

# Understanding cultural barriers and opportunities for developing new apprenticeship programmes<sup>1</sup>

*Comprender las barreras culturales y las oportunidades para desarrollar nuevos programas de aprendizaje*

Graham Attwell<sup>2</sup>

Ana Garcia Muñoz<sup>3</sup>

Jose Luis Garcia Molina<sup>4</sup>

## ABSTRACT

There is increasing interest in many countries in training models that are practice-oriented and correspond to the needs of the labour market. The new Spanish dual system of apprenticeship (FP Dual) for teaching and learning was first implemented in the Valencia Community in 2012. Although FP Dual enjoys considerable support from institutions and from politicians who believe it has the potential to reduce youth unemployment, the dual system is still in a pilot stage. This report is based on research based in Valencia, to explore the cultural and organizational norms and the barriers and opportunities these afford to introducing apprenticeship. The research included interviews with different stakeholders. The findings reported here are seen as the precursor to a longer-term study.

## KEYWORDS

apprenticeship; workplace training; Dual VET System; training culture(s); teachers/ trainers; local development; employment policies; unemployment; social actors; qualifications systems

---

1 The authors acknowledge the support of the International Network on Innovative Apprenticeship (INAP) in their support for this research.

2 Director e investigador de Pontydysgu S.L. University of Warwick, Reino Unido. ... Email: graham10@mac.com

3 Investigadora en Pontydysgu S.L. - Empresa de investigación y desarrollo experimental en Ciencias Sociales y Humanidades, Valencia, España

4 Profesor del Departamento de Psicología Social. Universidad Complutense de Madrid

## **RESUMEN**

Existe hoy en muchos países un interés creciente por modelos de formación que estén orientados por la práctica y respondan a las necesidades del mercado de trabajo. El nuevo sistema de Aprendizaje Dual (FP Dual) para enseñar y aprender, se implantó en la Comunidad Valenciana en 2012. Si bien la FP Dual goza de considerable apoyo por parte de instituciones y de políticos que creen en su potencial para reducir el desempleo juvenil, el hecho es que se encuentra todavía en una fase piloto. Este informe se basa en la investigación llevada a cabo en Valencia (2016/2017) con objeto de explorar las normas culturales y organizacionales y las barreras y las oportunidades que pueden afectar y/o contribuir a su introducción. La investigación, fase inicial de proyecto más amplio, incluye entrevistas con las diferentes partes interesadas.

## **PALABRAS CLAVE**

Aprendizaje; formación en el lugar de trabajo; Sistema dual de FP; cultura (s) de entrenamiento; profesores / formadores; desarrollo local; políticas de empleo; desempleo; actores sociales; sistemas de calificaciones

## **1. Introduction - aims of project**

The Spanish economy, still struggling from the impact of the 'crisis', is struggling with persistently high levels of youth unemployment and low skills levels. Unemployment is especially high for those leaving school early with no qualifications and for recent graduates (Esenciales Fundación BBVA, 2016).

A series of reports have suggested that moving beyond the school based, initial vocational training system to adopt a dual system based, apprenticeship model offers benefits to the economy, to companies and to individuals (Wolter and Mühlemann, 2015).

However, other research points to the difficulties in transferring models developed in one culture – such as the German Dual apprenticeship system – to other cultures and countries (Pilz, 2016). A review of research literature suggests a series of issues with implementing apprenticeship in Spain (Cedefop, 2015). These include the weakness of trade unions at a company level (despite their institutional strength), educational polarisation between vocational and higher education, resistance at company level, resistance by families and young people, variation in co-ordination between actors from region to region, complex interactions between national and regional levels, the government, social partners and employment organisations and, of course, the ongoing economic crisis.

With the support of the EU Youth Guarantee and backing from the Bertelsmann Foundation, the Spanish government has established an experimental apprenticeship framework, with pilots designed to run in parallel to existing VET schemes (Refer Net Spain, 2014). However, the implementation of the programmes varies greatly in different Autonomous Communities, based on different cultures, different economies and different organisational and governance forms. This has rendered evaluation problematic.

In a report, Clara Bassols and Guillem Salvans (2016) conclude that the Spanish Dual VET system is presently underdeveloped and needs to be refined and improved to ensure that it is genuinely capable of providing young people with the necessary professional skills and thus employability. In comparing developments in Spain with the German Dual apprenticeship training system, they say that while the two Dual VET systems will never be exactly the same, comparison with Germany reveals that the Spanish system lacks some of the defining strengths of the German system. That the Spanish Dual VET system is so new is viewed as “an opportunity to make changes before it becomes too entrenched.”

It is our hypothesis that the development of apprenticeship programmes in Spain needs to be developed to build on existing cultural and organisational norms. Furthermore, this requires an in depth understanding of the critical factors in the perception of apprenticeship by different actors / groups and how that affects the development and implementation of apprenticeship programmes.

The ‘Understanding cultural barriers and opportunities for developing new apprenticeship programmes’ project is to undertake research based in one Autonomous Community, Valencia, to explore the cultural and organisational norms and the barriers and opportunities these afford to introducing apprenticeship.

## **2. The context for apprenticeship in Valencia**

### **2.1 The geography, economy and labour market**

The Valencian Community is an autonomous community of Spain located along the Mediterranean coast in the south-east of the Iberian Peninsula. It is the fourth most populated region, after Andalusia, Catalonia and Madrid with more than 4.9 million inhabitants, 10.68% of the total Spanish population. It is formed by the provinces of Castellón, Valencia and Alicante and the capital city, Valencia, is Spain’s third largest city.

By gender, women make up 50.59 % of the population, similar to the Spanish average of 50.90 %. Valencia is one of the Autonomous Communities with the highest proportion of foreign nationals (14.02 % of the population). Of the 697,681 foreign nationals, 50.34 % are men and 49.66 % are women, mainly from Romania, United Kingdom, Morocco, Ecuador and Germany.

The Valencian economy by Sector (as percentage of regional GDP)

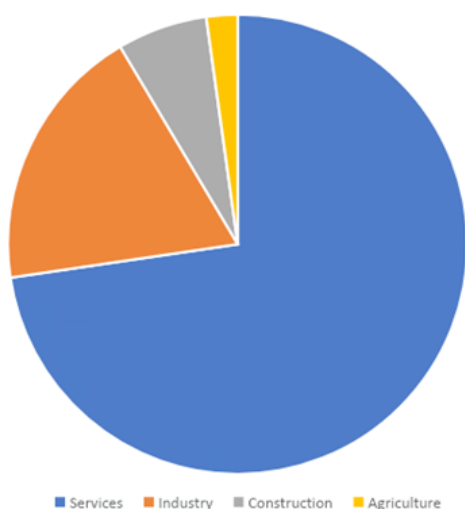


Figure 1. The Valencian economy by Sector (2014, as a percentage of regional GDP). Source: Valencia Statistical Office

The most significant areas within the services sector were wholesale/ retail trade, transport, restaurants and hotels (2 %); artistic, recreational and entertainment activities; household appliance repairs and other services (2.8 %), financial and insurance activities (3.1 %), real estate activities (2.1 %) and information and communications (4.6 %).

Companies in Valencia by Sector )

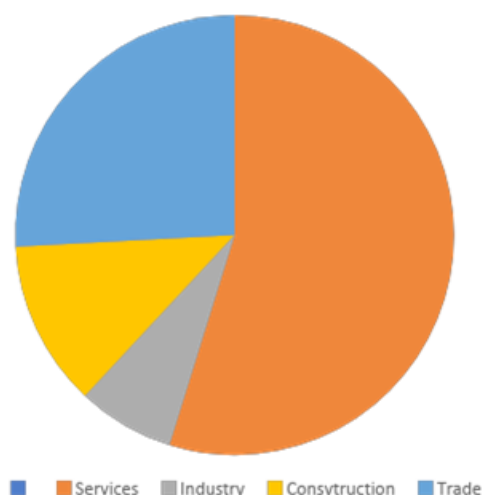


Figure 2. Companies in Valencia by sector. Source: EURES

According to the Central Companies Directory (DIRCE), the number of active companies on 1 January 2015 was 339 533.

The economically active population in the Community of Valencia during the third quarter of 2015 was 2,425,600 persons, of whom 45.69 % were women. The rate of activity was 59.13 %, which is slightly lower than the national rate of 59.50 %. In the third quarter of 2015, the employed active population stood at 1,882,900 persons, of whom 44.94 % were women. Of those employed, 72.90 % were in services, 17.32% in industry, 6.10 % in construction and 3.68 in agriculture (EURES).

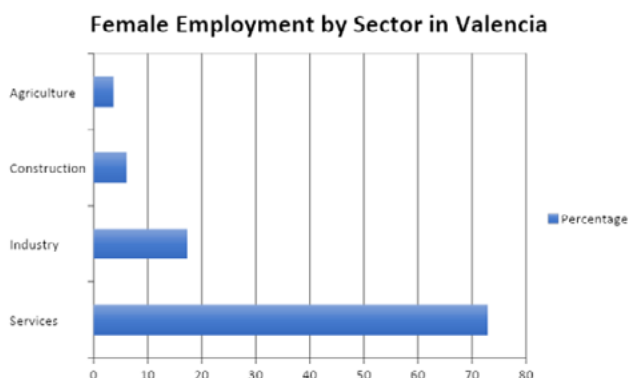


Figure 3. Female employment by sector in Valencia. Source: EURES



Figure 4. Male employment by sector in Valencia. Source: EURES

In the same quarter, the active unemployed population amounted to 542 600, 48.29 % of whom were women. The unemployment rate in the Community was 22.37 %, which is higher than the national unemployment rate of 21.18 %. The female unemployment rate was 23.64 % and the male rate was 21.30 %. The unemployment rate among foreign nationals was 28.71 %. The number of workers registered with the Social Security system in September 2015 was 1,627,618, 169 946 of whom were foreign nationals, which represents 10.33 %.

