

# Chapter 2

## Building Up a VET System: Formal VET



Patricia Olmos-Rueda and Óscar Mas-Torelló

**Abstract** Vocational education and training (VET) has been influenced by the changing social context and labour market. VET has been forced to adapt to new labour scenarios and to seek how to develop needed competencies for working in professional settings and preparing for this changing labour market. According to these social and labour changes and its new requirements, in Spain, since the middle of the twentieth century, there have been changes and reforms of formal VET with the main purpose of improving its quality, social recognition, accessibility, etc. This chapter provides an overview of Spanish formal VET system and its evolution until nowadays through a complete description of the laws that have influenced VET, listing its characteristics, objectives, structure, levels and curriculum or programmes and focusing on the need of working on a collaborative model among all social agents on VET for its success transformation and development.

**Keywords** VET evolution · VET structure · VET characteristics · Social agents · Training in workplace

### 2.1 Introduction<sup>1</sup>

Adapted from *Ministerio de Educación, Cultura y Deporte (MECD)*<sup>2</sup> and Cedefop (2014, adapted from European Training Foundation, 1997), VET is understood as the set of training actions that aim to develop needed competencies

---

<sup>1</sup>The information in this section was obtained partially from the website of the Ministry of Education, Culture and Sport of the Government of Spain. *Todo FP*. Retrieved 2017 and 2018 from <http://www.todofp.es>

<sup>2</sup>Ministry of Education, Culture and Sport of the Government of Spain. *LOMCE. Formación Profesional*. Retrieved 2017 and 2018 from <https://www.mecd.gob.es/educacion/mc/lomce/fp.html>

---

P. Olmos-Rueda (✉) · Ó. Mas-Torelló  
Applied Pedagogy Department, Faculty of Education Sciences, Autonomous University of Barcelona, Bellaterra (Cerdanyola Valles), Spain  
e-mail: [patricia.olmos@uab.cat](mailto:patricia.olmos@uab.cat); [oscar.mas@uab.cat](mailto:oscar.mas@uab.cat)

for working in professional settings and preparing themselves for the changing labour market, enabling their steps through regulated and non-regulated education system and their personal development.

In Spain, since the middle of the twentieth century, there have been various partial changes and reforms of VET (curriculum and/or organization), with the main purpose of improving the quality.

These changes have often been conditioned and/or supported by the European Union (EU), which Spain joined in 1986. Each state member is responsible of its education policies (including VET) although some current situations and future challenges set off the need of agree different aspects among all of them. According to Paredes (2014), the *Ley General de Educación* (General Education Act - LGE) of 1970 already featured a certain proximity to European approaches, especially regarding:

- “Integration of VET in the education system” (p. 7).
- Time spent on the curriculum is similar for both technical knowledge and general knowledge.
- Incorporation of the possibility of doing external in-company work placements (voluntary basis).

In 1990, LOGSE (General Organic Law of the Educational System) was the first educational law related to VET within the framework of a Spain now a member of the EU. After, the *Ley Orgánica de las Cualificaciones y de la Formación Profesional* (Qualifications and Vocational Training Act) was passed in 2002 as a specific VET law. In parallel, the Copenhagen Process was approved to raise, among other aspects, the quality of VET in Europe. There would later be further recommendations, declarations and announcements (European Qualifications Framework [EQF] 2008; European Quality Assurance Reference Framework for Vocational Education and Training [EQARF – EQAVET] 2009; European Credit System for Vocational Education and Training [ECVET] 2009; Bruges Communiqué 2010; European Parliament resolution on European cooperation in vocational education and training to support the Europe 2020 strategy 2011; Riga Conclusions 2015; among others), in order to improve the overall quality of existing European vocational training systems.<sup>3</sup>

## 2.2 First Steps and Evolution of Spanish VET

The beginning of Spanish VET goes back to 1955 when the industrial sector emerged and the first VET law (The Industrial VET law) was promulgated as a consequence of new labour and productive requirements. During this period time, VET was characterized by the close relation between factory and VET within a

---

<sup>3</sup> Based mainly on information from the website of the Ministry of Education, Culture and Sport of the Government of Spain. *Todo FP*. Retrieved 2017 and 2018 from <http://www.todofp.es>

framework of VET apprenticeships. However, it is not until 1970 that Spanish VET became an education option integrated in the educational system.

In 1970 an educational reform came up with the LGE (General Educational Law) as a consequence of demands of an updated educational, social, political and labour Spanish context. VET was understood as an educational chance for students and not a parallel and marginal pathway. The article 40.1 of the LGE established that “VET has to recruit students for developing their elected profession and continuing their comprehensive training and that VET has to be closely linked to the workplace”.

Within the framework of LGE, the VET system (regulated by the *Decreto 995/1974, de 14 de marzo, sobre Ordenación de la Formación Profesional*) was involved in the Educational System and it articulated in levels. The first one (FPI) was the vocational pathway for the students – the main option for all those who did not finish their compulsory studies. It aimed to provide a minimum knowledge base to the performance of a job; hence it had a compensatory feature. The second one (FPPII) aimed to specialize and improve professional training in order to gain access to a workplace. Likewise, within the LGE framework, it is worth noting this improved VET system considered the students’ experience in the workplace on a trial basis. It could be understood like the first step to link companies and VET even though it was very strongly academic education.

This was the first attempt to improve Spanish VET, but it is worth highlighting that if something has characterized Spanish VET since its origin, it has been its low social value and recognition – VET has been characterized for being a parallel and marginalized educational pathway characterized by its lack of coordination with the workplace and work agents and also by its lack of capacity for answering to real work demands – and LGE did not change this VET social perception. According to Menéndez (2013), LGE perpetuated the conception of VET studies of second category (specially the first level FPI). In other words, VET was considered the educational alternative for school leavers without option for accessing the academic pathway (baccalaureate as the only entry gate into university). Neither society nor educational agents and companies conceived VET as a worthy option. For example, at the end of compulsory studies, successful students were guided for taking baccalaureate studies, the direct way for accessing university. Likewise, companies were not enough involved with VET schools.

This VET model was in force until 1990 when a new educational law came up (LOGSE, General Organic Law of the Educational System) as a consequence of the access of Spain to European Union and in accordance with the new social, educational, economic and political requirements that this European framework implied to the Spanish context. Within this new framework, the 1970s VET model is obsolete and a change is needed. In this regard, LOGSE could be considered one of the most relevant VET reforms. In terms of authors as Marhuenda-Fluixá et al. (2015), Menéndez (2013) and Rial and Rego (2011), LOGSE is the beginning of the modernization of the Spanish VET system and of a new regulated VET model that recognizes VET as a worthy educational itinerary at the end of compulsory school.

