

Dual vocational training in Spain, comparison with the German model and proposals for improvement

Jesús Alemán Falcón*, María A. Calcines
Piñero & Lázaro Moreno Herrera

Abstract: The bases that support the dual system in Spain as well some recommendations to improve its implementation will be exposed in this chapter. Firstly, both the structure of the spanish dual vocational training and its organizational differences among the autonomous communities are explained. Secondly a comparative study between the Spanish and German dual system is carried out due to the latter has been a key part in the economic development of Germany, becoming a reference model at the international level. For that purpose it will be analyzed specific aspects related to the duration of the training, the selection of the apprentices or their economic remuneration. Then, it deepens in the student evaluation procedure as well as in the required training for the company trainers. Furthermore, not only the role of the Chambers of Companies is addressed, but also the Joint Training Facilities, which have been an essential tool for small and medium enterprises. Finally, a set of rec-

* Correspondence: jesus.aleman@ulpgc.es

ommendations for the improvement of the Spanish dual system are presented.

Keywords: Dual system, apprenticeship, comparative studies in VET

1. INTRODUCTION

The dual vocational training starts in Spain in 2013 with the objective of combining the teaching and learning processes in the company with those developed in the vocational schools (Ministerio de Empleo y Seguridad Social, 2014). It was at that time a new innovative modality in Spain in the field of VET that aimed at the pursuit of excellence as well as fostering a culture of dual vocational training in companies and schools. The purpose was also to provide individuals with the necessary specialized training as well as bringing VET closer to the socio-economic reality of the labor market.

With the implementation in Spain of this new training system, the Spanish Government as well intended that companies not only participate more actively in the instructional process of students but also know in depth about the training received by the students.

It is needed to take into account that Spain is a country with a decentralized public administration among the different autonomous communities who have assumed many of the competences that were before the State, especially in non-university education. For this reason, some autonomous communities have included in their regulations the need to promote collaboration with companies through the development and realization of dual professional training experiences such as did the Canary

Islands in the Canary Law of Non-University Education (Presidencia del Gobierno de Canarias , 2014).

Before analyzing how dual vocational training has been implemented in Spain, it is helpful to know how its structure is. In this sense, once a student has obtained the title of Graduate in Compulsory Secondary Education, he can choose to take a Baccalaureate or professional studies. Choosing this last route, the student access the Intermediate level training cycles obtaining at the end of it the title of Technician in the corresponding subject matter. There are also post-secondary training programs; they are the Higher level Training cycles. They are accessed with the title of Bachelor or also with the title of Technician. Once completed these studies, the title of Advanced Technician is obtained. All training cycles are grouped into 26 professional families organised by a modular structure. Nevertheless, an alternative route called Basic level training cycles is offered for students who have failed during secondary education and did not access either the Baccalaureate or the Intermediate level training cycles (Alemán and Calcines, 2019). This is intended to prevent the Early School Leaving. Upon completion of the training, these students obtain a basic professional degree that allows them to perform basic prevention functions (Jefatura del Estado, 2013).

Finally, it is necessary to indicate some specificities about how the Spanish productive system is constituted. According to the latest data provided by the Ministry of Industry, Commerce and Tourism, there are currently 2,886,759 companies in Spain. Of these, 1,559,798 are self-employed, that is, small businesses without employees, made up of one person. In addition, 1,322,261

companies have between 1 and 249 employees, with 86% of them between 1 and 9 workers. There are only 4,700 Spanish companies that have more than 250 employees (Ministerio de Industria, Comercio y Turismo, 2019).

2. ORGANIZATIONAL STRUCTURE OF DUAL VOCATIONAL TRAINING IN SPAIN

The Royal decree 1529/2012 (Ministerio de la Presidencia, 2012) came to establish the legal framework for the development of dual VET projects in the Spanish educational system, with the co-participation of vocational schools and companies. The development of these dual vocational training projects seeks to facilitate the labor insertion of students, increase the linkage and co-responsibility of the business fabric with vocational training as well as strengthen the relationship of teachers in vocational schools with companies in the sector. Unlike ordinary Vocational Training, where the apprentice puts into practice in the company what they have learned in the vocational school, the student of Dual FP not only actively participates in the production process, but also learns in a real environment of job.

The increase of Dual VET in Spain has been extraordinary; an example is Andalusia where it has gone up from 12 projects and 207 students in the 2013–2014 academic year to 321 projects and 3,967 students in the 2017–2018 academic year (Caballero, García & Lozano, 2018). In the 2018–2019 academic year, 411 projects, 5001 students, 205 educational centers and 3282 companies involved have been reached (Junta de Andalucía, 2018). At the national level, according to the latest data published by the Ministry of Education, 795 centers taught this type of stud-

ies in Spain during the 2016–2017 academic year reaching the figure of 20,357 students (Ministerio de Educación y Formación Profesional, 2019). It is, therefore, an incredibly rapid rise in a few years.

According to this Royal Decree, the dual vocational training projects in Spain must be authorized by the Educational Administration of each Autonomous Community and they have to be formalized through an agreement with the collaborating company under the conditions established by the Educational Administrations themselves. Therefore, there are some differences between the different territories that make up the Spanish State. In general, the agreement established between both parties includes the training program, the number of participating students, the schedule in the vocational school and in the company, as well as the conditions that companies, students, teachers and trainers of companies must fulfill. Likewise, the scholarship regime is specified, that is, the amount of money that each student receives in the company under the dual modality, as well as all the necessary insurance for students and teachers. Some autonomous communities indicate very specific conditions for companies, such as Castilla y León, which states that they must develop productive activities directly related to at least two professional modules of the professional training program object of the project and that the workers union must know the characteristics of the project (Presidencia de la Junta de Castilla y León, 2017).