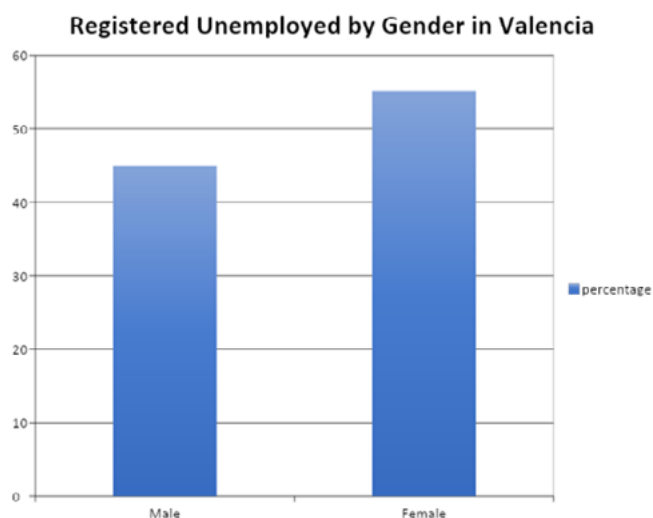


Figure 5. Registered Unemployed by gender in Valencia. Source: National Public Employment Service Jobs Observatory

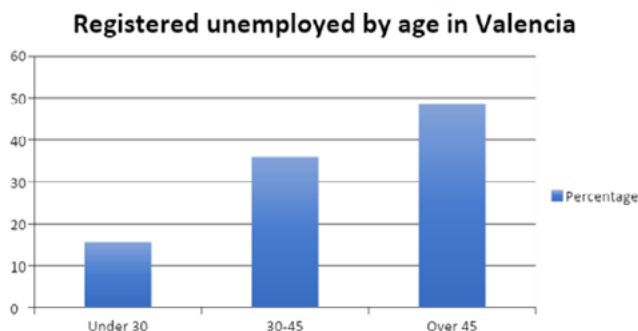


Figure 6. Registered unemployed by age in Valencia. Source: National Public Employment Service’s Jobs Observatory

14.08 % of the total number of unemployed were foreign nationals. The number of unemployed jobseekers registered for longer than 365 days was 46.55 %. Finally, 4.45 % had some type of disability.

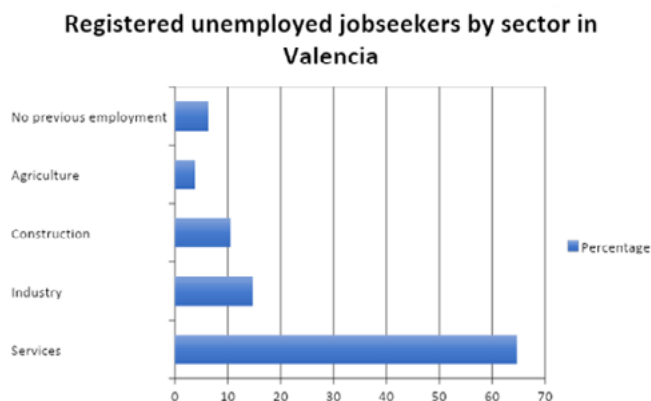


Figure 7. Registered unemployed jobseekers by sector in Valencia. Source: National Public Employment Service’s Jobs Observatory

These detailed statistics need some interpretation in terms of their implications for the development of apprenticeship programmes. Firstly, there is a high number of small retail shops, restaurants and bars in the services sector. It will be hard to persuade these micro SMEs to become involved in supporting apprenticeship. It should also be noted that a substantial number of service staff are employed in the tourism industry which is to some extent seasonal in nature and therefore not likely to become involved in ongoing apprenticeship programmes. On the other hand, the prevailing numbers working in manufacturing may provide a readier base for apprenticeship programmes. It is not clear whether apprenticeship will become established in the Craft sector, which is numerically important in the Dual Apprenticeship system in Germany. Furthermore, although slow, the construction sector is showing signs of some upturn. With the near collapse of the sector at the peak of the crisis, some forms of reskilling will be necessary to advance employment and productivity in this sector. The likelihood of different sectors becoming involved in the new apprenticeship programme is also related to active Labor Market and Employment policies.

## 2.2 The crisis and youth unemployment

The unemployment rate in Spain declined to 18.91 percent in the third quarter of 2016 from 20 percent in the previous three months, reaching the lowest since the last quarter of 2009 when unemployment was recorded at 18.66 percent. However, Spain still has second highest

unemployment rate in the European Union after Greece. In the Valencian Community those unemployed fell by 29.2 thousand. Despite these improvements, it should be noted that the majority of jobs were for temporary contracts, indeed the number employed on permanent contracts actually fell.

Yet despite improving overall employment figures, youth unemployment remains persistently and worrying high. In September, 2016 it fell just 0.5 percent, to 42.60 percent. This compares to an average of 34.51 percent from 1986 until 2016, reaching an all-time high of 55.90 percent in February of 2013 (EURES, 2016).

A large percentage of young people work on temporary contracts (almost 70% for those under 25), often within sectors that require low levels of qualification and that are especially vulnerable to economic crises – and subsequent job contraction (e.g. the building sector, tourism, services). However, the youth unemployment problem in Spain is not only due to the latest economic crisis: it is endemic and has been well above 15% for the past three decades (Poulson and Eberhardt, 2016). This may be partly because Spain has the highest percentage of early school leavers of all EU countries (22% as compared to the European Union average of 11%).

However, at the same time Spain has already achieved - indeed surpassed - its target for university graduates as laid down in the Europe 2020 growth plan. Overall, there is a strong preference for higher academic education in Spain, despite employment outcomes for university graduates being much different to those for graduates of higher levels of vocational training (Poulson and Eberhardt, 2016).

### 2.3 Vocational education and training in Spain and Valencia

There are three main modes of vocational education and training in the Spanish education system. Basic vocational education and training is a new programme, replacing the previous Initial Professional Qualification programme, and introduced largely for those at risk and potential dropouts (not in education, training or employment), “ninis” in Spanish. It has 2000 hours of theoretical and practical training of which 240 hours must be undertaken in the workplace. It is an optional and transitional course addressed to young people aged 15-17 years that have ended the third course or exceptionally the second course of the secondary mandatory education (ESO). The courses combine teaching in maths, literacy and other academic subjects with teaching in a vocational field, including training at the workplace. Pupils that pass the course gain a Basic Technical Professional diploma and a level one qualification according to the National Catalogue of Professional Qualifications (ISCED 1). Moreover, they will be allowed to enter into an Initial Vocational Education and Training programme at intermediate level.

The other two programmes are intermediate and higher level VET. Intermediate is for those who enter after completing compulsory secondary education, while higher level VET is for those who have already completed their intermediate level training or have finished upper secondary school. Higher level VET enables direct access to university. Both last two years and offer 2,000 hours of teaching and both are also part of the new Dual VET system. Figure 8 shows the changing patterns of enrolment in the different modes of training in Spain between 2004 and 2-15

### Trends in student enrolment in vocational training

	2004-2005	2009-2010	2014-2015
<b>TOTAL</b>	<b>462.975</b>	<b>537.571</b>	<b>748.588</b>
Basic vocational training	-	-	40.468
Intermediate vocational training (classroom attendance required)	231.365	271.990	331.695
Distance intermediate vocational training	2.148	5.935	21.297
Advanced vocational training (classroom attendance required)	225.964	245.354	320.243
Distance advanced vocational training	3.498	14.292	34.885

Figure 8. Student enrolment in vocational training 2004 -2015. Source: Spanish Ministry of Education

The following figure (Figure 9) shows a breakdown of vocational training students for 2015 in the different autonomous communities of Spain. The statistics also shows the number enrolled on the traditional classroom based training programmes as opposed to those undertaking training through distance learning.

### Vocational Training Students by autonomous community. 2014-2015 school year

	Total	Basic vocational training	Intermediate voc. training		Advanced voc. training	
			Classroom	Distance	Classroom	Distance
<b>TOTAL</b>	<b>748.588</b>	<b>40.468</b>	<b>331.695</b>	<b>21.297</b>	<b>320.243</b>	<b>34.885</b>
Andalucía	128.984	8.633	62.713	683	51.863	5.092
Aragón	20.935	1.438	9.388	683	8.129	1.297
Asturias (Principado de)	17.134	447	6.731	1.356	7.227	1.373
Balears (Illes)	13.321	1.728	5.744	825	4.322	702
Canarias	41.224	2.045	14.759	5.077	14.215	5.128
Cantabria	11.918	450	4.850	1.056	4.538	1.024
Castilla y León	40.963	2.502	18.056	1.834	16.654	1.917
Castilla-La Mancha	36.231	2.827	15.669	1.333	13.668	2.734
Cataluña	120.935	0	56.496	2.521	55.418	6.500
Comunitat Valenciana	90.227	5.418	43.188	77	40.800	744
Extremadura	18.148	1.426	7.851	486	6.940	1.445
Galicia	49.789	2.086	20.954	1.918	22.067	2.764
Madrid (Comunidad de)	79.748	5.254	33.618	1.364	37.463	2.049
Murcia (Región de)	23.867	2.249	10.223	1.173	9.411	811
Navarra (Comunidad Foral de)	8.179	497	3.594	244	3.555	289
País Vasco	37.462	2.294	13.894	294	20.529	451
Rioja (La)	5.610	581	2.551	65	2.120	293
Ceuta	2.133	262	707	259	768	137
Melilla	1.780	331	709	49	556	135

Figure 9. Vocational training in Spanish Autonomous Communities. Source: Spanish Ministry of Education



Figure 10 (below) shows a breakdown of vocational students in Spain by gender and by vocational family. It also shows the percentage of those students who were admitted to the course following an ‘admissions test’ to recognise competence gained through experience, rather than already having the required qualifications for being admitted to the programmes.