As we can see later in this chapter, this VET model was characterized by a modular structure that aimed to answer European new requirements and be closely linked

to labour demands and contexts. To this end, VET system was organized according to the European qualification VET Levels, specifically Levels 2 and 3 – CFGM (formative cycle of medium level) and CFGS (formative cycle of higher level), respectively, organized according to professional families – and training in the workplace (FCT<sup>4</sup>) became a compulsory VET component, one of the most relevant component because it required coordination between both VET school and work contexts. Likewise, an alternative itinerary for early school leavers – all those who do not have the Certificate of Compulsory Secondary Education – was taken into account in terms of basic VET programmes named Social Guarantee Schemes (PGS), related to Level 1 VET; as we are going to explain later, these programmes have evolved significantly in the last years. All these elements were a strength of the VET model in LOGSE as well as the mandatory of achieving Compulsory Secondary Education Certificate to access to VET system – VET stopped being a parallel and marginalized educational pathway and began to be a worthy option.

Although this 1990s model meant an important change for Spanish VET, it embedded some weaknesses such as the lack of bridges among the academic itineraries, the breaking between both 2 and 3 VET Levels, the lack of a real commitment and coordination between companies and training centres or the development of basic skills or key competencies, to name the main ones. These weaknesses led towards the necessity of rethinking VET and the relations among education, VET and work (Casal et al. 2003; Menéndez 2013).

In order to answer the above needs, two national plans of VET were designed between 1993 and 2002. The first one (PNFP) was from 1993 to 1998 and the second one (NPNFP) was from 1988 to 2002, when another reform came up with the *Ley Orgánica 5/2002, de 19 de junio, de las Cualificaciones y de la Formación Profesional* (LOCFP, Organic law of qualification and VET). It aimed to integrate all formal and non-formal VET supply as well as CVET like a unique system in order to consolidate VET as a strategic axis for social and labour inclusion, providing people with marketed and non-marketed benefits that support a well-functioning productive system, the promotion and guarantee of equal opportunities to access the job market as well as active social participation (MECD 2011; Olmos-Rueda 2017; Rial and Rego 2011). LOCFP worked for adapting VET to the European context and its requirements, and bringing VET and the Spanish job market much closer together.

Working in line with this new scenario, in 2006 a new educational law (LOE; Organic law of Education) was promulgated. This new legal framework was focused on working towards the qualification improvement of people at risk of social and labour exclusion emphasizing VET as a training model based on competencies, and making VET more flexible and adaptable to make it accessible for all those people that want to improve their labour competencies and work qualification. Within the framework of LOE, the concept of lifelong learning emerges as a key strategy for answering the social and labour requirements of the changing society (Pérez and Rahona 2009), as well as the efforts for improving the education of young people at

---

<sup>4</sup>Editor's note: See Chap. 7 for further information on the work placements and the developments of FCT along the past 25 years.

risk of social, labour and educational exclusion. To this end, Social Guarantee Schemes (PGS) were replaced by the Initial Vocational Qualification Programmes (PCPI) addressed to the same kind of young people without Certificate of Compulsory Secondary Education but with relevant differences in its curriculum organization and structure in order to contribute not only to the improvement of the education of young people at risk of social, labour and educational exclusion equipping them with a Level 1 VET, as Marhuenda et al. (2015) claim, but also improving the social image of these basic VET programmes. In other words, PCPI became second chance training programmes for vulnerable young people and contributed to their participation in society (Field et al. 2012; Olmos-Rueda and Mas-Torelló 2013; Abiétar-López et al. 2017).

Focusing our attention on the main relevant differences among PGS, PCPI, and FPB, we can point the law framework, students' profile, structure and certification. Regarding the *law framework*, PGS were regulated by LOGSE (1990), PCPI were regulated by LOE (2006) and FPB were regulated by LOMCE (2013) and Real Decreto 127/2014. According to these laws and other authors as Palomares and López (2012), in regard with *students' profile*, PGS were addressed to unemployed young people aged 16–25 without any academic certification, PCPI were addressed to young people from 16 years old without the Certificate of Compulsory Secondary Education and exceptionally, young people aged 15, and FPB are addressed to young people, who are proposed by teaching staff or progenitors, that have passed the first cycle of Compulsory Secondary Education and are from 15 years old or not older than 17 year at the time of inscription or throughout the course. Regarding the *structure* of these programmes, PGS were structured into one academic year while PCPI and FPB are structured into two academic years. Finally, in regard with *certification*, PGS only gave access to a certificate of PGS, PCPI gave access to a professional accreditation and the opportunity to get a certificate of Compulsory Secondary Education, and FPB gave access to medium-level formative cycle (CFGM, level 2) and, like PCPI, to the opportunity of getting a Compulsory Secondary certificate.

As we can see above, these basic VET programmes have evolved improving their social image through the improvement not only of the students' requirements for accessing to these but also the opportunities that these programmes offer to young people, who are enrolled in them, to continue in formal VET programmes or to access to the job market.

In 2008, the financial crisis started, and its impact on Spanish employment was severe with unqualified workers, unskilled young people being particularly badly affected – data of young people's unemployment were near 50% (INE 2009). Given the seriousness of this unemployment situation, VET turns again into the way for palliating early school leaving and improving labour situation through the improvement of qualification. According to CEDEFOP (2009, p. 15), 'VET has an important role in increasing and sustaining labour-market participation but this can be considered as a narrow form of social inclusion'.

In 2011, the LES (Law of Sustainable Economy) and its Complementary Organic Law were promulgated whose aim was to make more attractive and competitive VET through more flexible access to VET studies, connecting VET to other opportuni-

**Table 2.1** Evolution of students' enrolment in VET

	2005–2006	2008–2009	2011–2012	2012–2013	2015–2016	2016–2017 (provisional data)
Level 1 VET	44,927	54,914	84,217	84,009	61,909	69,299
Level 2 VET	230,174	249,506	302,455	317,365	327,134	317,966
Level 3 VET	217,255	223,098	280,495	300,321	314,607	328,319

Source of data: Ministry of Education, Culture and Sport of the Government of Spain. Retrieved 2017 from <https://www.mecd.gob.es/servicios-al-ciudadano-mecd/estadisticas/educacion/no-universitaria/alumnado/matriculado.html>

According to RD 1147/2011 and RD 127/2014: Level 1 (FPB) is ISCED 3.5.3, Level 2 (CFGM) is ISCED 3B and Level 3 (CFGS) is ISCED 5B

**Table 2.2** Students' enrolment in VET and academic programmes

	Baccalaureate	Level 1 VET	Level 2 VET	Level 3 VET
2015–2016	644,165	61,909	327,134	314,607
2016–2017 (provisional data)	642,280	69,299	317,966	328,319

Source of data: Ministry of Education, Culture and Sport of the Government of Spain. Retrieved 2017 from <https://www.mecd.gob.es/servicios-al-ciudadano-mecd/estadisticas/educacion/no-universitaria/alumnado/matriculado.html>

ties – it allowed students to design their own itineraries, and renewing VET supply according to the productive system (MECD 2011; Menéndez 2013; Rial and Rego 2011); according to Descy and Tessaring (2002, p. 7), a more attractive VET depends on its social position and the labour possibilities that this offers. However, it was lived for a short period of time as a consequence of the change of the Spanish Government in 2015, when a new VET law came up (*Ley 30/2015, de 9 de septiembre, por la que se regula el Sistema de Formación Profesional para el empleo en el ámbito laboral*) – this law was not an educational law like LOMCE (2013) as we can see later.