In case a company presents a dual vocational training project in more than one Autonomous Community, the authorization of this project corresponds to the Ministry of Education of the Spanish government.

As noted above, there are differences among the autonomous communities. In fact, in the regulations of the Autonomous Community of Madrid, which is applicable to authorized both public and private schools (Consejería de Educación, Juventud y Deporte, 2017), it is established that the duration of the dual training is two years, with the student remaining in the company for 12 consecutive months. During the first year, students will be in school from October to June. Then they start attending the company from July to June of the following year, thus completing the second school year. During these twelve months, the student remains full-time according to the company's schedule. Only in the case that a double degree is taught, the training lasts three years. However, in the case of the Autonomous Community of the Basque Country, the Dual FP model is developed based on two modalities with different duration, one of them is designed to reinforce the skills acquired in the Vocational Training Cycles and the second, to acquire a professional specialization in order to respond to the technological needs and complexities presented by the Basque productive fabric (Euskadi Lanbide Heziketa, 2017). The first modality has a duration of two years, that is, between 2400 and 2800 hours, of which 1450 to 1600 hours are taken in the educational center and 800 to 1200 hours in the company. The second modality lasts three years, with which a specialization is acquired that serves to respond to the needs of the companies, according to their complex production processes. The total duration varies between 3400 and 4700 hours, of which 1750 to 1950 hours are taken in the vocational school and between 1800 and 3100 hours, in the company. With respect to the Autonomous Community of the Canary Islands, the duration of the project is the same as that

established in the ordinary VET, that is, two school years (2000 hours). Therefore, the beginning and end of the dual vocational training courses coincide with those of the teaching activity of each school year. Likewise, the first quarter of the project is carried out in the educational center, in order to ensure that the needed previous knowledge acquirement has been achieved so that the training activity in the company was carried out with the appropriate hygiene and occupational safety conditions (Dirección General de Formación Profesional y Educación de Adultos de Canarias, 2019). The project to be approved is submitted by the vocational school to the Canary Islands Regional Ministry of Education and it specifies the annual and monthly distribution of the course, that is, how many hours of the module will be taught in the company and how many ones in the school. Similarly, in the Autonomous Community of Andalusia, the first trimester also takes place only in the educational center while the remaining quarters, both of the first and second year are dual, that is, the students go as to the company as to the vocational school. However, during the third quarter of the second year, that is, during the last quarter of the training, students only go to the company (Formación Profesional Andaluza, 2018). On the other hand, in the Autonomous Community of Castilla y León it is established that students must take the first year of the training cycle in the vocational school. The training in the company will begin at the end of the first quarter of the second school year, after the first evaluation session of the modules of the VET program. There is also an expanded option of three school years. In this case, the period of training in the company will also begin in the second quarter of the second school year, but it will last until December or, where appropriate, until a

year of staying in the company was completed (Presidencia de la Junta de Castilla y León, 2017).

As far as the training in the company is concerned, the hours taught therein also vary from one autonomous community to another. Thus, in the Community of Madrid it is regulated that a minimum of 45% of the total training hours established in the training program will be provided (Consejería de Educación, Juventud y Deporte, 2017). In the Canary Islands, this minimum is 33%, although it can be extended depending on the characteristics of each professional module and the participating company. On the other hand, the regulations established by the Junta de Andalucía establish that the minimum and maximum total training number of hours in the company is 530 and 800 respectively, both for Intermediate level training cycles and for Higher level training cycles; in the case of Basic level training cycles, the range is located between 300 and 500 hours (Caballero, García y Lozano, 2018). Likewise, in Andalusia, training in the company must be carried out during the school period and between seven a.m. and and ten p.m. hours. It may also be requested an authorization to train on weekends or on holidays and after the scheduled time in order to attend the company's needs. The limit of 40 hours per week must not be exceeded. It should also be added that, in the case of the Community of Castilla y León, the period of training in the company will include a minimum of seventeen and a maximum of twenty-two weeks, reaching at least 660 hours, except in the Basic level training cycles in which the minimum stay will be 500 hours. In addition, in the expanded option of three school years, the training in the company lasts a minimum of thirty-five weeks and a maximum of one year, it must reach at least one 1200 hours and it will fin-

ish at the third school year (Presidencia de la Junta de Castilla y León , 2017). There are two ways to develop the dual vocational training project in this autonomous community. On the one hand, consecutively alternating training periods in the vocational school with one or several periods of stay in one or more companies. On the other hand, there is the option to combine training in the educational center and stay in the company in the same period of time. In both cases, the student's stay will never exceed forty hours per week or eight hours per day and it will take place between 6 am and 10 pm. Another important aspect in Castilla y León is that students are allowed to rotate between different companies in order to develop professional skills associated with training modules (Consejería de Educación de Castilla y León, 2017). These rotations can be in companies associated with the one that welcomes the student, companies that are part of a training consortium or, even also, among companies linked to the same vocational school which are part of a network for development set of dual training projects.