Students enrolled in vocational training <sup>(1)</sup> by vocational family, gender and form of admission. 2013-2014 school year

	Intermediate			Advanced		
	Total	% Females	% Admissions testing	Total	% Females	% Admissions testing
<b>TOTAL</b>	<b>350.250</b>	<b>43,2</b>	<b>13,7</b>	<b>348.444</b>	<b>48,1</b>	<b>26,9</b>
Agricultural activities	7.368	13,1	17,8	5.824	17,9	31,5
Physical and athletic activities	7.574	19,4	14,7	16.773	18,4	24,7
Marine and fishing activities	1.766	5,6	16,2	1.725	9,2	29,3
Administration	55.085	63,4	11,6	53.032	65,8	27,1
Graphic arts	3.286	37,8	11,6	1.998	45,5	23,9
Sales and marketing	14.513	58,2	13,9	21.066	49,8	27,5
Communication, audiovisual media	3.675	45,7	11,1	12.471	35,4	17,9
Building and civil engineering works	856	10,0	16,0	6.243	30,3	17,8
Electricity and electronics	34.753	2,6	15,1	25.120	5,0	32,3
Mechanical manufacturing	12.612	2,9	15,5	8.372	8,5	32,4
Hospitality and tourism	19.958	37,9	15,0	20.025	58,1	22,0
Personal image	20.825	93,9	11,4	6.340	96,1	24,3
Food industries	4.492	51,5	13,3	1.872	47,1	21,6
Computer science	28.780	10,2	14,2	38.573	14,1	29,5
Wood and furniture	2.956	5,1	14,8	763	19,4	27,7
Maintenance and production services	12.798	1,6	13,9	12.843	17,2	29,3
Automobile maintenance	28.797	2,0	16,4	10.253	3,1	36,5
Chemistry	3.123	56,1	15,3	7.031	50,7	26,6
Health	66.253	73,0	13,5	39.736	73,2	25,6
Social, cultural and community services	19.773	85,7	11,8	53.582	89,2	26,9
Textiles, garment making and leather/fur	942	87,7	7,0	1.370	88,7	10,5
Glass and ceramics	36	8,3	-	17	23,5	-
Crafts	0	-	-	111	45,9	-
Energy and water	0	-	-	2.869	8,9	30,0
Safety and environment	0	-	-	435	42,1	24,4
Undistributed	29	-	18,8	0	-	-

(1) Classroom and distance studies are included, except for admission data, which only refer to studies requiring classroom attendance.

Figure 10. Students in Vocational training in Spain. Source: Spanish Ministry of Education

In Valencia, the following number of students were undertaking vocational education and training in the different regions of the Valencia Autonomous Community in 2014-2015, also broken down by Public and Private centres (Figure 10, below).

	Alicante	Castellón	Valencia	C. Valenciana
<b>Centros Públicos</b>				
Grado Medio	11.664	4.279	16.250	32.193
Grado Superior	11.189	3.712	19.166	34.067
<b>Total</b>	<b>22.853</b>	<b>7.991</b>	<b>35.416</b>	<b>66.260</b>
<b>Centros Privados</b>				
Grado Medio	3.230	1.341	6.669	11.240
Grado Superior	646	553	6.404	7.603
<b>Total</b>	<b>3.876</b>	<b>1.894</b>	<b>13.073</b>	<b>18.843</b>
<b>Total alumnado</b>				
Grado Medio	14.894	5.620	22.919	43.433
Grado Superior	11.835	4.265	25.570	41.670
<b>Total</b>	<b>26.729</b>	<b>9.885</b>	<b>48.489</b>	<b>85.103</b>

Figure 10b. Vocational training in the Valencia Autonomous Community. Source: Valencian Economic and Social Council

## 2.4 Vocational education and training and Apprenticeship in Europe

There is increasing interest in many countries in training models that are practice-oriented and correspond to the needs of the labour market. In Europe, in view of the generally high youth unemployment rates, apprenticeships are seen to be a key to providing young people with direct access to the labour market. Apprenticeships are viewed as a sustainable model for an education system that takes the needs of the labour market into consideration and uses them for comprehensive competence development based on an occupational standard (Poulson and Eberhardt, 2016). Apprenticeship is also seen as a profitable investment or companies benefitting from the work apprentices undertake as well as an increasingly skilled workforce.

Poulson and Eberhardt (2016) point out that the overall objective of contemporary apprenticeship systems “is not significantly different from that of the medieval systems. An apprenticeship system is meant to ensure the relevance of vocational education and training (VET) to labour market needs and thus the employability of the VET graduates.”

Indeed, Spain has a long history of apprenticeship provision going back to pre-industrial times. Although this report is focused on modern apprenticeship practices, it is important to note that even in this earlier period there were marked differences in what apprenticeship meant in the cities and regions of Europe. The institutions involved, the duration and conditions, the legal form and standing of the contract, the relationship of apprenticeship to subsequent occupational status all varied widely. It seems likely that the scale of training, the type of people who entered, and the consequences that service had for their lives may also have been very different (see, for example, Agua de la Roza and Nieto Sánchez, 2015).

In the same way, there are important differences in social and educational models and regulations and of understandings of the meaning and organisation of modern apprenticeship in different European countries. Some definitions of apprenticeship are quite narrow and focus solely on the alternation between school and company; others go beyond the learning at two learning venues and take the steering of VET into account.

For the purposes of the European Alliance for Apprenticeships (EAFE), apprenticeships are understood as

*a particularly successful form of work-based learning, which is based on the following principles:*

- ♦ Apprenticeships are part of formal education and training programmes and lead to a nationally recognised qualification;
- ♦ Apprenticeships combine company-based training (periods of practical work experience at a workplace) with school-based education (periods of theoretical/practical education in a school or training centre);
- ♦ Most often there is a contractual relationship between the employer and the apprentice, with the apprentice being paid for his/her work<sup>5</sup>.

---

5 See: <http://ec.europa.eu/social/main.jsp?catId=1175&langId=en>

Cedefop, the European Centre for the Development of Vocational Training, regards apprenticeships as:

*systematic, long-term training alternating periods at the workplace and in an educational institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation (Cedefop, 2014).*

Eurostat defines apprenticeship as follows:

*apprenticeships aim at completing a given education and training programme in the formal education system. Learning time alternates between periods of practical training at the workplace (inside or outside the employer premises) and general/theoretical education in an educational institution or training centre (on a weekly, monthly or yearly basis) by the following criteria:*

- ♦ The apprenticeship is a component of a formal education programme;
- ♦ Upon successful completion, as evidenced by a qualification or certificate, apprenticeships qualify for employment in a specific occupation or group of occupations;
- ♦ The characteristics of the apprenticeship (e.g. occupation, duration, skills to be acquired) are defined in a training contract or formal agreement between the apprentice and the employer directly or via the educational institution;
- ♦ The participant (apprentice) receives remuneration (wage or allowance);
- ♦ The duration of the contract or formal agreement is at least six months and at most six years. In most cases, the apprenticeship contract or formal agreement involves an employer and a person not having any other formal arrangement with the latter before the apprenticeship starts” (Eurostat 2010).

One of the key points for the European Alliance for Apprenticeships in pursuing an employment agenda is: “Strong partnerships at all governance levels between public authorities, social partners, businesses, VET providers, youth representatives, employment services and where appropriate chambers for effective design and functioning of apprenticeship schemes” (European Commission, 2013).

## 2.5 Understanding apprenticeship and the launch of FP Dual in Spain

The different definitions of apprenticeship are important in developing a discourse with the actors involved with vocational education and training and apprenticeship in Spain. The new apprenticeship programme in Spain is called Formación Profesional Dual (Dual Vocational Education and Training) - the term Dual reflecting that training takes place in both the school and the company. However, our discussions and interviews revealed different and contested considerations of what does and what should constitute an apprenticeship programme. In fact, the term ‘alternance’ appeared more familiar than apprenticeship. Some of those interviewed saw the present intermediate and higher vocational training programmes as near to apprenticeship in that they included a period of work experience at the end of the programme. As will be explained in section four of this report, there was a varying level of knowledge and experience of the new Spanish apprenticeship

programme and the prospects for its future. The first pilot projects took place in 2011 and in 2012 apprenticeship training became part of Spain’s vocational education system. However, it is important to note that the law establishing the programme left to the Autonomous Communities considerable leeway in the form of the programme and how it should be developed. The speed and dynamic of development varies between the different Autonomous Communities.

The extension of FP Dual has been driven, at least at a national level, by the Alliance for Apprenticeship which is developing a state-wide network of companies, educational centres and institutions committed to the development of a high-quality Dual VET system in Spain under the banner “Alianza para la FP Dual” (Alliance for Dual Vocational Training). To date, they claim 61 companies have joined the Alliance and around 40 more are in the process of joining. The Alliance is backed by the Bertelsmann Foundation, the Princess of Girona Foundation, the CEOE-CEPYME (Spanish Confederation of Employers’ Organisations-Spanish Confederation of Small and Medium-Sized Enterprises) and the Spanish Chamber of Commerce.

ACCIONES FORMATIVAS POR PROGRAMAS EN LA COMUNITAT VALENCIANA, 2015				
	Cursos	Alumnos	Horas	Subvención
Formación Profesional para Desempleados	1.117	16.710	388.502	27.620.920,00 €
La Gestión en la Red de Centros Servec de Formación de Titularidad Pública	203	2.875	87.544	0,00 €
Formación Profesional no subvencionada	185	3.326	88.080	0,00 €
Formación Profesional Dual	32	75	4.862	0,00 €
Programas de Empleo-Formación. Talleres de Empleo	143	2.692	156.480	28.644.051,00 €
<b>Total Comunitat Valenciana</b>	<b>1.680</b>	<b>25.678</b>	<b>725.468</b>	<b>56.264.971,00 €</b>

Fuente: Subdirección General de Formación Profesional para el Empleo. Conselleria d’Economia Sostenible, Sectors Productius, Comerç i Treball.

Figure 11. Apprenticeship courses in Valencia in 2015. Source: Economic and Social Council of Valencia

Adoption of the Formación Profesional Dual (or apprenticeship programme) has been slow in the Valencia Autonomous Community. As Figure 11 (above) shows, in 2015 there were only 32 courses being offered. However, although we do not have up to date figures, it is apparent that there has been a considerable expansion in 2016 and an increasing dynamic behind developing the new apprenticeship programmes<sup>6</sup>.

<sup>6</sup> Further information on vocational education and training in Valencia can be found in the CVET Reports of the Tripartite Foundation (2012) - “Comunitat Valenciana. Encuesta a Empresas de 1 a 4 trabajadores” [www.sepe.es](http://www.sepe.es) and Fundación Estatal para el Empleo (2015) “Formación en las Empresas 2015 Comunitat Valenciana” [www.fundae.es](http://www.fundae.es).