As we have seen till here, in our Spanish context, VET has been influenced by different laws. Some of those have been specific laws of VET and others have been general education laws. However, in one way or another, all of them have worked to improve VET recognition.

Currently, it is possible to state that VET is gaining social recognition. Students' enrolment in VET has increased considerably since 2007 until nowadays, as we can see in Table 2.1; although VET has improved its social recognition, VET continues being a second option, as we can see in Table 2.2 (MECD 2016a, b).

This current trend of VET enrolment is in accordance with the tendency of VET enrolment during the 1980s and 1990s. For example, in 1985–1986, the percentage of students' enrolment in VET was of 33.6% against 66.4% of students who were enrolled in Baccalaureate (Rivière et al. 1988). In the same way, in 1995–1996, the percentage of students' enrolment in VET was of 35.86% against 64.14% of students who were enrolled in Baccalaureate (Murillo 1997).

Likewise, although data of Spanish VET enrolment have improved in the last years, these are lower than the European VET enrolment average (MECD 2016a). It is due to the fact that VET in the Spanish context is not still an alternative educa-

tional pathway, like in other European contexts, because academic pathway continues being the prior academic itinerary.

It is possible to think that the social value of VET in the Spanish context is still poor. Not always, but VET continues being undervalued by a section of the Spanish society (e.g., families as one of the most significant one) and considered as a second choice to the academic pathway. It is obvious that Spanish VET needs to be revalued to improve its social image. To this end, some interesting initiative promoting by entities like Fundación Bertelsmann<sup>5</sup> are currently working on, improving the links between VET and the job market, which need to be stronger (Descy and Tessaring 2002; MECD 2016a; Pérez and Rahona 2009), and emphasizing Dual VET.

The Educational Law that was promulgated in 2013 in the Spanish context (LOMCE, Organic Law for the improvement of education quality) wants to work in the way of VET improvement according to OECD 2012 suggestions (OECD 2014, 2015) such as clearer pathways for learners, modern VET itineraries, development of basic skills, more flexible VET, better guidance processes, encouraging of learning in the workplace supported by Dual VET, internationalize Level 3 VET, to name a few (Gomendio 2015). It is worth noting here one of the changes that this law means to VET Level 1, which current name is Basic VET (FPB<sup>6</sup>) –from PCPI to FPB–. VET Level 1 is integrated in the last year of compulsory secondary education in Spain, this is the lower secondary educational level like the professional alternative for students although, to be critical of this law, the fact of this pathway could be meant like the alternative for students at risk of dropout, makes us to reflect and ask ourselves, in accordance with Menéndez (2013) and Marhuenda-Fluixá et al. (2017), if this does not mean a step back for the future of VET. The consideration of a professional pathway for students during their compulsory education is interesting and it could be potential resources for tackling early school leaving and risk of exclusion (Cutanda 2014). Nevertheless, the fact of considering it as the alternative path for students with more difficulties to follow academic itineraries could flip the good image of VET and turn it again into a ‘marginal’ itinerary.

The future of VET depends on many factors. The systematic reforms, which have been pursued, have contributed to the improvement of Spanish VET, but some challenges have still to be resolved (Field et al. 2012), and one of these challenges is the importance to emphasize the commitment of social, educational and economic agents and its involvement in VET and in its future.

---

<sup>5</sup> *Fundación Bertelsmann. Formación profesional dual.* Retrieved 2018 from <https://www.fundacionbertelsmann.org/de/home/formacion-profesional-dual/>

<sup>6</sup> Editor’s note: See Chap. 8 for further information on Basic VET.

## 2.3 Current Characteristics of Formal VET<sup>7</sup>

As explained in previous sections, formal VET has evolved along with changes in society. Among other, all of the aforesaid modifications have configured formal VET as we know it today within the Spanish educational context, and taking into consideration relevant features such as structure, goals, duration, in and out ways to CFGM and CFGS, to name a few (see in more detail in next sections).

In Spain, the current structure of formal VET is formed by 26 vocational families (LOE certificates), each including different certificates of Level 1, 2 and 3 (more than 150 in total), with a few exceptions (based on website of the Ministry of Education and VET of the Government of Spain).<sup>8</sup>

### 2.3.1 Formal VET Objectives

According to LOMCE (2013), among others, the main objectives of formal VET are linked to students' train to work in a professional field, to facilitate their permanence in the training context and to make possible their adaptation to labour changes.

However, if we focus our attention on students, the main purposes of formal VET are, among other aspects (LOMCE 2013), to acquire the professional competencies, to work safely, to know the labour sector, to understand the labour law, to know the processes for finding employment and to motivate for the lifelong learning.

### 2.3.2 Formal VET: Level 2 (CFGM) and Level 3 (CFGS)

These training programmes (in Catalonia) are structured into one or two academic years with a duration of 1400 or 2000 hours, respectively, this training period being divided between the school and the workplace (based on website of the Ministry of Education of the Government of Catalonia<sup>9</sup>).

---

<sup>7</sup>The information in this section was partially obtained from *Todo FP* the official website of the Ministry of Education, Culture and Sport of the Government of Spain (Retrieved 2017 and 2018 from <http://www.todofp.es>), and *Ministry of Education of the Government of Catalonia, Estudiar a Catalunya* and *Ensenyaments Professionals* the official websites of the Government of Catalonia (Retrieved 2017 and 2018 from <http://ensenyament.gencat.cat>, <http://queestudiar.gencat.cat/es/estudis/fp> and <http://xtec.gencat.cat/ca/curriculum/professionals>)

<sup>8</sup>Source of data: *La FP actual. Todo FP*. Website of the Ministry of Education, Culture and Sport of the Government of Spain. Retrieved 2018 from <http://todofp.es/sobre-fp/informacion-general/sistema-educativo-fp/fp-actual.html>

<sup>9</sup>Source of data: *Información general. Estudiar a Catalunya*. Website of the Government of Catalonia (Retrieved November, 2018 from <http://queestudiar.gencat.cat/es/estudis/fp/info-general/>)



The formative cycles are structured into several types of modules in the Spanish context (adapted from *Real Decreto 1147/2011* (article 22, 23, 24 and 25), *Decret 284/2011*(article 11) and the curriculum of Formative Cycles<sup>10</sup>):

