifications

European priorities in VET

VET Recommendation

VET agile in adapting to labour market challenges

Flexibility and progression opportunities at the core of VET

VET as a driver for innovation and growth preparing for digital and green transitions and occupations in high demand

VET as an attractive choice based on modern and digitalised provision of training and skills

VET promoting equality of opportunities

VET underpinned by a culture of quality assurance

Osnabrück Declaration

Resilience and excellence through quality, inclusive and flexible VET

Establishing a new lifelong learning culture - relevance of continuing VET and digitalisation

Subsystem

IVET CVET

Further reading

[Spain: Promotion of training in digital skills for workers](#)

[Plan for the modernisation of VET \[Plan de modernización de la Formación Profesional\]](#)

[Fundae's Digitalízate \(Go digital\)](#)

[National digital competence plan \[Plan Nacional de Competencias Digitales\]](#)

[Digital Spain 2025 plan \[Plan España Digital 2025\]](#)

[The national recovery and resilience plan \(summary in English\)](#)

[Plan for the Digitalisation and Digital Competences of the Education System \(#DigEdu Plan\) \[Plan de Digitalización y Competencias Digitales del Sistema Educativo \(Plan #DigEdu\)\]](#)

[Call for public subsidies for the execution of state-wide training programmes, aimed primarily at employed workers of the Tourism sector](#)

[Royal Decree 978/2022 of November 22, which regulates the direct granting of subsidies for the project "Training financing \(microcredits\)" \[Real Decreto 978/2022 de 22 de noviembre por el que se regula la concesión directa de subvenciones del proyecto "Fi](#)

[Participants in Youth Guarantee's Digital Transformation Programme - Spain \[Participantes en el Programa de Transformación Digital de Garantía Juvenil - España\]](#)

[Government launches the first call for the "Digital SME Generation" initiative to promote training for digital transformation for SMEs \[El Gobierno lanza la primera convocatoria de la iniciativa "Generación Digital Pymes" para impulsar la transformación d](#)

[Digitalizate Plus portal](#)

[Organic Act 3/2022, of 31 March, on the organisation and integration of Vocational Training \[Ley Orgánica 3/2022, de 31 de marzo, de ordenación e integración de la Formación Profesional\]](#)

[Royal Decree 659/2023, of July 18, which develops the organisation of the Vocational Training System \[Real Decreto 659/2023, de 18 de julio, por el que se desarrolla la ordenación del Sistema de Formación Profesional\]](#)

[Modular structure of the intermediate and higher vocational training programmes](#)

[Digital Skills Awards Spain, organized by AMETIC](#)

[Creation of 146 New Digital Skills Training Centres](#)

[Micro-credentials](#)

[Network of Digital Skills Training Centres - 2nd Call](#)

Related policy developments

2024 Implementation

Online teaching material

In education authority VET, the education community can find and create structured teaching material ready to be downloaded and used by teachers and learners in Procomún, the Repository of open educational resources (OER) of the ministry, operated by the National Institute for Education Technolog

Type of development


Practical
measure/Initiative

Subsystem

IVET

**2024 Implementation****VET teacher training, upskilling and mobility**

In December 2018, the Council of ministers approved EUR 8.6 million (three times the previous budget), jointly financed by the European Social Fund, for VET teacher training, upskilling and mobility.

 SPAIN

Type of development


Practical
measure/Initiative

Subsystem

IVET

**2022 Completed****School of computational thinking and AI for teachers**

The School of Computational Thinking was set up in the academic year 2018/19 to train teachers to develop programming and robotics in their classrooms.

 SPAIN

Type of development

Practical
measure/Initiative

Subsystem

IVET

**2024 Implementation****Teacher training through digital environment**

The National Institute of Education Technologies and Teacher Training (INTEF) is also responsible for the integration of ICT in non-university education.

 SPAIN

Type of development

Practical
measure/Initiative

Subsystem

2024 Implementation**Digital competence framework for teachers**

The Ministry of Education and Vocational Training, through the National Institute of Educational Technologies and Teacher Training and the Autonomous Communities, elaborated, in 2021, a new reference framework for digital competence in teaching through a commission dependent on the Working Group

 SPAIN**Type of development**

Practical
measure/Initiative

Subsystem

IVET

2020 Completed**Subsidised training for employment supporting the acquisition of key competences**

Subsidised training for employment supports the acquisition of key competences, especially for those who left school without a secondary education certificate, so they can access professional certificate programmes at levels 2 and 3.

 SPAIN**Type of development**

Practical
measure/Initiative

Subsystem

CVET

2024 Implementation**Curricula update supporting key competences**

A 2015 Ministerial Decree ECD/65/2015 provides for the revision and update of key competences in curricula. The Decree describes the relationship between competences, content and evaluation criteria for primary, compulsory and secondary education.

 SPAIN**Type of development**

Regulation/Legislation


Subsystem

IVET

2021 Completed

Action plan for youth employment

The Action plan for youth employment (2019-21) includes initiatives in relation to vocational training aimed at enabling young people under 30 years of age to acquire competences or professional experience, upgrade their qualifications and increase their employability.

 SPAIN

Type of development

Strategy/Action
plan


Subsystem

CVET

2021 Completed

Triennial plan for preventing and reducing long-term unemployment

The Reincorpora-T plan 2019-2021, approved in April, aimed at the long-term unemployed, is one of the measures implemented to contribute to the development of a new, more inclusive production model and is committed to intelligent, sustainable and inclusive growth as set out in the Europe 2020 Str

 SPAIN

Type of development

Practical
measure/Initiative

Subsystem

CVET

2024 Implementation

Strategic boost to VET

The new government, in power since June 2018, reorganised the administration. The change of name in the education administration state, now the Education and Vocational Training ministry (previously Education, Culture and Sports), reflects the new strategy to promote VET.

 SPAIN

Type of development


Strategy/Action
plan

Subsystem

2024 Implementation

Promotional actions to support WBL

The education ministry has contributed to promote work-based learning by supporting VET skills competitions at national (Spainskills), European (EuroSkills) and international levels (WorldSkills).

 SPAIN

Type of development

Practical
measure/Initiative

Subsystem

IVET CVET

“ ... ” **Cite as**

Cedefop, & ReferNet. (2025). Raising employability for ICT and the digital economy: Spain. In Cedefop, & ReferNet. (2025). *Timeline of VET policies in Europe* (2024 update) [Online tool].

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