In Valencia, those we talked to tended to see the origins of the new apprenticeship programmes as the German Dual System. Indeed, it is striking that the new programme has been named FP Dual. However, it is important to note that even taking into account differences in the programmes between the Autonomous Communities, there are important differences between the German Dual System and FP Dual, as documented by Bassols and Salvans (2016). In Spain (in contrast to Germany):

- ♦ Young people enrol in the educational centre and apply to pursue dual vocational training. The educational centre is responsible for finding companies willing to offer apprenticeship places. Trainee selection is unregulated. In practice, the educational centre makes a first selection. Companies sometimes play a role in selecting their trainees.
- ♦ There is no specific contract for Dual VET. In some cases an employment contract is signed and in others the company awards a scholarship. In both cases the student is covered by Spanish Social Security. In most cases, trainees receive some form of compensation for the time they work in the company, although this is not compulsory in all regions. They are not paid for the time they spend at the educational centre.
- ♦ There are no general regulations regarding what content is taught in educational centres and what is taught in the company. There is no final exam to accredit the training received in the company. Only the educational centre can accredit training, even if training is provided by a company.
- ♦ One region has established minimum requirements for the training of tutors; there are no regulations in place in the other regions. No accreditation or exams are planned for tutors.
- ♦ There is sufficient flexibility to adapt the content of the curriculum to the needs of companies. Adaptations must be approved by the relevant Education Authority.
- ♦ In many cases, Dual VET students share the same classroom with other students taking traditional VET. Teachers are the same for both training models.

## 2.6. Apprenticeship: an experimental approach in a period of political instability

It is important to be aware that the new FP Dual apprenticeship programme is still experimental, that different Autonomous Communities have developed different approaches and regulations and that in Valencia, which is the main focus of this report, the adoption has been slow. It is also important to understand that the change comes against a background not only of the 'crisis' and endemically high levels of youth unemployment, but against a background of continuing political instability. It was only in November 2016 that a new national minority government was approved, after a period of over a year with only a caretaker government following two inconclusive national elections. In Valencia, the September 2015 elections saw major changes, with the Popular Party (PP) losing power for the first time after the end of the dictatorship in 1975. The new Autonomous government is a coalition led by the Compromis regional party, together with support of the Socialist Party (PSOE) and the leftist Podemos party, which itself was only formed in 2014. Education is obviously an important area of policy and governmental instability has led to uncertainty about the future development and implementation of change in vocational education and training.

### 3. The project methodology

#### 3.1 An Action research approach

A key aim for the project was to understand the introduction of an education innovation -apprenticeship - within a local setting and with a wide range of different actors.

The project adopted an action research approach. Our aim was to develop an understanding of the underlying causes of issues relating to the introduction of educational practice in order, in the longer term, to arrive at consensus by different social partners on how practice can be improved. The work undertaken through this project is seen as the initial phase of a wider action research project. In this phase, our main focus has been on qualitative research with different actors who may have an important voice in this area, the organisation of apprenticeship, the role of different organisations and the cultural factors affecting the provision and reform of vocational education and training in the Valencia Community and in Spain.

Action research is seen as appropriate for understanding a context in which lay and professionally oriented community members, and multiple organizations and institutions are working to achieve a broad array of shared and highly interrelated community goals, despite sometimes different views on how this can be achieved,

In the context of work research, Elden (1983) introduced the notion of 'local theory'. To understand the challenges of each specific workplace, he said, as well as how to attack them, there is a need to understand this specific workplace. In a similar way, we would suggest the need to understand the specific ideas and activities and 'theories' of different actors involved at a local level in apprenticeship. Here, theory might be understood as the specific pedagogic and learning approach of apprenticeship in bringing together vocational training within schools with alternance periods spent within companies. One objective for our research is how such theory is linked to practice in introducing and supporting such programmes.

In developing action research, Gustavson (2008) has noted that while patterns of organisation are local, the mechanisms through which they are generated can be made subject to generalisation. However, it is also possible for one single mechanism to trigger off a substantial number of local development processes on the practical level. Actors within schools and other training institutions may be inspired by a concept (De Bruijn E., 2004) but act on the basis of their own interpretations. In educational research, an understanding of a systematic relationship between 'the concept' and the linked development of educational practice is lacking. Methodological approaches which genuinely link conceptual developments to innovating educational practice are, however, based upon this relationship.

The key issue in such approaches is that knowledge is seen as a multidimensional concept which has different 'shapes' and different 'functions' (ibid). Such knowledge multidimensionality can be seen in the various descriptions in the European Qualification Framework (EQF), where knowledge (*K*) is linked to skills (*S*) and competences (*C*), subdivided under the labels of "autonomy" and "responsibility. The European Commission (1996) said "The position of everyone in relation to their fellow citizens in the context of knowledge and skills therefore will be decisive. This relative position which could be called the learning relationship will become an increasingly dominant feature in the structure of our societies (p. 17). This cognitive "learning relationship principle" together with "learning outcomes approaches" constitute now both linguistically and conceptually

a component in the Vocational Education and Training domain and discourse at different levels. The recent EU Council Recommendation on Quality Apprenticeship Framework considers the issue in its criteria for learning and working conditions: *“the delivery of a comprehensive set of learning outcomes... that ensure a balance between job-specific skills, knowledge and key competences for lifelong learning...”* Learning Outcomes act not only as standards and as a process of social construction but in its real uses, how they are internalized and adapted by social actors. For VET teachers and trainers, they are part of their normative environment, sort of paradigm, Frameworks are by nature reductive and are in need of continuous renewal and, where appropriate, adaptation.

The multidimensionality of knowledge and the process of creating knowledge also presuppose an ‘actor’ approach in which, for example, the work of Gustavson (2001) on action research is relevant. In exploring the impact of research on innovation in practice, the position and function of the various actors involved in the process of knowledge creation is crucial (see e. g. Manske, Moon, Ruth and Deitmer, 2002). To develop a longer-term action research project bringing together the different actors at a community level, it is important to give voice to these different actors.

Altman (1995), Best et al. (2003), and others (e.g., Conner & Tanjasiri, 1999) contend that the effective practice of action research -especially the development of evidence-based, sustainable community interventions- depends heavily on the adoption of community partnering strategies in which researchers, lay citizens, and community leaders work together, often over extended periods, in a highly collaborative and equitable fashion.

Whilst realising that such an approach and methodology would require a longer time frame than the current project allows, the work undertaken here is intended as the basis for a longer term action research project if support can be obtained. This would allow an informed and participatory discussion enabling future projections about personal and organizational change. Our longer-term intention is not merely to document the reform measures but to challenge the status quo and contribute to the dynamic of social and educational change and reform in Valencia.

### 3.2 Social actors in apprenticeship in Valencia

In the first stage of the project, we identified the major actors involved in the development and introduction of the apprenticeship programmes in Valencia. These included:

- a. Vocational Training Schools (directors, teachers, tutors) that can give an overview about how the different modalities of apprenticeship programmes are working in their centres and the challenges for vocational training in the current scenario of educational reforms.
- b. Policy Makers (regional government and political parties and organisations). In Spain responsibility for the education system is shared between the national Ministry of Education and the regional governments. The Ministry is in charge of developing government policies on education and vocational training and the Autonomous Communities are responsible for implementing the administration of the education system at regional level. At present, in the Valencia Community, the regional government has launched different measures to adapt the vocational training to the needs of the economy in the Valencia region. In this scenario, we are interested in what kind of measures are adopted by the regional government to improve vocational training through apprenticeship, what are the main problems in its implementation,

and what is the perception of the rest of political parties and organisations about how vocational training is working in the Valencia Community.

c. Students and trainees are an important group and more so in the current Spanish situation with high levels of youth unemployment and with one of the highest rates of young people who are not in education, employment or training (NEET) in the European Union, indicators to which we can add those on school failure and early school leaving.

d. With a weak careers counselling and guidance system, parents play an important role in the education and professional future of their children. What influence do parents have in the future professional development of their children?

e. Companies are a key element in vocational training. The application and development of apprenticeship programmes should take into account the role of the company in this process. In the Valencia Community, most companies are Small and Medium Enterprises (SMEs). In this situation involving companies in apprenticeship programmes is difficult. Therefore, it is critical to understand what are the main barriers for companies to support apprentices in company training.

### 3.3 Purposive Sampling

The project adopted the idea of purposive sampling as a basis for selecting respondents for interviews. Subjects are selected because of a particular characteristic - they have something useful to tell us about apprenticeship. Patton (1990) has proposed purposive sampling is useful for the following reasons:

- *to deal with relatively low numbers;*
- *it is possible to select extreme cases, learning from highly unusual manifestations of the phenomenon of interest, such as outstanding success/notable failures;*
- *to be able to find intense cases where individuals or organisations give us access to information;*
- *to select rich cases that manifest the phenomenon intensely;*
- *to be able to search for maximum variation - purposefully picking a wide range of variation on dimensions of interest and documenting unique or diverse variations that have emerged in adapting to different conditions;*
- *to identify important common patterns that cut across variations; to be able to Snowball or Chain;*
- *to make possible the identification of cases of interest from people who know people who know people who know what cases are information rich, that is, good examples for study, good interview subjects;*
- *to be theory based and test an operational construct finding manifestations of a theoretical construct of interest so as to elaborate and examine the construct (in our case apprenticeship);*
- *to confirm or disconfirm while elaborating and deepening initial analysis, seeking exceptions, testing variation;*



- *to be opportunistic- following new leads during fieldwork, taking advantage of the unexpected, flexibility.*

Although this provides a general basis to understanding our approach, it does not explain how the individuals and organisations were selected. In the first instance, a flier about the project was produced in electronic and paper formats. This was distributed to a wide range of the different actor organisations as identified above. This was followed up by telephone calls or personal visits to organisations. It should be noted that respondents have explained to us that the timing was unfortunate – August is a holiday month in Valencia and September and October are the busiest time of the years in the vocational training centres. The pressure of enrolment and programme and staffing arrangements are normally stressful and for many of the organisations this was compounded by the introduction of new apprenticeship programmes.

