

Article

Evaluation of Strengths of Dual Vocational Educational Training in Andalusia (Spain): A Stake on the Future

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Abstract: Dual Vocational Training was introduced in Spain in 2012 with the purpose to reinforce training based on employment requirements and to promote youth employment within the labour market. Since its implementation, there has been continuous growth of the presence of this modality across every Autonomous Community, with Andalusia being one of the latest regions to dualize the Vocational Educational Training (hereinafter VET) educational scheme. From the outset however, this modality has faced a number of obstacles that question its sustainability. Without losing sight of these obstacles, and with the purpose of providing arguments that justify the suitability of this model in Andalusia, this study aims to identify—from the unique perspective of three Andalusian educational institutions—the strengths of this modality and the opportunities that the Andalusian context offers. To this end, we have used the SWOT technique to analyse the opinion of a group of teachers regarding their thoughts on the Andalusian Dual VET system, from both an internal and external perspective. Workforce insertion and the quality of skills gained through training are some of the strengths that characterize this model, with the greatest opportunities derived from the needs of the Andalusian business and productive sectors. Based on the scenarios drawn, we have suggested a number of guidelines to capitalize on some of the identified strengths and take advantage of the opportunities observed.

Keywords: dual vocational educational training; evaluative research; strengths; opportunities

1. Introduction

When in 2012, in the midst of the economic crisis, the Spanish Government established the regulatory framework for a new modality of Vocational Educational Training (hereinafter VET) within the educational system of Spain, Dual Vocational Educational Training (hereinafter Dual VET), it did so from the conviction that training shared between an educational institution and a company would be the best way to learn a trade and to respond to those competencies required by the production sector [1]. It was also an opportunity to respond to the European guidelines regarding the need to reinforce training based on workforce needs and promote the employment of young people. This regulation [2] together with the Spanish educational law [3] constitute the basis from which the Educational Administration of each of the 17 Autonomous Communities, under which the Spanish state is structured, regulates the regional Dual VET offering, adapting the curriculum to the socio-productive and educational context and determining the modalities of development for the dual educational project at both educational institutions and companies.

Although it is true that the incorporation of the dual model in the educational system has been a highly applauded initiative and is supported nationally and internationally by organizations such as the European Centre for the Development of Vocational Training, European Alliance for Apprenticeships, the Organization for Cooperation and Economic Development, among others, there are many criticisms

made of both the model and its current structuring and regulation, as well as very varied arguments from the educational and business sectors that seek to highlight the need to address a comprehensive reform of this alternating system.

The model that Spain uses as a reference for the implementation of this alternating training system is the German model, but despite the fact that this model is one of the most internationally recognized, alongside the Swiss and Danish models, its adoption has been one of the most repeated criticisms of the process of implementing this VET modality in Spain ([4–10], among others).

Other hindrances that have accompanied Dual VET from its launch in Spain focus on regulations, governance models, financing, public-private collaborations, the involvement of companies, the relationship between the offer-production sector and the capacity of the model itself to respond to the requirements of the labour market ([5–9,11], among others). The problems that the current health crisis, resulting from COVID-19, is generating in the Spanish productive and economic contexts, and the impact that the current economic break will have on the youth community must be added to this list.

As Echeverría and Martínez-Clares [12] state, echoing other analysts, ‘The pandemic is not only going to affect health and the economy, but also our lifestyles, ways of working, education, etc. For some analysts it is a call to undertake further research and a reminder of the need to invest more than ever in scientific, technological and productive potentials, to respond and strengthen resilience in the face of the crisis’ [12] (p. 1). Without a doubt, the productive and economic panorama that is a result of this crisis will have an impact on the VET offering, and therefore on Dual VET.

Since its experimental launch in the Andalusian Autonomous Community (the context in which this study is focused) in the 2013–2014 academic year, Dual VET has been increasingly present in the Andalusian political, educational and business scenes as another measure to reduce school dropout rates, motivate students, alleviate the situation of youth unemployment and to improve job placement opportunities for young people by adjusting their training to the requirements of the Andalusian productive fabric. The achievements and criticisms that accompany Dual VET schemes in this Autonomous Community are the same as in the rest of the country, however, the demographic conditions in Andalusia and the characteristics of its productive and business fabric make this training modality a powerful tool for the workforce entry for one of the groups that has suffered the highest unemployment rates in Andalusia, that is, young people (71.5%) (Andalusian Labour Force Survey, data for the first quarter of 2020) [13].