In relation to the economic benefit that each apprentice receives there are also territorial differences; thus, in the Community of Madrid, each student obtain a scholarship from the company, being 300 euros per month for those students who attend the Higher level training cycles and 200 euros for those who take Intermediate level training cycles. In addition to this, the company manages the registration in Social Security of each of the trainees, with the category of intern. On the contrary, in the case of the Canary Islands, the regulations include the possibility that students receive scholarships (Dirección General de Formación Profesional y Educación de Adultos de Canarias, 2019), but it is not mandatory for companies. In fact, the Canar-

ian students, in general, do not receive any kind of financial benefit for the work carried out in the company during the training. However the students in Castilla y León get a scholarship provided by the company which cannot be less than 50 percent of the legally established minimum interprofessional salary (Consejería de Educación de Castilla y León, 2017). Nowadays the minimum wage in Spain is 900 euros, so the students in Castilla y León must receive at least 450 euros.

The next point concerns to the requirements for the development of a dual VET project. In this respect, the vocational schools must have a prior authorization granted by the corresponding Autonomous Government which is different from that granted to provide ordinary teaching. Thus, in the case of the Community of Madrid, schools make a request that indicates which training cycles they wish to impart in this modality together with a justification of the project and a proposal of the training program that covers both training modules that will be taught at the school such as those that will be developed in the company.

Likewise, the school presents a proposal of the companies that will participate and the number of training positions offered by each of them for each training cycle. It is also established a commitment among the student, the vocational school and the company (Caballero, García y Lozano, 2018). With regard to the selection of the companies, in the case of the Autonomous Community of Andalusia, the coordinators of the dual project in the teaching center are the ones who watch over the suitability of the companies for the development of the VET program. Thus, they are responsible for determining if companies have the necessary spaces, the qualified personnel, the safety condi-

tions and the essential equipment to provide adequate training to students (Consejería de Educación de la Junta de Andalucía, 2018). As for the Autonomous Community of Castilla y León, the Official Chambers of Commerce, Industry, Services and Navigation can also intervene in the selection and validation of companies, in the training and designation of trainers as well as in the control and evaluation of the accomplished programming (Presidencia de la Junta de Castilla y León, 2017).

In general, companies together with the vocational schools can collaborate in the assignment and selection of students for the different training positions. Thus, in the case of the Community of Madrid, if the student is selected by the company after conducting an interview, he or she can accept or reject that position in the company (Dirección General de Formación Profesional y Enseñanzas de Régimen Especial, 2016). If the student is not accepted by the company, he or she can formulate the enrollment in the vocational school and carry out the training cycle in ordinary regime (CEPYME Aragón, 2019). In the case of the Canary Islands, the selection of students is based on objective criteria of competence and suitability that are established by the school although the collaboration of the company is allowed (Dirección General de Formación Profesional y Educación de Adultos de Canarias, 2019).

In the area of the evaluation of students, there is greater uniformity among the autonomous communities. In this sense, a teacher at the school is responsible for monitoring the training and progress of students during the period of stay in the company. Therefore, a monthly coordination mechanism is established between the school and the company for the monitoring of the training program. Thereby the detection of incidents

can be allowed so that it can intervene quickly and thus any arisen problem can be solved. There is also a quarterly coordination, in which the evolution of the students in that period of time is recorded and their performance in the company is observed. Thus, the trainer of the company completes a report that includes the specific professional tasks that the student has developed in the company along with an assessment of each of them; in this report an observation scale about the student's attitude in the company must also be completed (Dirección General de Formación Profesional y Enseñanzas de Régimen Especial, 2018). The evaluation criteria they use for this are included in the didactic programming. To facilitate the tutoring work, the student can also prepare a monthly report of the activities carried out in the company, so that they are taken into account in the follow-up of their training.

With respect to the attitude of the student in the company, in the event that a student had some type of negative behavior during the training period, the company trainer must notify the tutor of the school and the director thereof, explaining the events and leaving written record of them. Once the allegations of the company have been analyzed, the director of the school decides, with the collaboration of the teaching team and the tutor of the school, if it is necessary to apply the sanctioning procedure provided by the regulations (Consejería de Educación e Investigación, 2019), or that the student change company.

In the case of the Basque Country, all these aspects are also taken into account, since as the Basque Government affirms in relation to this area, the company in no case replaces the vocational school which is the responsible for the programming, the design and the implementation of the monitoring plan and the

evaluation system, always in coordinating with each participating company (Euskadi Lanbide Heziketa, 2017).

In relation to the company trainer, the state legislation indicates that it must be designated by the business organization and that he or she must have an adequate professional qualification in addition to professional experience. The trainer is responsible for coordinating the tasks that the student must perform in the company during the training period as well as for the collecting documentary assessments of these tasks in order to be taken into account for the evaluation of the module. Likewise, the company tutor have to participate in the monthly follow-up meetings together with the tutor of the vocational school who will watch over the supervision of the tasks foreseen in the training program.

In the case of the Autonomous Community of Castilla y León, some more demanding requirements are established for company trainers; they must have a qualification of the same level or higher than those of the training cycle carried out by students as well as a professional experience of more than three years in the same job that is related to the training program that the student will develop (Presidencia de la Junta de Castilla y León, 2017). In addition, the Regional Ministry of Education of this autonomous community periodically organizes training activities certified by the public Administration for the company trainers to develop the work of tutoring.

Hereafter a comparative analysis will be carried out between the Spanish and German dual systems; this one has been a key part in the economic development of Germany and becoming an international reference model.