Ideally we would have sought a larger sample than was possible within the constraints of a resource and time limited research project. Despite (and because of) this we were particularly interested in seeking interviewees that could provide rich cases in a wide range of variation on dimensions of interest including different sectors but also those that had a leading role in introducing apprenticeship programmes.

Members of the research team discussed the findings on an ongoing basis. In the latter phase of the research we sought interviewees that could confirm or elaborate on our initial and deepening analysis, seeking exceptions and testing variations. In this we were greatly helped by those initially interviewed who were willing to provide us with further contacts and personal introductions.

Our initial findings drew attention to the centrality of the vocational training centres in driving the process of apprenticeship adoption. Thus, we organised further interviews with these organisations.

The principal investigator also attended two important conferences. The first was organised in Madrid by the Alliance for Apprenticeship, involving policy makers and companies as well as apprenticeship providers from throughout Spain. The second was a first of three regional conferences and workshops organised jointly by the Autonomous Community government and the Bertelsmann Foundation in the Valencia Community which, as well as involving companies and vocational schools, also invited apprentices to attend. At both events, we could undertake further interviews with different social actors.

It should be noted that within the time constraints we were not able to interview all those actors that we wished. Despite numerous approaches we were unable to arrange meetings with the representatives of the main political parties nor with the Valencia Community administration. Although part of the problem is undoubtedly time issues, our impression is that even when willing to collaborate, some of the political parties were finding it problematic in finding experts for us to meet. It may also be that the ongoing political uncertainty over the future direction of the apprenticeship programme was an issue for these groups.

Parents, it would appear, have not often been included as a prime actor in apprenticeship research, although they feature highly in studies into how young people decide on training and careers and the role of counselling and guidance (see, for example, Grinstad and Way, 1993). However, in a country with weak counselling and guidance systems, with low esteem for vocational training as opposed to academic qualifications and where apprenticeship is little known, parents

may play an important role in help shaping young peoples' future career decisions and we were particularly interested to explore their perception of apprenticeship. In this case, rather than conduct individual interviews, we held group discussions.

The interviews were conducted face to face. They were based on a semi structured questionnaire with slightly different versions dependent on the different stakeholders. The questions provided a general framework, rather than focusing more narrowly on the apprenticeship programmes themselves. This was thought to be important as key questions were how apprenticeship is located within the wider education and training offering and organisations, the dynamic and processes of change within organisations concerned with apprenticeship and particularly the relations and networks between different social actors and within the wider social and cultural understandings within the Valencia Community. However, the discussions were often wider than the questionnaires and for some issues went much deeper than the more general questions. Although we did not indicate in advance how long the interviews would take, most lasted around an hour and a half and some considerably longer. Most of the interviews were recorded on audio. It is noteworthy that in many cases, respondents were keen to continue discussions 'off the record' without a recording device. Whilst obviously, we cannot use this material in our account of findings, they have provided us with a much richer background understanding of the issues.

The interviews were undertaken in the Spanish language and transcribed in Spanish before translating them to English.

Although the initial organisation of interviews had been problematic, most of those interviewed said they valued the process of the study. One reason for the length of the interviews seemed to be the appreciation of the opportunity to give voice to their ideas and feelings. There was an impression that despite the many official reports, there had been little consultation with those central to the process of introducing apprenticeship or opportunities for them to discuss issues of concern. Many of those interviewed stated their willingness to continue the dialogue and were keen to receive copies of our draft report and have promised us feedback on our findings.

### 3.4 Interview list

The following tables provide an overview of those interviewed in each of our target actor categories.

<b><i>Interview number</i></b>	<b>Type of the school</b>	<b>Role in the school</b>	<b>Occupational field</b>
1	Integrated Centre	Teacher	Health, Electricity and Electronic, Administration and management, Hotel Industry and tourism
2	Integrated Centre	Head of Studies	Administration and management, Trade and marketing, Electrical and Electronics, Socio-cultural services and the community
3	National Reference Centre	Director	Wood, Furniture and Cork
4	Integrated Centre	Director	Wood and Furniture, Energy and Water
5	Integrated Centre	Teacher	Electricity and Electronics, Socio-cultural and community services, Health, Installation and Maintenance, Trade and marketing

6	Private University	Professor	Administration and Management, computing & Communication, Hotel Industry & Tourism
7	Institute of Secondary Education	Professor	Socio-cultural Services and the Community
8	Integrated Centre	Teacher	Chemistry, Electricity and electronic, Construction and Civil work, Installation and Maintenance, Mechanics and Manufacturing
9	Institute of Secondary education	Head of Studies	Administration, Communication, Trade and Marketing

### 3.5 Policy makers

<b>Interview number</b>	<b>Policy organisation</b>
1	Alliance for Apprenticeship
2	Trade Union
3	Chamber
4	Local Government

### 3.6 Students and trainees

<b>No. of students</b>	<b>Type of the school</b>	<b>Occupational field</b>	<b>Level of Qualification</b>
6	Integrated Centre	Tourism	High
3	Private Centre	Installation and Maintenance	Medium
1	Institute of Secondary Education	Socio-cultural services and the community	Medium
1	Private university	Administration	High
4	Integrated Centre	Health	High

### 3.7. Parents

<b>No of interview</b>	<b>Number of parents</b>
1	6
2	2

### 3.8. Companies

<b>Sector</b>	<b>Role in the company</b>	<b>Apprenticeship programmes</b>
Wood and Furniture	Director of training department	yes

Textile	Director of training department	yes
Hairdresser	Owner	no
Health	Director of the company	no
Mechanical Manufacturing	Director of training department	no
Hospitality	Owner	no
Installation and maintenance	Owner	yes
Electricity and Electronics	Head of production	yes
Trade and Marketing	Director of training department	yes

#### **4. The empirical research**

This section of the report provides an account of the ideas and opinions about the new dual system from different social actors in the Valencia Community.

The new dual system (FP Dual) for teaching and learning was first implemented in the Valencia Community in 2012. Although FP Dual enjoys considerable support from institutions and from politicians who believe it has the potential to reduce youth unemployment, the dual system is still in a pilot stage. Besides those involved in the pilot programmes, there is little knowledge about FP Dual by parents, companies, students and institutions, the actors that are fundamental in the development of dual training. We were concerned above all to understand their perspective and view of the new dual training qualification.

For ease of reading we have coded the type of respondent who we interviewed. The codes are:

1. Professor from an institutional centre
2. A professor from an Integrated Centre
3. Vocational school teacher
4. Professor from a private university
5. Director of a vocational centre
6. Parents
7. Trade union official
8. Director of an integrated centre
9. Representative from the textile sector
10. Company representative
11. Local administrator
12. Director of National Reference Centre

13. Representative of Chambers

14. Students

#### 4.1 The role of companies in the FP Dual

Given the central nature of companies to the FP Dual system, it is not surprising that the relationship between companies and vocational schools, as well as the local administration was a major issue raised by all the different social partners. Although most company representatives interviewed were positive about the FP Dual and vocational schools welcomed the partnership with companies, it is proving time consuming to develop a culture and processes to support a dual system.

Despite an apparent expansion of programmes for the 2016-2017 education year, the number of apprenticeship programmes and the number enrolled on these programmes in Valencia remains limited. Many large and international companies have launched apprenticeship programmes but there are difficulties in involving SMEs, although some school centres report significant success and anticipate further progress developing partnerships with SMEs. Whilst Germany has a tradition of craft apprentices at SMEs where employers pay for apprentices, it is likely that in Valencia, even if appreciating the value of apprentices, SMES are not prepared to pay, especially in the context of the ongoing crisis, and lack skilled trainers. Yet given the composition of the Valencian economy, SMEs are important for the future success of the programme.

“For the companies, it was a possibility they did not know and they do not see the Dual System as a long-term commitment because many say it is not an investment – it is a waste. When we started with the Dual System our main problem was to talk to and convince companies to deal with a centre.” [4]

“With the business model that exists in the Valencia community composed of small and medium-sized enterprises, the implementation of the dual system is not possible in all regions.” [5]

“The problem that we have here is the dual system needs a business plan and culture that there is not here.” [12]

“One of the things we need in the dual system is cooperation with companies and for the companies to change their mentality, to look at students as an investment – it is a social responsibility as well - but we have to take into account that the companies in Valencia are small and medium and for the small companies it is not easy for them to run the dual system. Many companies have only one or two people but is something we have to take into account as well”. [12]

“The Dual System is not mere practices, FP Dual requires that the company becomes a great training asset and is the main protagonist of the training of students, in conjunction with the educational centre. This implies a necessary change both in the business sphere and in the educational model. We have to change our model of centres, so that the company is part of the educational process and organisational in origin, and likewise, the company cannot consider the school as a mere training instrument that at any given time is approached as receiving students who will be collaborating for a few months.” [2]

“The key is the company. We need the involvement of the company in the production and

development of training. The company must be aware of training in the medium and long term. The Dual system allows a very direct adjustment with what companies demand. Another problem as well is the tutor of the company. Now it works better because the companies are growing.” (2)

“Companies must internalize the dual system as part of its culture. It’s an issue of social responsibility.” (13)

“The company must become the essential activator of training in constant innovation and construction, because it is the business world which really drives the pace of change in the professional and occupational environment.” (2)

“Each year agreements with companies are increasing but it is a difficult job. To make an agreement with the company takes two to three months.” (3)

“The company is interested in the dual system and we can offer a very good opportunity for the students. We are open to cooperate with centres and the Administration.” (9)

“The dual system is a good system - the student can acquire additional knowledge, know the market trends, new opportunities, ... although it’s not new - we have to recover the apprenticeship school we had in 1950.” (10)

“In relation to the problems with the dual system the practices have to adapt to the needs of the company, not the training programme. There must be more involvement between the company and the administration. Good coordination between the centres and the companies is also necessary.” (10)

“For other companies their main problem is that they don’t have time and enough staff to support the students, we fear that students will come to the company with little theoretical knowledge. (10)

“As well we need more collaboration between centres – companies and administration.” (10)

“One of the challenges we have in relation to professional training is the relationship between the centres and the companies. Another problem is that we must sort out which centres work with which companies in line with their subjects or there will come a time when students do not have companies to do the practice.” (2)

#### 4.2 The role of the school centres

It was clear from our interviews that despite the support of some large and important companies, the adoption of FP Dual is being driven by the School Centres. In such a situation, it is possible that the large integrated centres are in a better position to lead such development, although this is not to downplay the contribution and effort of the smaller centres. It was also apparent that the issue of school leadership is a critical factor, as is the commitment and contribution of teachers in the vocational schools. Both directors and teachers have an important role to play in contacting and persuading companies to participate and support FP Dual. At present, they receive no remuneration for this added role and this could prove a significant barrier in the future.