- ‘Vocational modules that are common’ to all formative cycles: ‘Formación en centros de trabajo’ (training in the workplace, FCT) module that will be explained in Sect. 2.3.2.1 and Chap. 7, ‘empresa e iniciativa emprendedora’ (enterprise and entrepreneurial initiative, EIE) module (which works, among other aspects, on such matters as entrepreneurship, innovation, company start-up, and management) and ‘formación y orientación laboral’ (employment training and guidance, FOL) module (which works, among other aspects, on finding employment, the labour world, labour legislation and the prevention of occupational hazards)
- Vocational modules that enable the acquisition of competence units of the National Vocational Qualifications Catalogue
- Other vocational modules (optional) that are not related to competence units
- “Project module” (only in CFGS),<sup>11</sup> that is taken at the end of the formative cycle. The students have to show that they have achieved the general objectives and have acquired the different competencies of the Formative Cycle

Although there are multiple ways for accessing CFGM, the priority (for the 2017–2018 academic year to Catalonia) is to pass *Educación Secundaria Obligatoria* (Compulsory Secondary Education) (83%), to have passed an entrance course or test (10.3%) or to come from another Formative Cycle (3.1%).<sup>12</sup> Likewise, passing a CFGM grants entrance to *Bachillerato* (Baccalaureate), a CFGS and/or employment.

CFGS can be accessed in different ways, although the main means of entrance (for the 2017–2018 academic year to Catalonia) are by passing Baccalaureate (45.9% of enrolled students) via a specific entrance course or test (25.7%) or from another Formative Cycle (24.2%).<sup>13</sup> Likewise, passing a CFGS grants access to certain university degree courses and/or employment.

---

<sup>10</sup>*Todo FP. The curriculum of Formative Cycles*, official website of the Ministry of Education and VET of the Government of Spain (Retrieved 2018 from <http://todofp.es/que-como-y-donde-estudiar/que-estudiar/ciclos.html>)

<sup>11</sup> In CFGM, a similar module (named summarized module or similar) is optional; this condition depends on the curriculum of the formative cycle and/or the Autonomous Community (administrative regions) where it runs (e.g., in Catalonia this summarized module is compulsory, *Decret 284/2011*).

<sup>12</sup>Data available for the 2017–2018 academic year corresponding to Catalonia, provided by the Ministry of Education of the Government of Catalonia (last update 09-10-2018). Retrieved 2018 from <http://ensenyament.gencat.cat/ca/departament/estadistiques/indicadors/sistema-educatiu/escolaritzacio/regim-general-presencial-semipresencial/>

<sup>13</sup>Data available for the 2017–2018 academic year corresponding to Catalonia, provided by the Ministry of Education of the Government of Catalonia (last update 09-10-2018). Retrieved 2018 from <http://ensenyament.gencat.cat/ca/departament/estadistiques/indicadors/sistema-educatiu/escolaritzacio/regim-general-presencial-semipresencial/>

Most formative cycles are taken in face-to-face format, but there is another alternative remote, for which the number of enrolled students has increased in recent years. According to data from the MECD,<sup>14</sup> on CFGM and CFGS, 101 certificates are offered remotely, for which there has been a rise from 10,951 enrolled students in 2007–2008 to 57,931 in 2015–2016. In Catalonia, in the academic year 2017–2018 (first semester), according to data from the Ministry of Education of the Government of Catalonia,<sup>15</sup> on CFGM and CFGS, there has been an enrolled 22,444 students in remote format.

### 2.3.2.1 Training in the Workplace (FCT)

The compulsory and evaluable work placement, named training in the workplace module (FCT), is defined as ‘simple alternation’, because it combines in-company training (without academic recognition of the time of activity spent on the workplace) and training at the vocational school (*Resolució ENS1024/2012*) (for more details, see Chap. 7).

### 2.3.2.2 Dual VET

Although this modality has been widely implanted in other contexts, in Spain the foundations are based on *Real Decreto 1529/2012* and the LOMCE (2013), so its implantation is still in process (Pineda et al. 2017).

According to *Resolució ENS1024/2012*, the ‘alternation with dual training modality’ in the formative cycles develops its training activities in both vocational school and workplace (both training activities receive academic recognition) (for more details regarding Spanish Dual VET implementation, see Chap. 11). This situation is logical, as Tejada states (2005, p. 24) ‘the very definition of vocational competence associated to experience and to the certain context fosters displacement of training itself towards the labour system’.

### 2.3.3 Basic VET Program (VET Level 1)

In Spain, these Level 1 VET programmes (FPB) are integrated in the education system. The duration of these programmes (FPB) is 2000 hours (two academic years), with an FCT that must be of a minimum duration of 240 hours (if this type

---

<sup>14</sup>Source of data: *La FP actual. Todo FP*. Website of the Ministry of Education, Culture and Sport of the Government of Spain. Retrieved 2018 from <http://todofp.es/sobre-fp/informacion-general/sistema-educativo-fp/fp-actual.html>

<sup>15</sup>Data available for the 2017–2018 academic year corresponding to Catalonia, provided by the Ministry of Education of the Government of Catalonia. (last update 13-09-2018). Retrieved from <http://ensenyament.gencat.cat/ca/departament/estadistiques/indicadors/sistema-educatiu/escolaritzacio/alumnes-distancia/>

of program is run using the dual training modality, this can be extended to 3 years) (*Real Decreto 127/2014*).

These training programmes are structured into several types of modules, which are ‘constituted by theoretical-practical knowledge areas whose purpose is the acquisition of vocational, personal and social competencies and permanent lifelong learning competencies’ (Real Decreto 127/2014 article 4). According to Real Decreto 127/2014, article 9, these modules are:

- Modules that enable the acquisition of competence units of the National Vocational Qualifications Catalogue
- Other vocational modules (optional) that are not related to competencies linked to this professional profile
- Modules related to general knowledge and competences for lifelong learning (‘applied sciences’ and ‘communication and society’)
- ‘Training in the workplace modules’ (FCT)

Access to these programmes, its exits routes and possible certifications are mentioned in Sect. 2.2.

## 2.4 The Role of Social Agents in the Evolution and Change of Spanish VET

As we have seen, Spanish VET has been changing according to social and labour changes and its new requirements; the efforts to update VET qualification, mainly according to local territory demands (Olmos-Rueda and Mas-Torelló 2017; Rego et al. 2017), or to design a Dual VET model are some examples of these VET changes and tendencies through the different reforms that have been pursued. Every one of these Reforms have tended to adapt VET to new social and labour frameworks based on competencies and to awareness-raising on VET as a smart choice; that is, as an attractive choice with the capacity to respond to labour market needs and personal expectations, as Thyssen (2017) says.

Evolution and change of Spanish VET requires to sustain the participation, collaboration, co-responsibility and consensus of all the social agents (employers and unions, teachers, students, policymakers, public administration, chambers of commerce, etc.) on VET policy in different levels – national government, autonomous communities and regional and local government – working on and toward the same objectives (Bassols and Salvans 2016; Field et al. 2012; Rego et al. 2015; Scandurra 2016; Valiente et al. 2015). That is, it requires to take into consideration the role that social agents have to have in order to make possible a viable, attractive and flexible VET system.