3. COMPARATIVE SIDES BETWEEN THE SPANISH AND THE GERMAN DUAL VET SYSTEM

The German dual vocational training system is characterized by offering well-qualified workforce to the business world, a factor that has led Germany to become a world economic power today. Therefore, this training system has become a benchmark for other countries such as Spain (Alemán, 2015). Therefore, a comparative analysis between Spain and Germany and a set of conclusions for each area will be carried out.

If we compare the development figures of the dual model in Spain with those in Germany, we find large differences. As indicated above, there are currently 20,357 students in Spain studying in 795 schools compared to 1,323,894 students in Germany. 58.2% of German students do so in the field of German industry and commerce and 27.5% in crafts; the remaining 14.3 is formed in the field of agriculture, public service, liberal professions, etc. (Bundesinstitut für Berufsbildung, 2019a). In fact, the dual system has a lot of social importance in Germany, given that, for example, in 2011, 47% of the German population aged between 18 and 26 had obtained a degree in the dual vocational training system (Vollmar & Klaukien, 2013). Logically these great differences are due to the historical development of both systems, being the Spanish model of very recent creation which has managed to multiply his figures by two thousand in six years. Therefore, growth in Spain is being exponential.

In relation to the duration of the training, it generally lasts two school years in Spain; however, there are autonomous communities that offer an extended three-year modality. In Germany, the duration of the training varies in each of the 318 pro-

fessions, with most of them being three years (Bundesinstitut für Berufsbildung, 2019b), although there are some of two years and others of three and a half years. The latter last longer because of the technical complexity of their teachings (Bundesministerium der Justiz und für Verbraucherschutz, 2005). Likewise, the curriculum taught in German companies is regulated by the Training Regulations that set the national standards for dual training in the company. They are decrees whose validity covers the entire German Federal Republic. In turn, the curriculum of each profession taught in the vocational school is established by each federated state, always taking into account the Teaching Framework Plan established by the Conference of Ministers of Education (KMK) (Kultusministerkonferenz, 2015). Therefore, if the duration of the training between both countries is compared, it is found that the time of stay in companies of Spanish students is shorter, so it is necessary to increase the total duration of the training cycle in Spain such as already It is being offered from some Spanish autonomous community through the extended three-year modality. This decision would have to be adopted for the whole country.

Regarding the economic benefit that each apprentice receives, there are territorial differences in Spain since, for example, in the Community of Madrid, each student receives a scholarship of 300 euros per month from the company. This amount is 450 euros in Castilla y León while, in the Canary Islands students do not receive anything. However, the situation in Germany is quite different. The average remuneration for an apprentice is 908 euros per month, 913 euros in the old federated states and 859 in the new ones. There are also different salaries depending on the profession. In fact, the apprentices receive 999 euros in

the public service while 975 euros is the amount paid in the field of industry and commerce. However, this amount is lower in the agriculture sector, this being 767 euros (Bundesinstitut für Berufsbildung, 2019a). The company also intends to guarantee a sufficient number of qualified future technicians. In short, the comparative analysis indicates that it is necessary for students in Spain to receive an economic amount from the company that is really sufficient to meet the expenses generated by the training and, in turn, also take into account the productive tasks that apprentices carry out in the company.

As regards the selection of students who participate in dual training, it is usually a responsibility of the vocational school in Spain. For it the schools follow the objective criteria of competence and suitability, although the collaboration of the company in this selection is also allowed. However, in Germany, the students must find a training position in a company before they can enroll in a vocational school. For this, they can make use of the possibilities offered by the Federal Employment Agency through the Professional Guidance Centers (BIZ), as well as through applications and websites that inform about the number of learning positions offered by companies in a certain profession (Bundesagentur für Arbeit, 2017). The Chambers of Industry and Commerce and the German Craft Chambers as well offer information on this. Therefore, the selection of apprentices is carried out in Germany directly by the companies. In order to do this, the students fill out an application, attach both the certificate of notes and the Curriculum Vitae and then conduct an interview. Before making this selection, the companies plan the number of apprentices that they will need using a series of criteria. On the one hand, it is taken into

account the needs of personnel in the different structures of the company over a horizon of between three and five years. On the other hand, technological changes and those related to the organization of work are also valued. The proportion of specialists that will have to be covered in the future and that have to have their own specific training is also calculated (Cramer & Kieper, 2002). Finally, another determining factor is the image that the company shows before the society, since dual training is highly valued in Germany. In conclusion, from this analysis it follows that the company participate in the selection of students because it will train an apprentice who will likely become one of its future workers.

As for the evaluation of students, in Spain it is a teacher of the vocational school who is responsible for monitoring the training and progress of the apprentices during the period of training in the company. Therefore, a monthly and quarterly coordination mechanism is established between the school and the company for the monitoring of the training program and even a report on the professional tasks developed by student is completed by the company trainer in order to analyze the evolution of the students. Therefore, always in coordination with the trainers, it is the educational center that is responsible for programming, design and evaluation. In Germany, the evaluation process is in a different way. There are two important tests during the training: the intermediate and the final test. In fact, there are Training Regulations for each profession at the state level that indicate the content and duration of the tests. The intermediate exam is intended to be a test of the student's performance control that takes place before the end of the second year of training (Bundesministeriums der Justiz und für Verbraucherschutz, 2006). As