“Initially, our centre refused to enter into the FP Dual from a point of principle. However, we now see the possibility of working with public institutions to implement apprenticeship and the rules

oblige them to give students a grant, although the amounts are not high.” [1]

“It is very positive that the student has contact with the work world during their training, but as articulated it is necessary to plan it well. The dual system is working because professors believe in the system – and of its value for society.” [1]

“Students who are studying through the dual system consider it very positive for their training since they have greater contact with the labour market and they are happy because they are learning and working in what they want.” [6]

“Our experience from when we started until now is positive. We think it is a very good experience for the students. Why the dual system – you have a labour system and your curriculum is much better because of that. It completes the student profile.” [3].

“The Dual System is very close to the labour market and it helps the students with employability. The students have more experience, motivation and acquire competence to work in the labour market.” [3]

“The Dual System is a way to increase the prestige of vocational training.” [4]

“With the implementation of dual VET, it is intended to involve companies in the training of students, so that students are trained according to the needs of companies. The positive aspect is that the student acquires the practical training in the companies, which complements the one received in the centre.” [3]

“Although the beginnings were very complicated in our centre, we are satisfied with the students that we have in dual and if the other countries in Europe have implemented it and they are doing well we have to make an effort and work in this direction.” [8]

“In Germany the companies look for the students – here it is very different - here the centres are looking for companies to take students under the dual system. [12]

“The Dual System is a good idea but for the centres it is a lot of work – it is not going to be easy to develop in a short term. It needs a long-term approach. “

“The Dual System is very good as a training strategy and has the potential in the right way – the capacity of the company for training and the capacity of centres to answer to that reality - but to get that result from the current situation takes time.” [4]

“At this moment, in vocational training we are trying to redirect the system because the Dual System starts fast but is not well planned. It depends in many cases on the teachers and the centres.” [2]

“Another problem is that the teachers running the Dual system in the centres do not receive any economic compensation.” [4]

### 4.3 Administration and Bureaucracy

Given this, the often-commented heavy burden of bureaucracy associated with the establishment of new apprenticeship programmes, both for the schools and for the companies, is troubling.

“When we started with dual training, three years ago, there were no regulations and we did not have companies for the students. Courses in the dual system were initially supposed to last three years but were then reduced to two, so the first year of implementation was very chaotic.” (3)

“When the Dual System started, there was strong pressure on the centres to introduce new programmes and the result was a disaster. Administratively, with a single student participating in the system, the group was considered Dual even when the rest of the students in the same classroom were taking the traditional VET programmes”. (2)

“We presented a dual training project last summer to start this year and we are still in trouble with paperwork. This is a discouraging situation.”(1)

“With the introduction of the dual system, the bureaucracy has been complicated in relation to the FCT (on the job training module)”. (3)

“To enrol students in dual programmes this year meant that we had to start almost a year ago.” (3)

“We find ourselves with slow and complex paperwork.” (3)

“The requirements and bureaucratic procedures established by the Administration are very complex and require a large volume of documentation and a lot of time to start up, even if it is a project for a single company and a single student. These procedures even generate mistrust on the part of the companies, that in order to participate in the Dual FP, they have to provide the deeds of incorporation, NIF, Notarial Powers, and other documentation of great importance.” (2)

“Every centre has its freedom to deal with a company. That is difficult for companies when centres elaborate different training projects to deal with the same companies.” (12)

“One of the biggest problems is that each centre develops different training programmes and that is very confusing and difficult to understand for the companies, and the bureaucracy is really slow. We need more flexibility from the administration.” (10)

#### 4.4 Public and private schools

A linked issue is the different rules applying to public and private vocational schools. While public vocational schools must gain the approval of the public administration for a new FP Dual programme, such programmes can be approved directly by the directors of private/concerted vocational schools.

“The legislation is complex and this means the process to deal with the companies is slow – even more so for the public centres.” (2)

“Public centres have to pass more formalities than private ones and that is a major imbalance in the regulation between public and private centres. A director of a public centre cannot sign an agreement – it must be signed by the administration. It is a problem when you have to give a quick response to the company.” (3)



#### 4.5 Contracts and collaboration

One of the major issues which arose in discussions was the question of contracts and remuneration for apprentices. Some Autonomous Communities have legislation on these issues with differing rulings. In Valencia, it would appear to depend on the individual programmes negotiated between the company and the vocational schools. Quite obviously, this is problematic in that some apprentices are being paid for their work at the company while others are not. Furthermore, some apprentices, who are not receiving remuneration from the company, may be incurring some considerable expenses for travel.

“Dual training was introduced in 2012 when the economic crisis was very deep and in that context, the companies rejected any type of contract for work practice which included economic remuneration to students. The companies were firing people and in the process of restructuring. Students should get economic compensation but the companies will not pay them that.” [4]

“We think that it´s a really interesting model of learning but to have to pay students is something that we don´t see clearly.” [10]

“There is a situation of competition between the centres and many offer the dual system to companies at zero cost, a question in which I disagree because the student should receive at least a grant for the work done.” [3]

“The rules over grants and contracts are confused. In some centres the students undertake the work practice free of charge. In our case the student at least has a grant which helps with motivation and provides money for transport.” [12]

“The scholarships offered by companies, when they do, are of little importance, which discourages students who think that the company uses them as cheap labour. It requires a great effort on the part of the student, who sees his or her teaching time increased by an average of 3 hours a day.” [2]

#### 4.6 Curriculum Design

At present, the FP Dual programmes last two years in contrast to the normal three year length of apprenticeships in the German Dual system. A number of those interviewed were concerned that at least in some subjects, the curriculum was too heavy for such a time length. It may be that their will need to be some kind of rebalancing drawn between what is learnt through a school curriculum and what is expected to be learnt through in-company training.

“Since the implementation of professional training with the LOGSE<sup>7</sup>, all courses have included a significant period of work practice, through a training on the job module at the end of the programme of studies. There was originally a period of work practice of between 300 and 700 hours. With the LOE<sup>8</sup> these work practices have been reduced to 300 – 400 hours. This is clearly insufficient.” [1]

---

7 Ley Orgánica de Ordenación General del Sistema Educativo/LOGSE (Organic Law on the General Organization of the Educational System)

8 Ley Orgánica de Educación (LOE, Organic Law of Education)

“The profile of the students is important – they have to know what it means to work in the company and study in the centre –sometimes the timetable is hard.” (13)

“The schedules of the VET centres are incompatible with those of the companies. The participating companies are of a small size, thus hosting a few students.” (2)

“The curricula are very extensive. They lack the hours to get everything in and we do not have the time to fit everything into a two-year programme. The development of the qualifications should be outside party political debate. Education should be more impartial.” (3)

“We need to develop the instruments we already have as national reference centres, integrated centres, information and guidance processes in which we have a long way to go, and processes for the evaluation of competences that are acquired in informal contexts that are increasingly important.” (12)

“It is necessary to review the curriculum of the cycles and better adjust it to the professional profiles in the different productive sectors.” (2)

“We should adapt the training that is offered to the students to the training needs that the companies demand. On the other hand, through the development of the F.P. Dual it is intended to involve companies in the training of students, so that it adapts to the needs of the company. This could be a good mechanism for selecting students prior to being hired by the company.” (2)

“We need consensus on vocational training as well as a stable law for education. You cannot be changing the law every 3 or 4 years when you need a 7 or 8 year period for adaptation.”(4)

#### 4.7 Sector organisations

One key factor, at least at this stage to develop and implementing the FP Dual, is the strength and support of sector organisations. This appears to vary between different sectors. Obviously, the initial programmes are being implemented where there is good communication and support between sectors, vocational schools and industries. However, a longer-term approach will require a more strategic approach to planning, taking into account the future development of the Valencian economy and different sectors and occupations within the economy as well as future competence and skill needs. It is notable that in the Textile sector the lack of qualified workers has led to collaboration with a VET centre on the basis of the companies analysis and demand.

“In relation to the dual we consider that as it has been implemented so far it has not worked correctly. However, we see it working well in large companies and in sectors where you need machinery and technology that you cannot access in the training centre.” (7)

“We must take into account the sector and the vocational family as well. To homogenize is complicated,” (3)

“In companies, it depends on the level of culture about training that a company has – it also depends on the sector, one of the best is the industrial sector.” (13)

#### 4.8 Flexibility and collaboration

The flexibility for the Autonomous Communities in how to implement apprenticeship schemes

allows programmes to be adapted and planned according to the needs of local economies and societies. But this may be a problem in terms of transferability of different courses (cycles) and in transparency of what apprenticeship programmes stand for. Similarly, there is an important balance to be achieved between the design of programmes to cater for the needs of individual companies and more standardised curricula which meet the needs of students in their education.

“One of the problems of the Dual is the flexibility so that there are many training projects that do not guarantee the minimum standards of the Royal Decree [the legal framework establishing the dual system]. The inspection will not check the training projects.” (2)

#### 4.9 Careers guidance and the role of parents

One obvious issue is that despite recent articles in the press and events organised with support from the Alliance Foundation and other organisations such as the Bertelsmann Foundation, there is only limited public awareness of the FP Dual and the aims and the organisation of apprenticeship. This issue is particularly salient given the high prestige placed on academic courses in Spain and particularly university programmes within the wider Spanish society. The weakness of education and guidance networks and services within Valencia is a major issue if young people, and especially higher achieving young people are to be recruited on FP Dual programmes and if companies and SMEs are to understand the value of apprenticeship. Equally, given the weakness of the guidance systems and services, parents may play a more prominent role in advising their children on future career choices. Therefore, it is important that they too understand the potential of apprenticeship qualifications. Worryingly, several centres have been unable to recruit sufficient students for FP Dual programmes. A number of those interviewed talked of the need for a well organised public awareness campaign around FP Dual.