Within this VET framework, there is the necessity to assume a common responsibility between companies – and/or employers – and education agents or that companies/employers, unions, teachers and administration work on a common model that can really adapt to social and labour market needs.

Till nowadays, Spanish VET system has evolved out of the consensus among the social agents although, sometimes, this consensus seems to be at risk, as in the case of current Dual VET model that has been designed by the Administration without the other social agents, as Marhuenda-Fluixá et al. (2017) say.

Companies/employers have a role on formal VET system. They are the setting for training on the workplace (FCT). Companies provide a workplace where students can train their competencies. To this aim, employers should design working plans that students have to develop during their stage in the company and under the supervision of the company tutor. It is worth highlighting the need to link companies/employers to the schools through the figure of the tutors. Both tutors, the academic tutor in the school and the company tutor in the workplace, are responsible of students' education process. They have the responsibility to design students' working plan on both scenarios, schools and workplace, to identify which competencies they have to acquire and develop and to plan students' assessment. In short, the development of both tutors' role requires a strong coordination in order to achieve a positive impact on students' learning, their motivation, their access to the job market, etc. Nevertheless, sometimes, this coordination is lacking, becoming clear that it needs to be improved (Mas Torelló et al. 2012; Olmos-Rueda and Mas-Torelló 2017) because, as Chamber of Commerce, Industry and Services (n.d., p. 107) says, a collaborative training model between companies and schools means advantages for companies such as good standing, decrease in training costs, flexible organization, adaptation to local or regional requirements, to name a few.

One example of success collaboration model among social agents on VET is the Alliance for Dual Vocational Training in Catalonia (Bassols and Salvans 2016). It is a network of companies, schools and institutions committed to work on and develop a high-quality Dual VET system in Spain. For example, the members of this Alliance contribute to define which elements need to be developed, modified or improved and also develop tools for supporting company tutors in their training function such as is the Handbook for Company Tutors in Dual VET (Caballero and Lozano 2016).

Other example of Catalan initiatives towards VET transformation according to a collaborative, integrated and Dual VET model is the implementation of the *Llei 10/2015, del 19 de juny, de Formació i Qualificació Professionals* (Law of training and professional qualification of Catalonia). The Steering Committee of this law is integrated by the Government of Catalonia, business organizations, unions, local administration and Chambers of Commerce.

Other example is the case of Basque Dual VET (Astigarra Echeverría et al. 2017; Rego et al. 2015) that since the 1990s has worked on the development of a collaborative VET model between companies/employers and the Administration of Basque Autonomous Community although not always with success because of the lack of involvement by the companies/employers. Currently, Basque Administration manages VET system in collaboration with four VET organizations – IVAC (Basque high school of VET knowledge), TKNIKA (Centre of applied research and innovation of VET), IDEATK (Basque high school of creativity applied to VET) and CVFP (Basque council of VET) – and develops good initiatives like ETHAZI model in VET (Astigarra Echeverría et al. 2017) or the last Basque VET Plan that leads VET

transformation towards an international and proactive model before labour market and companies' needs, capable of training higher qualified professionals, working on network and focusing on active entrepreneurship (*Departamento de Educación, Política Lingüística y Cultura -Gobierno Vasco-, 2014*).

As we can see, a collaborative model among all social agents on VET is key for its success transformation and development. Every social agent has to develop its role according to the others, especially companies and schools. Both schools and companies have to share their training role in order to develop qualified apprenticeships and working together for this purpose with the support of Administration, – in all its levels, national, regional, and local – and the other social agents (Scandurra 2016; Valiente et al. 2015).

## 2.5 Suggestions for Conclusions

As we have seen above, although VET system has acquired relevance in the latest years, it is still a challenge for the Spanish context.

As Field et al. (2012) claim, the main strengths of the VET system that are possible to point are the engagement of social agents in the VET system, the reforms that has been pursued according to new social and labour requirement, the improvement of VET as a pathway and the pathways through it, connection with other pathways. Also, it has to be taken into consideration the consensus between national government, autonomous communities in the regions of Spain, employers and unions on VET policy – with the exception of the current Dual VET model – and the use of basic VET programmes as a second choice for engagement or re-engagement of young people at risk of dropping out of the school.

Despite progress on VET, changes are still needed. According to Riga conclusions (2015), the main challenges of Spanish VET are the improvement of its attractiveness and accessibility. VET tends to make itself visible to society and transform itself into a smart choice.

An overview of main challenges on Spanish VET makes us focus our attention on competencies and employability, VET recognition, transference of learning, VET pathways, especially Dual VET, VET resources, requirements for VET teachers, trainers or VET groups, to name a few (Bassols and Salvans 2016; Field et al. 2012; Marhuenda 2012; Olmos-Rueda and Mas-Torelló 2017; Scandurra 2016; Valiente et al. 2015; Wolter and Mühlemann 2015).

According to these challenges, it is possible to conclude that:

- VET system has to focus the attention not only on complex competencies within specifically professional frameworks, also on basic skills that are key competencies for employability (to name a few, instrumental, adaptive or participative skills/competencies).
- Linked to the above challenge, some VET groups are object of concern for VET system, especially all those are in vulnerable situation and at risk of exclusion

(early leavers, unemployed and employees over 40, etc.). Data show once again how low qualification and low employability are the main cause of this risk situation and point out the need to work on VET improvement.

- In a system where developing practical vocational skills is a key issue, it is interesting to see how there is no requirement for VET teachers and trainers to have worked in their vocational field although they do need to be qualified in that field. VET teachers and trainers need to improve their professional profile, especially their psycho-pedagogical background.
- Despite enrolment in VET is growing the model requires to be checked. A governance on VET and institutional engagement, participation of all social agents involved on VET policy or the development of an evaluation process with the collaboration of all social agents in order to promote the improvement of schools are needed.
- Linked to above challenge, there is a good predisposition of collaboration between training contexts and work contexts, but it is not enough. Dual VET is a good initiative although, as we said before, it has to be improved. For example, a minimum critical mass of involved companies and schools is required, it is necessary to take into consideration the profile of companies in our context characterized for being small or micro enterprises and study their main difficulties for participating in VET; the role of company tutor has to change, it has to be recognized and supported providing them with tools and resources like training as well as the coordination between both company tutor and educational tutor. It is highlighting the necessity to improve both tutors' psychological and pedagogical training.
- Orientation processes need reform in order to recognize VET as an attractive pathway. In accordance with some research (Cedefop 2016; Mas Torelló et al. 2017), wrong orientation and/or a students' inadequate orientation is one of the reasons for dropping out VET pathways or for not considering VET as a choice. For example, as Cedefop (2016, p. 97) claims, many students choose VET tracks because they think it is the alternative option to the academic pathway that they are not able to continue because of their grades.
- Promoting lifelong learning through VET. The continuous changes in the socio-economic context make it essential that strategies for lifelong learning have been developed and VET becomes one of these strategies (Lindell and Abrahamsson 2002). VET is linked to both contexts of education and work, and it contributes not only to individual development of students but at the same time also to the labour market opportunities for these students. That is, VET makes possible to prepare people for a changing labour market that requires their continuous adaptation.
- Flexibility and adaptability of VET pathways are required (e-learning, accreditation processes, recognition of qualification, etc.) as well as a major offer of VET studies, new VET certification more in accordance with needs of the job market.