This research is approached from the conviction that it is necessary to support Dual VET schemes in this southern Spanish region, and so it is necessary to document how its implementation is rolling out, the aspects that condition its implementation and the scheme’s strengths—to first consolidate these as good practices and then to build on them. From the premise that the specific study of regional and provincial singularity will allow us to advance towards a more effective, efficient and sustainable Dual VET system, this study introduces the experiences of three Andalusian educational institutions that are very involved in Dual VET schemes, so that through an internal and external analysis of teaching staff involved with this educational model, we can identify the strengths of this model and the opportunities that the Andalusian context offers to this VET modality—a challenge that we can define as the objective of this study.

2. Theoretical Framework

2.1. Vocational Educational Training in Spain

As stated by Jansen and Pineda (2019) [14] and Bellil (2020) [15], although Vocational Educational Training (VET) still lacks recognition and prestige in Spanish society, it has undergone significant progress in recent decades, not only in terms of its social image but also in its consideration as an option of post-compulsory studies and as a part of the educational system that is fundamental to “generate talent and technology, which are the key elements for the competitiveness of companies in the context

of Industry 4.0" [16] (p. 11). However, and as Echeverría and Martínez Clares (2020) [12] propose, there is still a long way to go; as shown in the OECD Report [17], Spain has the highest rates of early school dropout (17.9%) in the EU, whose average is 10.6%. As indicated in this report, only 33.3% of those who graduate for the first time in the second stage of Secondary Education have a VET degree. The OECD average is 40.1% and that of the EU is 46.3%, unlike the access rate to tertiary education, which in Spain is 78.9% (non-university 31.1 %, university 48.9%), significantly higher than the OECD (64.9%) and EU (62.9%) averages. As these authors outline [12], this situation can only be reversed by political stability and strong public investment.

On the other hand, as the prospective studies of the CEDEFOP (2020) [18] point out, it is expected that between 2018 and 2030, 65% of the jobs that are generated in Spain will require professionals with medium-level qualifications (Medium Degree VET), and the remaining 35% with high-level qualifications (Higher Degree VET and university training). In addition, more technical profiles and those with STEAM training (Science, Technology, Engineering, Mathematics, Arts and design) will be required. These prospective studies should reflect the new economic and employment outlook generated by the COVID-19 health crisis we alluded to previously.

There have been various efforts made to consolidate VET in Spain, from its first normative regulation, with the General Law of Education in the 1970s [19], where it was given a marked compensatory character, to the latest reforms introduced with the Organic Law for the Improvement of Educational Quality (LOMCE) of 2013 [3] in which VET was proposed as a solution to lower school dropout and youth unemployment rates. Also noteworthy is the recent commitment of the Spanish Government to VET reflected in the Modernization Plan for Vocational Training (2020) [20] and the First Strategic Plan for Vocational Training of the Educational System (2019–2022) [21], in which Dual VET appears on the roadmap set out in this strategic plan.

Currently, the Vocational Training system in Spain is structured into two subsystems: vocational training within the educational system (vocational training cycles) and vocational training for employment (certificates of professionalism), both referred to the same Catalogue of Professional Qualifications [22], but dependent on two different Administrations. This double structuring has been questioned in Spain for a long time, with make calling for the need to move towards the unification of the system. Proof of this is the commitment to the unification of both subsystems that is included in the aforementioned Modernization Plan for Vocational Training (2020) of the Government of Spain (2020) [20].

This dual training modality, contemplated in both the VET scheme of the educational system and in the VET scheme for employment, is based on the theoretical and methodological foundations of two approaches: competency-based learning and work-based learning (WBL).

Competency-based learning places the emphasis on the globality of the capabilities of the students and refocuses the content of the training toward a more productive and less academic logic that is directed toward problem solving, distributing the educational activities between the educational system and the productive system. From this logic, the socio-professional scenarios become those that are most suitable for the acquisition and development of professional skills and the internalization of a professional behavior model, moreover, of an identity model [23].

As Barrientos, Martín-Artiles, Lope and Carrasquer (2019) [24] points out, this alternative training modality is based on the approach called work-based learning (WBL), an approach that provides the methodological framework from which to address the labor integration of young people as well as the continuous professional learning and training of staff.

Following Rodríguez, Serreri and Del Cimutto (2019) [25] and Tejada (2012) [23], this educational approach not only questions the curricular content of training but also the organizational structures of academic institutions, the organization of teaching, the methodological strategies, and the role of the actors involved; in this scenario, training institutions must be more flexible at both the curricular and structural level, and at the level of recognition of the training received in the workplace. As Zabalza (2011) [26] indicates, work-based learning represents an alternative way of understanding

and organizing learning in the academic context and has great implications for both the normative level of educational activities and at a theoretical-epistemological level—one must not discredit the impact of bringing together two culturally different worlds, namely the academic and professional sectors.