“There was much resistance at the beginning because the students didn’t know the system.” (4)

“The director of the centre explained the dual model but the benefits of it were not clear and we preferred the model already existing.” (6)

“We did not know anything about dual training and it was our son who told us that he wanted to study through this learning modality and the truth is we are very proud of him, of how it works and of its motivation.” (6)

“The truth is that I wanted my son to undertake a university degree but when my wife told me that our son wanted to study professional training and to do the dual mode I had my doubts, my son was not a bad student but he was not motivated and now my son is a boy who has changed, his degree of self-esteem is greater, he likes what he is doing, so I am happy to have supported him.” (6)

“We don’t know about it and our children study the normal courses.” (6)

“Many students do not know about the dual formation, of what it consists, but they are interested in knowing more.” (6)

“The dual system is not well known to companies, students or parents.” (3)

#### 4.10 Professional development

Troubling too, is the lack of a dedicated and well organised and resourced programme of professional development for vocational teachers and for trainers in companies. Both could be seen as a pre-condition for the future success of apprenticeship in Valencia, as could the opportunity for vocational teachers to spend time in industry.

One of the matters that has been discussed around Vocational Training is the training of teachers in terms of innovation, updating as a key elements in the quality of the education. The professors agreed with the necessity of updating their knowledge and skills especially in sectors that are changing more quickly. Some said that it is necessary to improve the Initial Training of teachers and this requires more support from the Administration. One important issue raised is to improve the practices of teachers in companies.

“The centres need help from companies. The role of the trainer in the company is very important. One of the problems here is that the companies did not have any trainers. Now the administration has started courses for training tutors.” [2]

“We live a revolution in techniques and tools of training both for the classroom and of technology in different subject areas - electronics, computer science, sales techniques, administrative, health, legislative changes - this requires permanent teacher training.” [2]

“We need vocational retraining especially in new technologies, of course we need pedagogical training but also technical updating in sectors such as Research and Development, International Commerce. We need to be in contact with companies”. [2]

“In relation to the training of teachers there should be more planning from the Administration about how to train the people in the centres. It would need a well-designed plan that currently we don´t have.” [2]

“One of the problems we have here is teachers needs to do practice at companies. In other European countries this is a legislative requirement but not here and we need that training at companies. It´s essential for the quality of education.” [2]

#### 4.11 The quality of initial teacher training

A number of school directors expressed concern about the quality of existing programmes of initial training for vocational school teachers. This was seen as overly focused on the subject with too little attention to pedagogic approaches to teaching and learning. A linked concern was the variable quality of teaching within the schools. But while there might be seen a need for measuring teaching quality, there were few if any concrete proposals on how this might be enacted.

“Another problem is that we have downplayed the importance of experience compared to degree qualifications when selecting teachers. The quality of teaching depends on how much a teacher is involved.” [3]

“When we talk about the quality of education we must necessarily talk about teacher training. There is no good initial teacher training, it is a very focused training on what to teach but not how to do it. Is very poor in methodology.” [2]

#### 4.12 Sharing resources and good practices

The vocational schools appear to have well developed unofficial networks. However, there would appear to be a need for the establishment of more formal networks which could generalise discourses over strategies and approaches to apprenticeship and provide a forum for knowledge development and exchange. This could also form a platform for more widespread sharing, for instance of curricula and of learning materials in the form of Open Educational Resources. We found examples of teachers who are already producing their own learning materials for students, but this work falls outside their present job descriptions and such materials are not presently shared between centres. We found many examples of good and sometimes inspiring practice; such practices are seldom being shared at present.

There is a general concern that vocational education lack prestige, but more importantly the vocational centres often lack sufficient resources to not only maintain present programmes but to develop apprenticeship. This is linked to their understanding of the need for recognised quality in teaching and learning if apprenticeship is to succeed. It is noted that the issue of resources for education not only applied to vocational training but to the wider school sector. There was concern expressed that there were insufficient text books. It was suggested that companies have to understand the restrictions on resources particularly for access to advanced technologies and that the companies could themselves provide resources, either during periods of in-company training or by providing technologies for the schools.

Another important issue and linked to the quality of education in vocational training is the access to resources and technologies in the schools. In the interviews many teachers said that the resources are not sufficient and there is very poor access to the Internet.

“In vocational training we must streamline the training curricula, provide more resources to the centres, and provide a good professional orientation for students. Guidance is an important topic and it would be highly recommended to start in primary education.” [9]

“In the case of the professional family in which I teach (Administration), the administration should provide the Centres with licenses to use the computer programs (commercial management, accounting and payroll and social insurance programs) currently used in companies.” [2]

“The software is not the same as in the company and that is a problem.” [2]

“There is poor access to technologies - to make use of social networks in the centre requires authorization from the administration. The materials arrive according to agreements, not according to the real needs of the centres.” [2]

“The pedagogical use of technologies in the school is not understood.” [2]

“We have computers in the classroom but the problem is the poor access to the internet. It is impossible to work well in this situation”. [2]

“We live in a time of globalization and with the new technology – we need the companies because many of the times the centres do not have the technology that the companies have.” [4]

“Textbooks have poor quality and many teachers develop their own syllabuses.” [2]

“There is a lack of resources in the classroom in some specialties, especially technology and that provokes a lack of motivation of the students”. (2)

“You have more resources if you make deals with Administration but there is a lot of bureaucracy.” (2)

“We have in our course, tourism, really bad material resources and not enough to do practices in the classroom, apart the bad connection to internet.” (14)

“It is necessary to increase use Web 2.0. we don´t need books that have very poor quality.” (13)

“The textbooks are outdated and you can´t study with them. You manage as you can.” (14)

#### 4.13 New pedagogic approaches

On a positive note, it was interesting that many of those engaged in developing and teaching apprenticeship programmes stressed the pedagogic value of the time spent in learning inside companies. They criticised the traditional focus of the Spanish education system on learning facts and pointed to the value of work experience in developing competence and skills relating to practice and an understanding of the link between theory and practice in applying learning in the work situation. Equally they stressed the importance of so called ‘*soft skills*’ or ‘*key qualifications*’ for future employability of students. These issues and the more general pedagogic approaches to vocational teaching and learning apply both to centres as well as to companies and could form a central focus for continuing professional development opportunities for teachers and trainers.

“One of the problems we face is that we are training students for competencies that change so quickly that we do not have time to identify them. We are training people to work with machines that we do not know, in unknown processes and in changing contexts.” (2)

“It is also necessary to identify key competences such as learning to learn, information and communication technologies, learning to communicate, learning to manage diversity – these are currently essential.” (4)

“It is necessary to improve the key competences of students.” (12)

“One of the challenges is to qualify the students for the accomplishment of practical tasks and specialized work. This needs the adoption of new training techniques, updated practices and a lower ratio of students to staff, especially in the technical subjects.” (2)

#### 4.14 International collaboration

Many of the centres we talked to, also sector organisations, are engaged in collaboration with organisations in other European countries (and in one case with Canada) through different European programmes, predominantly the Erasmus Plus programme (v.g., Finland, CIFP). These programmes can include the development of new curricula and qualifications, new pedagogic approaches, the use of new technologies and the exchange of students and teachers. It appeared that these projects were extremely valuable in order for vocational schools to develop and exchange knowledge and experience about apprenticeship.

#### 4.15 Regional and city wide collaboration

At present, vocational schools would appear to be approaching companies individually. Once more there could be gains through developing more formal and extended networks between schools and companies, either on a regional or a sector basis. To an extent this role is being undertaken at a national basis by the Alliance for Apprenticeship. The establishment of the Alliance at the level of the Autonomous Communities could be an important step in promoting the FP Dual. This potential was shown in part by the recent three conferences organised at a regional level within Valencia. Importantly, these were able to bring together different social actors, including students, although the short notice of the programme perhaps mitigated against the effectiveness of the events.

Although the dual projects sponsored by the city council are considered as very positive for the students, there was a need to improve and establish protocols of action between the educational centres and the local administration, and to develop technical monitoring methodologies and evaluation of these projects.

“Working with the Local Administration, the city council and the council of youth have agreements with training centres that are delivering the FP Dual that students are paid for work practice in different municipal services during the period of the two year apprenticeship.” [1]

“The municipality pays under this agreement and the Generalitat (Autonomous Community Government) authorizes it. The municipality consider that they have an obligation to improve the qualification of young people for employability, so they have created this line of financing because they understand that any contribution to reduce youth unemployment and the disconnection they have in joining a job can never be enough.” [1]

“The initial regulation is complex - the problem that is developed based on a national law which was not very clear but it has to be developed and applied locally. The costs to the municipality are high.” [11]

“it is necessary that the Generalitat should finance apprenticeship development - when it comes to educational policies we cannot generate new practices without budgetary resources.” [11]

“We need more help in the development of dual system from the public administration”. [3]

#### 4.16 FP Dual and the local economy

Many of those interviewed saw apprenticeship as a way of proving the skills which the local economy would need in the future, particularly in view of the potential flexibility in designing new programmes in consultation with employers. However, they also recognised the challenges in developing such a responsive system.

“Valencia Community has to rethink Dual Vocational Training, especially the planning of vocational training, based on the study of the training courses and the needs of the labour market, seeking the necessary collaboration and involvement of enterprises in the training of workers, with the aim of transforming the productive system, improving the competitiveness of our companies and the employability of our students.” [7]

“We currently have a number of challenges in vocational training such as the fourth industrial

revolution and Information and Communication Technology that are changing the scenario of human behaviour and education, which is leading to important changes in the labour market. This is leading to a demand for higher levels of qualification but we have to remember that low level qualifications are an important entry route for those outside the education system.” (12)

“Other challenges include the budget cuts, the informal recognition of the competences and employability. (12)

“We also have to balance the training needs of people and what the companies require.