These challenges lead Spanish research approaches and make VET research as the tool for tackling these challenges in order to answer many questions about our

VET system. Questions like what we should know; that is, what is missing and which practices have to be implemented and guided via action-based research (prospective on future VET research concerns) require continue researching. But, in sum, maybe the main VET challenge, question and research purpose should be how to make get VET more valued and visible to the society.

## References

- Abiétar-López, M., Marhuenda-Fluixá, F., & Navas-Saurin, A. (2017). The ambiguous role of basic VET upon social inclusion: A participatory perspective on social justice. In F. Marhuenda-Fluixá (Ed.), *Vocational education beyond skill formation. VET between civic, industrial and market tensions* (pp. 342–361). Bruxelles: Peter Larsen.
- Astigarrar Echeverría, E., Agirre Andongegi, A., & Carrera Farran, X. (2017). Innovación y cambio en la Formación Profesional del País Vasco. El modelo ETHAZI. *Revista Iberoamericana de Educación*, 74, 55–82.
- Bassols, C, & Salvans, G. (2016). *European case study. High-quality dual vocational learning in Spain: the alliance for dual vocational training*. Barcelona: Fundación Bertessmann. Available in <http://www.ippr.org/files/publications/pdf/nsaw-case-study-bassols-salvans-may2016.pdf?noredirect=1>
- Caballero, M. A., & Lozano, P. (2016). *Manual de tutores de empresa en FP Dual*. Barcelona: Fundación Bertessmann. Available in [http://www.cec-comercio.com/wp-content/uploads/2014/04/Manual\\_Tutores\\_web.pdf](http://www.cec-comercio.com/wp-content/uploads/2014/04/Manual_Tutores_web.pdf)
- Casal, J., García, M., Merino, R., & Quesada, M. (2003). *Enquesta als joves de Catalunya 2002*. Catalunya: Secretaria General de Juventut.
- Cedefop. (2009). *Modernising vocational education and training fourth report on vocational education and training research in Europe: Executive summary*. Luxembourg: Publications Office of the European Union.
- Cedefop. (2014). *Terminology of European education and training policy*. Luxemburgo: Publications Office of the European Union. Available in <https://europass.cedefop.europa.eu/es/education-and-training-glossary>
- Cedefop. (2016). *Leaving education early: Putting vocational education and training centre stage. Volume I: Investigating causes and extent*. Cedefop research paper; 57. Luxembourg: Publications Office. doi.org/10.2801.893397
- Cutanda, M. T. (2014). De los Programas de Cualificación Profesional Inicial (PCPI) a la Formación Profesional Básica: algunas consideraciones. *Revista Educativa Hekademos*, 16, 69–79.
- Chamber of Commerce, Industry and Services (coord.). (n.d.). *Dual VET system transfer of successful structures and guidance for implementing the dual VET system. Training company trainers*. Zaragoza: Chamber of Commerce, Industry and Services. Available in [http://www.dualvet.eu/docs/productos/Dualvet\\_EN.pdf](http://www.dualvet.eu/docs/productos/Dualvet_EN.pdf)
- Departamento de Educación, Política lingüística y Cultura-Gobierno Vasco. (2014). *IV Plan Vasco de Formación Profesional. Hacia una FP diferente*. Available in [http://www.hezkuntza.ejgv.euskadi.eus/r43-2638/es/contenidos/informacion/formac\\_profesional/es\\_1959/adjuntos/ivplan/plancast\\_fp.pdf](http://www.hezkuntza.ejgv.euskadi.eus/r43-2638/es/contenidos/informacion/formac_profesional/es_1959/adjuntos/ivplan/plancast_fp.pdf)
- Descy, P., & Tessaring, M. (2002). *Formar y aprender para la competencia profesional. Segundo Informe de la Investigación sobre formación profesional en Europa: Resumen ejecutivo*. Luxemburgo: Cedefop EUR-OP.
- European Commission/EACEA/Eurydice. (2017). *The structure of the European education systems 2017/18: Schematic diagrams. Eurydice facts and figures*. Luxembourg: Publications Office of the European Union.