for the final test, this is carried out in Germany by an Evaluation Commission of the Chamber of Industry and Commerce or the Chamber of Crafts that will determine if the student has acquired the professional skills necessary for their profession. Each commission is made up of at least three people who are experts in a certain field. There must be the same number of delegates representing the employers and workers, both sides constituting two thirds of the total components of the commission. At least one teacher from the vocational school must also participate (Bundesinstitut für Berufsbildung, 2018). In this final test, there are written, oral and exam practice parts. However, the intermediate test of a large number of professions is being eliminated more and more in Germany. What is currently done in some of them is to divide the final exam into two parts (Bundesministeriums der Justiz und für Verbraucherschutz, 2013). The first one takes place before the end of the second year of training and the next one at the end of the studies. After obtaining a positive evaluation, the student receives three different certificates; one issued by the corresponding chamber, another by the vocational school and a third by the company in which he has developed his dual training. Consequently, there are large differences in the scope of the evaluation between the Spanish and German systems, since the huge participation and influence of German companies in the evaluation of students.

With reference to the trainers, the Spanish legislation indicates in a general way that they must have an adequate professional qualification as well as professional experience. However, in some Spanish autonomous communities, such as in Castilla y León, specific conditions are established for this. Thus, the company trainer must have a qualification of the same level or

higher than those contemplated in the training cycle taken by students and a professional experience of more than three years in the same job. In contrast to this, every German company that trains apprentices must have at least one accredited trainer why any worker can not assume this role. Thus, it is legally established that such trainers must have adequate both personal and professional aptitude. Therefore, they must have as the necessary professional competences, knowledge and skills as well the appropriate pedagogical qualifications. Consequently, there is a test regulated by the Ordinance on Trainer Aptitude (AEVO) which they must take in the Chambers of Industry and Commerce or the Chambers of Crafts (Bundesministerium für Bildung und Forschung, 2009). The exam consists of a written part and a practice. The written proof is about the planning and organization of training, the learning processes, the teaching methodology and evaluation. In turn, the practical part of the exam is divided into two halves: the practical development of a didactic unit and an evaluation interview. In addition to training apprentices, trainers in small and medium enterprises develop other professional activities while those in large companies are generally full-time. In this vein, the German Federal Institute for Vocational Training (BIBB) offers a digital information and communication platform to the trainers in order to support them in the daily practice that they develop in companies. In 2017 there were a total of 636,078 registered trainers of which 85.9% belonged to the old states and 14.1% to the new federated states. 46.5% worked in industry and commerce, 32.6% in craft trades, 13.6% in liberal professions, 3.8% in agriculture and 3.1% in public service (Bundesinstitut für Berufsbildung, 2019a). The rate of German company women trainers in 2017 was 25.7%.

In conclusion, there is clearly still that the level of training of company trainers is much more demanding in Germany than in Spain so it is an indicator of quality in the training received by apprentices. In fact, the application of the Ordinance on Trainer Aptitude (AEVO) was suspended in Germany from 2003 to 2009 in order to increase the number of trainers. Over that time period, it was found that not only there was a decrease in quality but also that there was an increase of both the apprentices who dropped out of the company and the number of young Germans who suspended the final tests. Therefore, having technically and pedagogically well-trained company trainers means that the quality of the training provided is larger. Therefore, it is needed that the criteria established to be a tutor were regulated in Spain through the rise of the technically and pedagogically levels of demands.

As regards the role played by the Chambers of Companies in dual vocational training, they have an irrelevant role in Spain. With the possible exception in some autonomous communities, as the case of Castilla y León whose Business Chambers can intervene in the selection and validation of companies, as well as in the control and evaluation of program compliance. However, the level of involvement at the national level is generally low. By contrast, in the case Germany, not only the Chambers of Industry and Commerce and the Chambers of Crafts but also those belonging to liberal professions are involved in vocational training as well as in the professional development. So much so that there is a Vocational Training Committee in each chamber (Bundesministerium für Bildung und Forschung, 2018). This committee is made up of representatives of the employers, representatives of the workers appointed by the unions and teach-

ers of vocational schools proposed by the educational authorities. Its purpose is to decide whether companies have adequate facilities to provide training, organize evaluation tests, issue certificates and develop industry-wide training. In addition, it is responsible for applying the measures established by the Professional Training Commission of the Federated State. Likewise, the commission receives information on the tasks performed by the vocational training advisor who depend on the Chamber. The figure of the vocational training advisor was created in order to comply with article 32 of the Federal Law on Vocational Training, which states that the Chambers of Industry and Commerce and the Chambers of Crafts are the competent body will supervise the development of the training given in companies (Bundesministerium der Justiz und für Verbraucherschutz, 2005). Therefore, these vocational training advisors are responsible for guiding both the trainers and those in charge about the training of apprentices by means of advising on issues related to legal regulations and the learning contract. They must also determine whether the conditions for training in the company are adequate, so they examine the status of the workshops, the personal and academic qualification of the trainers as well as the relationship between the number of learning positions and the number of trainers available in the company. They are also responsible for advising apprentices on their contractual rights and duties as well as exercising supervisory functions, observing compliance with the training regulations and the company's training plan. It must be taken into account that it is especially important both to verify that the apprentices only do work tasks belonging to the training and to eye the role developed by the trainers (Industrie- und Handelskammer, 2019). In Ger-

many, the vocational training advisor organizes his advisory and inspection activity by regularly visiting companies. He must record all these advisory and supervisory actions in the minutes established by the chambers. It should be added that the activity carried out by the vocational training advisor requires a lot of care because, since in addition to advising, they must supervise the compliance with the law which may trigger sanctions against individuals or companies.