Following Boud and Salomon (2001) [27], for the academic context, integrating theory and practice, curricular knowledge and procedural knowledge typical of the work-based context means questioning the traditional monopoly of knowledge production currently afforded to the educational sector, and it also questions the role of all those who play a role in the learning processes. Furthermore, it requires managing learning situations that on many occasions are new for teachers.

From this approach, dual VET can be seen as an educational itinerary that provides students with added value in improving their school-work transition, since it “fosters relations between companies and schools and the adjustment of professional profiles between the production and educational systems” [24] (p. 76).

2.2. *The Debate Facing Dual VET: The Heads and Tails of a Governmental Gamble*

Internationally, as we have mentioned previously, Dual VET has its origins in the professional training models implemented in Germany, Switzerland, Denmark, France and the Netherlands, and these models are seen as a benchmark for the implementation of Dual VET in Spain. This training modality envisages the student as an apprentice and the system of alternation between the educational institution and the company promotes a teaching-learning model that connects knowledge with know-how from an integral perspective, combining theory and practice.

In the dual training models of these countries, there are both positive and negative aspects but in general terms, the good outweighs the bad, and from their peculiarities and specificities, these are countries that have generally promoted this training modality as a reference within their educational maps and have consolidated these dual schemes as a training opportunity that favours the workforce entry of students and generates a network between the institution and the business fabric that has facilitated the rise of this training modality. It is worth mentioning that social recognition and political support in all these countries is seen as key to its success [28].

In the Spanish context, which is the object of this study, the current Spanish Education Law (LOMCE, 2013) defines the Dual Vocational Training scheme of the educational system as ‘the set of educational activities and initiatives that, in joint responsibility with businesses, are aimed at qualifying people’s professionalism, harmonizing teaching and learning processes between educational and work institutions [3] (Article 42.bis). With this alternation between two training scenarios, the educational institution is no longer the only place working as a fountain of knowledge and companies take on a lead role in the training process, not only in the design of the program, but also in the tutoring of the student during their time at the company and in their evaluation.

Dual VET, like the VET, is structured into industry sectors (related to a specific productive sectors) and within these, into training cycles of Basic, Middle or Higher levels whose contents provide students with the necessary professional skills with which to respond to the requirements of the different sectors and understand their specific professional context, adjusting the design and offerings of these cycles to professional requirements and specific geographical areas.

The design and approval of the minimum teachings of each training cycle is the responsibility of the central government, and the different Autonomous Communities are responsible for adapting the curriculum to their specific socio-productive and educational environments and the modalities of development. In this training (intermediate and higher levels), soft skills—personal and professional competencies that students must acquire to enable them to function successfully in work environments—occupy a leading role. These are highly demanded skills in the work environment (versatility, ability to work in a team, ability to make decisions, ease of relating to others, communicating, solving problems, etc.). It is necessary to emphasize the dynamic nature that these teachings are bestowed by the need to adapt them to the requirements of the different national productive sectors.

Although this modality of alternating training has continued to grow nationally from its introduction to the Spanish Educational System in the 2012/13 academic year, as indicated above, its implementation has generated controversies and very interesting debates.

These debates are focused on the suitability of the adoption of the German model, the financing of this model, public-private collaborations, the relationship between the training offering and the productive sectors, regulations, the involvement of companies, aid and scholarships for students, support from Administrations, recognition of the teaching staff involved, real coordination between the educational institution and the company and the quality of training ([4,7,29–38] among others).

As previously mentioned, one of the aspects that has generated the most controversy is related to the adoption of the German model. As Euler (2013) [29] argues, “whoever wishes to transfer a foreign training system to their own country must take into account the existing general conditions and guide dual vocational training according to their own educational, social and economic objectives. The question lies, therefore, in an intelligent transfer of adapted elements and not in an exact replica of an implantation in another country” [29] (p. 4). Thus, there are so many differences (social, productive and economic) between the German and Spanish contexts that simply adopting the German model without prior adaptation does not seem like good practice.

Another aspect that generates debate is the regulatory framework of the work-training system, specifically its lack of specificity. Although it is true that all regions establish Dual VET based on two ministerial normative references, RD 1529/2012 [2] and the Spanish Education Law (LOMCE, 2013) [3]—where the latest reform of Dual VET is incorporated—the regional contextualization of Dual VET without a specific national regulatory framework of reference has generated as many differentiated dual systems as Autonomous Communities in Spain. The majority of these proposals are committed to making the regulatory framework much more specific, thus ensuring the existence of a single model at a national level. As Echeverría and Martínez Clares (2018) [39] point out, it is necessary to have “a clear, coherent and consistent legal framework that allows the agents involved to act effectively, as well as guarantee mutual rights and responsibilities [39] (p. 190). The current regulations do not regulate important aspects including the company/business tutor, the remuneration of students, their contractual situation or time of alternation, the obligations of, and benefits for participating companies, among others, and so each region has outline these aspects without a national reference framework [37]. Currently, the ministerial commitment to Dual VET regulations is to have a common regulatory framework for Dual VET [20,21].