- Field, S., Kis, V., & Kuczera, M. (2012). *OECD reviews of vocational education and training. A skills beyond school commentary on Spain*. OECD. Available in <https://www.oecd.org/edu/skills-beyond-school/OECD%20Reviews%20of%20Vocational%20Education%20and%20Training%20-%20A%20Skills%20Beyond%20School%20Commentary%20on%20Spain.pdf>
- Gomendio, M. (2015). *La Formación Profesional en España*. Secretaría de Estado de Educación, Formación Profesional y Universidades. Ministerio de Educación, Cultura y Deporte. Available in <http://www.mecd.gob.es/prensa-mecd/dms/mecd/prensa-mecd/actualidad/2015/04/20150409-ocde/ocde1.pdf>
- INE. (2009). *Encuesta de Población Activa (EPA). Cuarto trimestre de 2008*. Available in <http://www.ine.es/daco/daco42/daco4211/epa0408.pdf>
- Lindell, M., & Abrahamsson, K. (2002). *The impact of lifelong learning on vocational education and training in Sweden*. Adelaide: National Centre for Vocational Education Research.
- Marhuenda, F. (2012). *La formación profesional*. Madrid: Editorial Síntesis.
- Marhuenda-Fluixà, F., Chisvert-Tarazona, M. J., Palomares-Montero, D., & Vila, J. (2017). Con d de dual: investigación sobre la implantación del sistema dual en la formación profesional en España. *Educare*, 53(2), 285–307.
- Marhuenda-Fluixà, F., Salvà-Mut, F., Navas-Saurín, A. A., & Abiétar-López, M. (2015). Twenty years of basic vocational education provision in Spain: Changes and trends. *International Journal of Research in Vocational Education and Training*, 2(2), 137–151.
- Mas Torelló, O., Espona, B., Quesada, C., & García, N. (2012). La Formació als Centres de Treball als Cicles Formatius de Formació Professional. Tendències de desenvolupament i factors d'èxit per l'eficàcia. *Temps Educació*, 44, 279–298.
- Mas Torelló, O., Olmos-Rueda, P., & Salvà Mut, F. (2017). Programas de formación profesional de nivel 1 (PFI): un estudio de caso desde la perspectiva docente. *Curriculum*, 30, 103–124.
- MECD. (2011). *Mapa de la oferta de la formación profesional en España*. Madrid: Dirección General de Formación Profesional-MECD.
- MECD. (2016a). *Datos y cifras. Curso escolar 2016–2017*. Madrid: Secretaría General Técnica. Subdirección General de Documentación y Publicaciones.
- MECD (2016b). *Enseñanzas no universitarias. Alumnado matriculado*. Available in <https://www.mecd.gob.es/servicios-al-ciudadano-mecd/estadisticas/educacion/no-universitaria/alumnado/matriculado.html>
- Menéndez, J. (2013). La formación profesional. Presente y futuro. *Razón y Fe*, 267(1374), 307–318.
- Murillo, J. (1997). *Sistema Educativo Nacional España, 1997*. Madrid, España: Ministerio de Educación y Cultura, Centro de Documentación e Investigación Educativa (CIDE) y Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura (OEI). In <http://www.oei.es/historico/quipu/espana/index.html#sis>
- OECD. (2014). *OECD reviews of vocational education and training. Report skills beyond school: Synthesis*. OECD. <https://doi.org/10.1787/9789264214682-en>.
- OECD. (2015). *Informes de la OCDE sobre la educación y la formación profesional. Competencias más allá de la escuela: síntesis, resumen y recomendaciones políticas*. OECD. In [https://www.oecd.org/edu/skills-beyond-school/Skills\\_Beyond\\_School\\_Summary\\_and\\_Policy\\_Recommendations\\_Spanish.pdf](https://www.oecd.org/edu/skills-beyond-school/Skills_Beyond_School_Summary_and_Policy_Recommendations_Spanish.pdf)
- Olmos-Rueda, P. (2017). The role of VET into social participation and self-determination of disabled people as full citizens. In F. Marhuenda-Fluixà (Ed.), *Vocational education beyond skill formation. VET between civic, industrial and market tensions* (pp. 183–201). Bern: Peter Lang.
- Olmos-Rueda, P., & Mas-Torelló, O. (2013). Youth, academic failure and second chance training programmes. *Revista Española de Orientación y Psicopedagogía*, 24(1), 78–92.
- Olmos-Rueda, P., & Mas-Torelló, O. (2017). Perspectiva de tutores y de empresas sobre el desarrollo de las competencias básicas de empleabilidad en el marco de los programas de formación profesional básica. *Educare*, 53(2), 261–284.
- Paredes, R. (2014). Empresa y escuela, ¿las dos caras de la moneda? *Padres y Maestros*, 359, 6–9.
- Palomares, A., & López, S. (2012). La respuesta a la diversidad: de los programas de garantía social hacia los programas de cualificación profesional inicial. *Revista Española de Educación Comparada*, 20, 249–274.



- Pérez, C., & Rahona, M. (2009). *La formación profesional en España y el Mercado de Trabajo: Desafíos y oportunidades*. XVI Encuentro de Economía Pública: 5 y 6 de febrero de 2009: Palacio de Congresos de Granada. Available in <https://dialnet.unirioja.es/descarga/articulo/2942169.pdf>
- Pineda, P., Arnau, L., & Ciraso, A. (2017). *La FP Dual en los centros educativos: visiones del profesorado*. Barcelona: Fundación Bertessmann.
- Rego, L., Barreira, E. M., & Rial, A. (2015). Formación profesional dual: comparativa entre el sistema alemán y el incipiente modelo español. *Revista Española de Educación Comparada*, 25, 149–166. <https://doi.org/10.5944/reec.25.2015.14788>.
- Rego, L., Barreira, E. M., & Rial, A. F. (2017). La participación en la planificación territorial de la formación profesional. *Educare*, 53(2), 241–260. <https://doi.org/10.5565/rev/educar.860>.
- Rial, A. & Rego, L. (2011). Formación profesional en España. *Formación XXI*, (12). Available in [http://formacionxxi.com/porqualMagazine/do/print/magazineArticle/2011/12/text/xml/Formacion\\_profesional\\_en\\_Espana.xml.html](http://formacionxxi.com/porqualMagazine/do/print/magazineArticle/2011/12/text/xml/Formacion_profesional_en_Espana.xml.html)
- Rivière, A., et al. (1988). *El sistema Educativo Español*. Madrid: Ministerio de Educación y Ciencia.
- Scandurra, R. (2016). *Un model de formació professional dual per a Catalunya? Aportacions dels agents implicats*. Barcelona: Fundació Jaume Bofill.
- Tejada, J. (2005). La formación profesional superior y el EEES. In Tejada, J. et al. (coord.), *Libro de Actas del IV Congreso de Formación para el Trabajo. Nuevos escenarios de trabajo y nuevos retos para la formación* (pp. 23–51). Madrid: Tornapunta ediciones.
- Thyssen, M. (2017). Turning vocational education and training into a smart choice. *Social Agenda*, 49, 14–15. Available in [http://ec.europa.eu/employment\\_social/social\\_agenda/books/49/en/](http://ec.europa.eu/employment_social/social_agenda/books/49/en/)
- Valiente, O. (coord.), Scandurra, R., Zancajo, A., & Brown, C. (2015). *Un model de formació professional dual per Catalunya? Reptes en el disseny i implementació de la reforma*. Barcelona: Fundació Jaume Bofill.
- Wolter, S. C., & Mühlemann, S. (2015). *La FP Dual en España. ¿Un modelo rentable para las empresas? Estudio de simulación coste-beneficio*. Barcelona: Fundación Berstelmann.

## Laws

- Bruges Communiqué on enhanced European Cooperation in Vocational Education and Training for the period 2011–2020. (7 December 2010, to review the strategic approach and priorities of the Copenhagen process). European Ministers for Vocational Education and Training, the European Social Partners and the European Commission.
- Conclusions of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, on the future priorities for enhanced European cooperation in Vocational Education and Training (Bourdais, 2008) 16459/08 EDUC 278 SOC 736 MI 499. Council of the European Union (Brussels, 5 December 2008).
- Council Resolution, of 19 December 2002, on the promotion of enhanced European cooperation in Vocational Education and Training (Copenhagen, 2003/C 13/02). Council of the European Union.
- Decret 284/2011, d'1 de març, d'Ordenació General de la Formació Professional Inicial. Generalitat de Catalunya. Departament d'Ensenyament.
- Decreto 995/1974, de 14 de marzo, sobre Ordenación de la Formación Profesional. (BOE n. 93 de 18 de abril de 1974). Gobierno de España. Ministerio de Educación y Ciencia. Available in: Agencia Estatal del Boletín Oficial del Estado.
- European Parliament resolution, of 8 June 2011 on European cooperation in vocational education and training to support the Europe 2020 strategy (2010/2234 INI). European cooperation in vocational education and training to support the Europe 2020 strategy (P7 TA (2011)0263). The European Parliament.