From this comparative analysis it is inferred that it would be necessary for Spain to have a similar figure like the vocational training advisor in order that he could visit the companies, supervise the apprenticeship training plan and verify the suitability of the trainers and the workshops in which the training is given. It would be an indispensable figure in order to raise the quality of dual VET in Spain.

The next point is the type of companies and their relationship with training. As indicated above, there are currently 2,886,759 companies in Spain, of which the majority are self-employed or small businesses between 1 and 9 workers. This reason conditions greatly the implementation of dual VET because it is easier to develop in large companies than in those of small size. In this sense, in Germany there is a type of centers called Joint Training Facility (ÜBS) which are intended to complement the training given in small and medium enterprises. The teachings taught in these institutions began to be organized by the Federal Government at the beginning of the 70s of the last century with the purpose of improving VET in Germany. In fact, these institutions are indirectly referred to in the Federal Law on Vocational Training, since article 27 makes reference to these small companies that cannot train in all professional competences estab-

lished by the regulations. They must do it in a location outside the company (Bundesministerium der Justiz und für Verbraucherschutz, 2005). These places are the Joint Training Facilities which are significant because of the importance they have not only in the field of dual VET but also in professional development activities, especially for craft companies as well as the agricultural sector and for industries (Drewes, 2008). Currently in Germany there are over a thousand such centers (Nause, 2018). In short, it is a fundamental tool that guarantees the training in the different professional competences that cannot be achieved in the company's ordinary facilities, especially in those companies that are small-sized (Bundesinstitut für Berufsbildung, 2019a). These companies find it difficult to have adequate facilities due to the costs it generates. Another reason is that, in certain specialties, new technologies require a high degree of specialization which these companies do not have.

As far as the specific characteristics of these joint training facilities there are different types. On the one hand, there are institutions with only one company trainer (sometimes employed only part-time) that is responsible for the teaching content in a particular profession. On the other hand, there are centers that do cover a wide range of professions, with a list of specialists as well as their own administration. As for the personnel employed in this type of institutions, this is also very varied: from specialized workers, through master craftsmen to technicians and engineers. Some of these Joint Training Facilities have an internship service for apprentices from other distant locations. The teachings taught by them are organised in two or three blocks of one to three weeks duration. Hence, there are coordination committees among these training centers, com-

panies and vocational schools in order to guarantee the quality of the training provided (Bundesministerium für Bildung und Forschung, 2016). Currently, the Federal Government promotes converting these institutions into centers of competence, so that they can make innovative qualification offers in a certain professional field (Bundesinstitut für Berufsbildung, 2019a).

In short, it can be said that these Joint Training Facilities respond to the difficulties that small and medium-sized German companies have to train apprentices. In the case of Spain, it would be very important that similar institutions existed in the country, since they would serve as support for small and medium enterprises to participate in dual training (Nause, 2018). It must not be forgotten that most Spanish companies are small-sized.

4. CONCLUDING REMARKS

After the comparative analysis between the Spanish and German dual systems, some conclusions can be drawn about how to improve the dual training offered in Spain. In fact, the creation of Spanish dual system is very recent although it has had an exponential growth in these six years of life. Despite this, the system requires improvements for its future expansion. Therefore, a key aspect is that decisions taken at the national level should be based on consensus among the autonomous communities in order to further unify the system. In addition, it would be important the participation of employers and trade unions in these decisions, as it has been done in the German dual system for decades.

With regard to the duration of the dual VET in Spain, the need for greater coordination at the state level is observed in

order to avoid imbalances that generate differences in terms of the duration and quality of the training received by the trainees, over all taking into account that the labor market in Spain is unique. Therefore, it would be necessary to increase the time of stay of the Spanish students in companies, so that the total duration of the dual VET in Spain should be three school years, as it is already being offered from some Spanish autonomous community through the extended three-year modality.

Likewise, it is necessary that the students in Spain receive a sufficient salary from the company that would serve both to meet the expenses generated by the training and to pay them fairly for the productive tasks they perform. So that it would not happen situations that has already occurred in some autonomous communities in which apprentices are paid with a tiny economic amount or even charge nothing. To do this, it is also important that Spanish companies participate actively in the dual system, particularly in the selection of the students whom they are going to train and who will probably become their future workers.

On the other hand, in relation to the evaluation of students, Spanish company trainers participate in the evaluation through their reports, but it would be desirable them to have a more notable and important role in this area. However, it is required that Spanish company trainers to be pedagogically and technically well trained given this being currently one of the weak points of the system. Hence, the authorities together with the Chambers of entrepreneurs have to make a greater effort in this regard. It is essential that the Chambers of Spanish entrepreneurs become more involved in dual VET. One of the measures that not only could but should be taken is the creation of the fig-

ure of the vocational training advisor who could visit the companies and supervise the quality of the training as well as its conditions of developing. It is an indispensable figure to be able to raise the quality of the Spanish dual VET.

Finally, given the fact that most companies in Spain are small-sized, it is essential that there be Joint Training Facilities. It would be a very useful instrument for small and medium-sized companies to also participate in dual VET. It would help to offset the difficulties they usually have due not only to not having adequate facilities but also to the high degree of specialization required by new technologies. Therefore, the involvement of the different sectors, it means the business chambers and of the Spanish public administrations, is required in the promotion and construction of this type of teaching centers.