“We have to train with companies and in companies to fight against the mismatch between supply and demand in the labour market.” (12)

“The vocational training must be an instrument of economic and social development at the same level of the University. It is necessary to invest in resources, technology and teaching staff.” (13)

#### 4.17 Evaluation

It is important to realise that despite the specific design of apprenticeship in Valencia and in Spain in general and that these programmes are new and experimental, many of the issues arising are not unique to Spain. Indeed, many of these issues have been raised in research into the long established German Dual System. However, the lack of qualitative evaluation of the FP Dual programmes, especially scientifically undertaken and published case studies, is a barrier to understanding just what is working, what is not and how to improve the quality of the programmes.

“The evaluation of the programme is undertaken by the training centre itself, more qualitatively than quantitatively, and with good quality procedures the tendency will be for apprenticeship to grow. But it is an extra effort for the centres to carry out this type of project.” (1)

#### 4.18 The tension between social inclusion and the prestige of apprenticeship programmes

There may be some tensions between the need to counter social exclusion through the introduction of lower level programmes such as the Foundation programme and the need to develop the prestige and attractiveness of the higher-level apprenticeship. This is an ongoing issue. In balancing such demands, company based assessment and accreditation could play a role, as could clearer progression routes between the various programmes. One interesting suggestion was the extension of FP Dual to establish degree level apprenticeships. In this regard, it is interesting that several universities are already offering FP Dual qualifications.

### 5. Implications for policy and recommendations

It had been our original intention to provide concrete policy recommendations within this report. We now do not think it appropriate within the present stage of project development. Over a short period of time we have undertaken an intensive programme of interviews with many of the key social partners involved in the development and implementation of apprenticeship within the Valencia Community. Those interviews, and our attendance at events around the FP Dual, have allowed us to identify major issues and concerns. The next stage, we believe, is to share these issues with those who have participated in contributing to the report and to others we were unable to talk to in the timescale of the present phase of the project, and to seek their viewpoints on what collective recommendations should be made, prior to the publication of the final Spanish



language version of the report. This is in line with our action research methodology and our desire to not just comment on developments but to help shape practice.

## **6. Limitations of study and further work needed**

This research was undertaken between late August and November, 2016. Because of pressures imposed by the commencement of the school year, few interviews could be undertaken before the start of October, 2016. Thus, the work has been undertaken in an extremely compressed time scale. We were always aware that the limited resources would only allow a first stage of research to be undertaken. Within the time period we were unable to secure interviews with representatives of the Valencian government and administration, nor with representatives of the major political parties. We were also only able to talk to one of the two major trade unions in Valencia and furthermore we would like to talk to a number of major companies who have indicated their interest in supporting the apprenticeship programme. Most of those interviewed were from the Valencia region of the wider Valencian Community but we do not expect there to be major differences in practice between the regions. We are still hoping to complete these interviews in the period following the end of the project. However, as we said in our application, we saw this work as the initial stage of a longer-term project and we are presently planning the follow up stage.

However it may be that that interviews that talked of “chaos”, “disaster”, “confusion” and “lack of knowledge for students, companies ” reflect the short time of implementations of FP Dual and may evolve to a more balanced and positive view of considering the FP Dual system as part of the educational and employment policies with a convergence between social actor while maintaining a clear awareness of the currents problems affecting its development.

We are convinced that our methodology and approach is an enriched way to study apprenticeship, especially in those countries or regions where apprenticeship is emerging or being re-imagined. It represents an initial stage in our aim of understanding the links between conceptual developments and innovation in educational practice and in promoting community partnering strategies as part of that process of innovation and educational change. Within that approach, further to finalising the further interviews, our next activities will be to produce a Spanish language version of this report and a multimedia presentation of our main findings as the basis for a further round of consultation with the different actors in the community, including those who responded to our first request for interviews. The discussion section of this report has listed concerns and issues, most of which come from our discourse from social actors. It is hoped that in a further phase the different actors who comprise the community can, together with us, articulate and prioritise recommendations for further action and reform.

## **7. References and further reading**

- Agua de la Roza, J. and Nieto Sánchez, J.A. (2015). Artisans' wages and working days in eighteenthcentury. *Sociología del Trabajo*, 84, 69 - 84
- Altman, D. G. (1995). Sustaining interventions in community systems: On the relationship between researchers and communities. *Health Psychology*, 14, 526–536.

- Bassols, C. and Salvans, G. (2016). *High Quality Vocational training in Spain: the Alliance for Dual Vocational training*. Madrid: Bertelsmann Foundation.
- Best, A., Stokols, D., Green, L. W., Leischow, S., Holmes, B., & Buchholz, K. (2003). An integrative framework for community partnering to translate theory into effective health promotion strategy. *Am J Health Promot*, 18(2), 168–176.
- Bruijn, Elly de; Manning, Sabine (eds.). *'Action research' and a VET framework of innovation. A round table provided as part of the VETNET Programme at ECER 2004, Crete, 24 September 2004*. Berlin: Research Forum WIFO, <http://www.b.shuttle.de/wifo/across/=round04.htm>], accessed 6 December, 2016.
- Cedefop (2015). *Governance and financing of apprenticeship*. Thessaloniki: Cedefop.
- Cedefop (2014). *Spotlight on VET Spain 2013/14*. Thessaloniki: Cedefop.
- Cedefop-Refernet (2015) *Supporting teachers and trainers for successful reforms and quality of VET Spain*. Luxembourg: Luxembourg Publication Office of the European Union <http://europe.eu>
- Confederación Empresarial Valenciana (1994) *Las necesidades de Formación en las PYMES y el papel de las Organizaciones Empresariales FORCE*, C.E.V., Valencia.
- Conner, R. F., & Tanjasiri, S. P. (1999). Communities evaluating community-level interventions: The development of community based indicators in the Colorado healthy communities initiative. *Canadian Journal of Program Evaluation*, 14, 115–136.
- El Mundo* (2016). Educación anuncia 3.000 nuevas plazas de Formación Profesional, <http://www.elmundo.es/comunidad-valenciana/2016/05/10/5731ff4b46163ffd0d8c070e.html>, accessed 10 June, 2016
- Elden, M. (1983). Democratization and participative research in developing local theory. *Journal of Occupational Behaviour*, 4(1), 21–34.
- Esenciales Fundación BBVA-lvie (2016). *La formación ha avanzado durante la crisis, pero el abandono escolar, los desajustes en competencias y el paro limitan el aprovechamiento del esfuerzo educativo*. [https://www.fbbva.es/wp-content/uploads/2017/07/FBBVA\\_Esenciales\\_03\\_tcm269-565026.pdf](https://www.fbbva.es/wp-content/uploads/2017/07/FBBVA_Esenciales_03_tcm269-565026.pdf), accessed 6 December, 2019.
- EURES (2016). A short overview of the labour market. <https://ec.europa.eu/eures/main.jsp?catId=448&countryId=ES&acro=Imi&lang=en&regionId=ES5&nuts2Code=ES52&nuts3Code=&regionName=Comunidad%20Valenciana>, accessed 6 December, 2016.
- European Commission (2013). *Launch of European Alliance for Apprenticeships* IP/13/634, p. 2, [http://europa.eu/rapid/press-release\\_IP-13-634\\_en.htm](http://europa.eu/rapid/press-release_IP-13-634_en.htm), accessed 6 December, 2016.
- Eurostat (2010). *Task Force on the improvement of the quality of education variables in the LFS and other household surveys. 2.3 Review of topic 3 (secondary variables) – Apprentices and trainees*. Luxembourg: Eurostat.

Fundación Tripartita para la Formación en el Empleo (2012) *Comunitat Valenciana. Encuesta a Empresas de 1 a 4 trabajadores* [www.sepe.es](http://www.sepe.es)

Fundación Estatal para el Empleo (2015) *Formación en las Empresas 2015 Comunitat Valenciana* [www.fundae.es](http://www.fundae.es)

Generalitat Valenciana, Conselleria D'Industria, Comerç i Turisme, (1987) *Guía de la Artesanía Dirección General de la Pequeña y Mediana Empresa*. Valencia: Generalitat Valenciana.

Grinstad, J. A., and Way, W. L. (1993). The Role of Family in the Vocational Development of Family and Consumer Education Teachers: Implications for Vocational Education. *Journal of Vocational Education Research*, 18, 4, 43-80.

Gustavson, B. (2001). Theory and practice: the Medicating Discourse. In Reason, P. and Bradbury, H. (eds.), *Handbook of Action Research*. London: Sage publications.

Gustavson, B. (2008) Action research, practical challenges and the formation of theory. *Action Research*, 6 (4), 421–437.

Manske, F., Moon, Y., Ruth, K., Deitmer, L. (2002). Ein prozess- und akteurorientiertes Evaluationsverfahren als Reflexionsmedium und Selbststeuerungsinstrument für Innovationsprozesse. In: *Zeitschrift für Evaluation*, 2, 245.

Patton, M. (1990) Qualitative evaluation and research methods. *Qualitative evaluation and research methods* (pp. 169-186). S. Beverly Hills, CA: Sage Publications.

Pilz, M. (2016). Training Patterns of German Companies in India, China, Japan and the USA: What Really Works? *International Journal for Research in Vocational Education and Training (IJRVET)*, 3, 2, 66-87

Poulson, S. and Eberhardt, C. (2016). *Approaching Apprenticeship Systems from a European Perspective*. Bonn: Bundesinstitut für Berufsbildung (BIBB).

Refer Net Spain (2014) *Apprenticeship-type schemes and structured work-based learning programmes: Spain*. CEDEFOP

UGT-FETE Ensejament (2014) La LOMCE introduce la FP de Base en el Sistema Educativo. *Conclusiones de la XII Jornadas de FP*. Valencia.

Ure, Odd Bjorn (2015) *Governance for Learning Outcomes in European policy-making: Qualification frameworks through the open method of coordination* IRVET 2(4), 168-183

Wolter, C. and Mühlemann, S. (2015) *Apprenticeship training in Spain – a cost effective model for firms?* Guetersloh: Bertelsmann Stiftung.