- LES. Ley 2/2011, de 4 de marzo, de Economía Sostenible. (BOE n.55 de 5 de marzo de 2011). Gobierno de España. Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Ley 30/2015, de 9 de septiembre, por la que se regula el Sistema de Formación Profesional para el empleo en el ámbito laboral. (BOE n.217 de 10 de setiembre de 2011). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- LGE. Ley 14/1970, de 4 de agosto, General de Educación y Financiamiento de la Reforma Educativa. (BOE n.187 de 6 de agosto de 1970). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Llei 10/2015, del 19 de juny, de Formació i Qualificació Professionals (DOGC 6899, de 25 de juny de 2015). Generalitat de Catalunya. Departament de la Presidència.
- LOCE. Ley Orgánica 10/2002, de 23 de diciembre, de Calidad de la Educación. (BOE n.307 de 24 de diciembre de 2002). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- LOCFP. Ley Orgánica 5/2002, de 19 de junio, de las Cualificaciones y de la Formación Profesional. (BOE n.147 de 20 de junio de 2002). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- LOE. Ley Orgánica 2/2006, de 3 de mayo, de Educación. (BOE n.106 de 4 de mayo de 2006). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- LOGSE. Ley Orgánica 1/1990, de 3 de octubre, de Ordenación General del Sistema Educativo. (BOE n.238 de 4 de octubre de 1990). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- LOMCE. Ley Orgánica 8/2013, de 9 de diciembre, para la Mejora de la Calidad Educativa. (BOE n.295 de 10 de diciembre de 2013). Jefatura del Estado. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Ordre EDU/416/2007, de 13 de novembre, per la qual es modifica l'article 5 de l'Ordre ENS/193/2002, de 5 de juny, per la qual es regula la formació pràctica a centres de treball i els convenis de col·laboració amb empreses i entitats. Generalitat de Catalunya. Departament d'Educació.
- Real Decreto 127/2014, de 28 de febrero, por el que se regulan aspectos específicos de la Formación Profesional Básica de las enseñanzas de formación profesional del sistema educativo, se aprueban catorce títulos profesionales básicos, se fijan sus currículos básicos y se modifica el Real Decreto 1850/2009, de 4 de diciembre, sobre expedición de títulos académicos y profesionales correspondientes a las enseñanzas establecidas en la Ley Orgánica 2/2006, de 3 de mayo, de Educación. (BOE n.55 de 5 de marzo de 2014). Gobierno de España. Ministerio de Educación, Cultura y Deportes. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Real Decreto 395/2007, de 23 de marzo, por el que se regula el Subsistema de Formación Profesional para el Empleo. (BOE n.87 de 11 de abril de 2007). Gobierno de España. Ministerio de Trabajo y Asuntos Sociales. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Real Decreto 1147/2011, de 29 de julio, por el que se establece la ordenación general de la formación profesional del sistema educativo. (BOE n.182 de 30 de julio de 2011). Gobierno de España. Ministerio de Educación. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Real Decreto 1529/2012, de 8 de noviembre, por el que se desarrolla el contrato para la formación y el aprendizaje y se establecen las bases de la Formación Profesional Dual. (BOE n.270 de 9 de noviembre de 2012). Gobierno de España. Ministerio de la Presidencia. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Real Decreto 1538/2006, de 15 de diciembre, por el que se establece la ordenación general de la formación profesional del sistema educativo. (BOE n.3 de 3 de enero de 2007). Gobierno de España. Ministerio de Educación y Ciencia. Available in: Agencia Estatal del Boletín Oficial del Estado.
- Recommendation of the European Parliament and of the Council, of 23 April 2008 on the establishment of the European Qualifications Framework [EQF] for lifelong learning (2008/C 111/01). The European Parliament and the Council of the European Union.

- Recommendation of the European Parliament and of the Council, of 18 June 2009 on the establishment of a European Quality Assurance Reference Framework for Vocational Education and Training (2009/C 155/01). The European Parliament and the Council of the European Union.
- Recommendation of the European Parliament and of the Council, of 18 June 2009 on the establishment of a European Credit System for Vocational Education and Training (ECVET) (2009/C 155/02). The European Parliament and the Council of the European Union.
- Resolució ENS1024/2012, de 25 de maig, d'organització de la formació en alternança en els ensenyaments de formació professional inicial. (DOGC 6155, de 22 de juny de 2012). Generalitat de Catalunya. Departament d'Ensenyament.
- Riga Conclusions 2015. Declaration of the Ministers in charge of vocational education and training of EU Member States, Candidate Countries, European Economic Area Countries (22 June 2015, on a new set of medium-term deliverables in the field of VET for the period 2015–2020, as a result of the review of short-term deliverables defined in the 2010 Bruges communiqué). Available in [http://www.izm.gov.lv/images/RigaConclusions\\_2015.pdf](http://www.izm.gov.lv/images/RigaConclusions_2015.pdf)

## Websites

- Agencia Estatal del Boletín Oficial del Estado. Gobierno de España. Available in: <https://www.boe.es/aeboe/>
- Fundación Bertelsmann. *Formación profesional dual*. Available in <https://www.fundacionbertelsmann.org/de/home/formacion-profesional-dual/>
- Generalitat de Catalunya. Departament d'Ensenyament. *Estadístiques. Indicadors sistema educatiu*. Available in <http://ensenyament.gencat.cat/ca/departament/estadistiques/indicadors/sistema-educatiu/>
- Generalitat de Catalunya. *Estudiar a Catalunya*. Available in <http://queestudiar.gencat.cat/es/estudis/fp/>
- Generalitat de Catalunya. *Xarxa Telemàtica Educativa de Catalunya (XTEC). Ensenyaments professionals*. Available in <http://xtec.gencat.cat/ca/curriculum/professionals/>
- Junta de Andalucía. Consejería de Educación. Dirección General de Formación Profesional y Educación Permanente. *La Nueva Formación Profesional: perspectiva para la Orientación Educativa*. Available in <http://colaboraeducacion.juntadeandalucia.es/educacion/colabora/documentos/60271/200744/orientadores+granada+09.pdf>
- Ministerio de Educación y Formación Profesional del Gobierno de España. *Todo FP*. Available in <http://www.todofp.es/>
- Ministerio de Educación, Cultura y Deportes del Gobierno de España. *Estadísticas. Enseñanzas no universitarias. Alumnos matriculados*. Available in <https://www.mecd.gob.es/servicios-al-ciudadano-mecd/estadisticas/educacion/no-universitaria/alumnado/matriculados.html>
- Ministerio de Educación, Cultura y Deportes del Gobierno de España. *LOMCE. Formación Profesional*. Available in <https://www.mecd.gob.es/educacion/mc/lomce/fp.html>
- Ministerio de Educación, Cultura y Deportes del Gobierno de España. *Todo FP*. Available in <http://www.todofp.es/>