In conclusion, the implementation in Spain of dual VET entails an economic cost for companies but this investment generates multiple benefits in the long term. Not just that companies are given the opportunity to have qualified apprentices based on their needs as well to have workers who become the generational replacement. Therefore, the dual VET system not only allows the business world to have a highly qualified workforce and to respond effectively to the demands of the economic-productive environment but also contributes to a higher level of social welfare of the population.

REFERENCES

- Alemán, J. (2015). El sistema dual de formación profesional alemán: escuela y empresa. *Educação e Pesquisa*, 41(2), 495–511.
- Alemán J. y Calcines M. (2019) Inclusion of Unemployed People at Social Risk and Private Training Markets in Ireland, Portugal, and Spain. In: McGrath

- S., Mulder M., Papier J., Stuart R. (eds) *Handbook of Vocational Education and Training. Developments in the Changing World of Work*. Basel, Switzerland: Springer.
- Bundesagentur für Arbeit (2017). *Jetzt auch online: Berufswelten im Überblick*. Recuperado de https://abi.de/data/File/Lehrer/171006_Flyer_BFI-Online.pdf
- Bundesinstitut für Berufsbildung (2018). *Richtlinie des Hauptausschusses des Bundesinstituts für Berufsbildung. Musterprüfungsordnung für die Durchführung von Abschluss- und Umschulungsprüfungen*. Köln: Bundesanzeiger Verlag. Recuperado de <https://www.ihk.de/documents/38722/91011/Musterpr%C3%BCfungsordnung/1960b677-27f3-4954-8dc6-88b61d9ebafi?version=1.2>
- Bundesinstitut für Berufsbildung (2019a). *Datenreport zum Berufsbildungsbericht 2019. Informationen und Analysen zur Entwicklung der beruflichen Bildung*. Leverkusen: Verlag Barbara Budrich
- Bundesinstitut für Berufsbildung (2019b). *Verzeichnis der anerkannten Ausbildungsberufe 2019*. Recuperado de https://www.foraus.de/html/foraus_verzeichnis-der-anerkannten-ausbildungsberufe-2019-12109.php
- Bundesministerium der Justiz und für Verbraucherschutz (2005). *Berufsbildungsgesetz vom 23. März 2005 (BGBl. I S. 931), das zuletzt durch Artikel 14 des Gesetzes vom 17. Juli 2017 (BGBl. I S. 2581) geändert worden ist*. Recuperado de http://www.gesetze-im-internet.de/bbig_2005/BBiG.pdf
- Bundesministerium der Justiz und für Verbraucherschutz (2006). *Verordnung über die Berufsausbildung zum Tischler/zur Tischlerin vom 25. Januar 2006 (BGBl. I S. 245)*. Recuperado de https://www.gesetze-im-internet.de/tischlausbv_2006/TischlAusbV_2006.pdf
- Bundesministerium der Justiz und für Verbraucherschutz (2013). *Verordnung über die Berufsausbildung zum Kraftfahrzeugmechatroniker und zur Kraftfahrzeugmechatronikerin*. Recuperado de <https://www.bibb.de/tools/berufesuche/index.php/regulation/kraftfahrzeugmechatroniker2013.pdf>
- Bundesministerium für Bildung und Forschung (2009). *Ausbilder-Eignungsverordnung*. Köln: Bundesanzeiger Verlag. Recuperado de https://www.foraus.de/media/ausbilder_eignungsverordnung.pdf
- Bundesministerium für Bildung und Forschung (2016). *Überbetriebliche Berufsbildungsstätten. Starke Partner der Wirtschaft*. Bielefeld: W. Bertelsmann Verlag
- Bundesministerium für Bildung und Forschung (2018). *Ausbildung & Beruf. Rechte und Pflichten während der Berufsausbildung*. Bielefeld: W. Bertelsmann Verlag
- Caballero M.A., García C. y Lozano P. (2018). *FP Dual, claves de la Formación Profesional dual para centros educativos*. Barcelona: Fundación Bertelsmann & Nestlé, SA.

- CEPYME Aragón (2019). *Programa Ibercaja Orienta. Información académico profesional. Formación profesional dual Madrid. Curso 2019–2020*. Zaragoza: CEPYME Aragón.
- Consejería de Educación de Castilla y León (2017). Orden EDU/398/2017, de 24 de mayo, por la que se desarrolla el Decreto 2/2017, de 12 de enero, por el que se regula la formación profesional dual del sistema educativo en la Comunidad de Castilla y León. Publicado en *Boletín Oficial de Castilla y León*, nº 104, de 2 de junio de 2017. España.
- Consejería de Educación de la Junta de Andalucía (2018). Orden de 20 de marzo de 2018, por la que se convocan proyectos de Formación Profesional Dual para el curso académico 2018/2019. . Publicado en *Boletín Oficial de la Junta de Andalucía*, nº 64, de 4 de abril de 2018. España.
- Consejería de Educación e Investigación (2019). Decreto 32/2019, de 9 de abril, del Consejo de Gobierno, por el que se establece el marco regulador de la convivencia en los centros docentes de la Comunidad de Madrid. Publicado en *Boletín Oficial de la Comunidad de Madrid*, nº 89, de 15 de Abril de 2019. España
- Consejería de Educación, Juventud y Deporte (2017). Orden 2195/2017, de 15 de junio, de la Consejería de Educación, Juventud y Deporte, por la que se regulan determinados aspectos de la Formación Profesional dual del sistema educativo de la Comunidad de Madrid. Publicado en *Boletín Oficial de la Comunidad de Madrid*, nº 150, de 26 de junio de 2017. España.
- Cramer G. & Kieper K. (ed.) (2002). *Jahrbuch Ausbildungspraxis 2002*. Köln: Fachverlag Deutscher Wirtschaftsdienst GmbH & Co. KG.
- Dirección General de Formación Profesional y Educación de Adultos de Canarias (2019). Resolución de 21 de febrero de 2019, por la que se dictan instrucciones para la autorización e implantación de proyectos de formación profesional dual del sistema educativo en la Comunidad Autónoma de Canarias durante el curso 2019-2020. Publicado en *Boletín Oficial de Canarias*, nº 43, de 4 de marzo de 2019. España.
- Dirección General de Formación Profesional y Enseñanzas de Régimen Especial (2016). *Guía para la gestión de los procesos de selección de formación profesional dual 2016–2018*. Madrid: Consejería de Educación, Juventud y Deporte de la Comunidad de Madrid.
- Dirección General de Formación Profesional y Enseñanzas de Régimen Especial (2018). *Orientaciones sobre la elaboración del programa formativo dual*. Madrid: Consejería de Educación, Juventud y Deporte de la Comunidad de Madrid.
- Drewes C. (2008). Zukunft und Gestaltung der überbetrieblichen Ausbildung. In F. Howe, J. Jarosch, G. Zinke (Hrsg.). *Ausbildungskonzepte und Neue Medien in der überbetrieblichen Ausbildung* (pp. 291–295). Bonn: Bundesinstitut für Berufsbildung.
- Euskadi Lanbide Heziketa (2017). *Formación Profesional Dual en régimen de alternancia del País Vasco*. Vitoria: Gobierno Vasco.

- Formación Profesional Andaluza (2018). *Formación Profesional en Andalucía. Curso 2018/2019*. Sevilla: Junta de Andalucía. Recuperado de <http://www.juntadeandalucia.es/educacion/portals/ishare-servlet/content/34145fc8-27d7-4604-9a31-36a9ab2ac964>
- Industrie- und Handelskammer (2019). *Aufgaben der Ausbildungsberatung*. Frankfurt am Main: Industrie- und Handelskammer . Recuperado de <https://www.frankfurt-main.ihk.de/berufsbildung/ausbildung/beratung/aufgaben/>
- Jefatura del Estado (2013) Ley Orgánica 8/2013, de 9 de diciembre, para la mejora de la calidad educativa. Publicado en *Boletín Oficial del Estado*, nº 295, de 10 de diciembre de 2013. España.
- Junta de Andalucía (2018). *FP Dual 2018/2019: informe de datos*. Recuperado de <http://www.juntadeandalucia.es/educacion/portals/ishare-servlet/content/629b144c-6408-4885-9677-c50d63c06cc5>
- Kultusministerkonferenz (2015). *Rahmenvereinbarung über die Berufsschule. Beschluss der Kultusministerkonferenz vom 12.03.2015*. Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland.
- Ministerio de Educación y Formación Profesional (2019). *Panorama de la Educación. Indicadores de la OCDE 2019*. Madrid: Secretaría General Técnica del Ministerio de Educación y Formación Profesional.
- Ministerio de Empleo y Seguridad Social (2014). Orden ESS/2518/2013, de 26 de diciembre, por la que se regulan los aspectos formativos del contrato para la formación y el aprendizaje, en desarrollo del Real Decreto 1529/2012, de 8 de noviembre, por el que se desarrolla el contrato para la formación y el aprendizaje y se establecen las bases de la formación profesional dual. Publicado en *Boletín Oficial del Estado* nº 10, de 11 de enero de 2014. España.
- Ministerio de Industria, Comercio y Turismo (2019). *Cifras PYME. Datos de enero de 2019*. Recuperado de <http://www.ipyme.org/es-ES/ApWeb/EstadisticasPYME/Documents/CifrasPYME-enero2019.pdf>
- Ministerio de la Presidencia (2012). Real Decreto 1529/2012, de 8 de noviembre, por el que se desarrolla el contrato para la formación y el aprendizaje y se establecen las bases de la formación profesional dual. Publicado en *Boletín Oficial del Estado* nº 270, de 9 de noviembre de 2012. España.
- Nause, T. (2018). La Cámara Alemana presenta los resultados del proyecto Join-VET, financiado por la JPMorgan Chase Foundation. *Das Deutsch-Spanische Wirtschaftsmagazin. Economía Hispano – Alemana*, 4(2018), 85–88
- Presidencia de la Junta de Castilla y León (2017). Decreto 2/2017, de 12 de enero, por el que se regula la Formación Profesional Dual del Sistema Educativo en la Comunidad de Castilla y León. Publicado en *Boletín Oficial de Castilla y León*, nº 9, de 16 de enero de 2017. España.
- Presidencia del Gobierno de Canarias (2014). Ley 6/2014, de 25 de julio, Canaria de Educación no Universitaria. Publicado en *Boletín Oficial de Canarias*, nº 152, de 7 de agosto de 2014. España.
- Vollmar M. & Klaukien A. (2013). *Berufsbildung auf einen Blick*. Wiesbaden: Statistisches Bundesamt.