Another aspect under debate has to do with the financing of this VET model. Currently, in Spain 6 of the 17 Autonomous Communities offer aid to companies to cover expenses derived from this type of training (Castile and Leon, Extremadura, Murcia, Basque Country, Valencian Community and Galicia), with the last four regions having specific funds for Dual VET. In Spain, companies do not take financial co-responsibility for this training modality, nor is a proposal made from the regulatory framework, which suggests it may be seen as a populist and political propaganda measure rather than a scheme that has real support [40].

All the difficulties derived from the implementation of this training model at both the educational institution and at companies have also become the object of debate and criticism; the complexity for academic organization offices, the bureaucracy of some administrative tasks, the rigidity of the curriculum, a lack of support from the Administration, the complexity of the processes, a lack of incentives for teachers and companies and the differences in the legal framework of Dual VET schemes between Autonomous Communities are some of the difficulties that put the success of the consolidation of the dual system in Spain at risk [8,28,41–44].

2.3. Dual VET Characterization in Andalusia

The commitment of the successive governments of the Andalusian Autonomous Community to this alternating system has been very substantial, with it being one of the priority lines established in the Andalusian Smart Specialization Strategy (2020) [45] elaborated within the framework of the

European Union Regulation 1301/2013 of the European Parliament and of the Council of December 17, 2013 [46]. Likewise, it is necessary to highlight the prominence that in the implementation of Dual VET in Andalusia are seeing at both educational institutions and companies, who, with more or less administrative support, have been taking up this educational modality.

In the Andalusian Autonomous Community, Dual VET began in the 2013–14 academic year, as a measure to try to alleviate the youth unemployment situation in this region, as indicated by the European Commission (2020) [47], given that 55.5% of young Spaniards aged between 15 and 24—66% in the Andalusian region—were unemployed in 2013.

Dual VET of the educational system in Andalusia is structured across training projects that the educational institutions design, together with the collaborating companies and present for approval or renewal to the call that the Andalusian government launches annually based on what is established in RD1529/2012 [2]. These projects are developed as part of a 3-level vocational training cycle (Basic, Medium and Higher levels), offering dual places in them or throughout the entire cycle.

The activities to be carried out at the two training scenarios, the educational institution and the company, are included in the dual vocational training project. Dual projects are designed taking into account the socio-economic and business environment of the institution in which they take place and the sectors with the most opportunities for employment or enhanced future prospects. The company enlists to collaborate with the institution, from the initial design of the proposal, defining a training program for each participating student. The duration of the dual vocational training project must be adapted to that of the relevant training cycle, that is, 2000 h, which in the Andalusian Community spans two academic years. Of these hours, between 530 and 800 are dedicated to an internship at the company (for both Medium and Higher-level VET); in the case of Basic VET, the internship is between 300 and 500 h, not including time dedicated to the compulsory module found in all training cycles at the companies.

In Andalusia the presence of this training modality has been increasing annually; going from 12 projects, 207 students, 10 institutions and 87 companies in 2013–14, to 528 projects, 6750 students, 259 institutions and 4725 companies in the last academic year (2019–20) (Table 1).

Table 1. Offer in the Andalusian dual VET.

Course	Projects (New and Renovated)	Students	Schools	Companies
2013–2014	12	207	10	87
2014–2015	41	536	26	273
2015–2016	110	1512	76	1053
2016–2017	194	2293	120	1543
2017–2018	323	4451	168	2832
2018–2019	408	6118	203	3282
2019–2020	528	6450	259	4725

Source: Pozo-Llorente and Poza-Vilches (2020) [23].

At present, the cycles with Dual VET places in Andalusia address 23 of the 26 industry sectors included in the National Catalogue of Professional Qualifications [22]. The industry sectors that are not represented in the dual offering in Andalusia are those related to Glass & Ceramics, Arts & Crafts and Image & Sound.

As shown in Table 2, the industry sector with the most dual projects over the last three years in this Autonomous Community is Administration and Management (with 166 projects) followed by Sociocultural and Community Services (128). The least present industry sectors in the Andalusian dual offering are Energy and Water, Extractive Industries, Textile, Clothing and Leather, and Maritime-Fishing.

Table 2. Dual projects (new and renovated) grouped by a professional family in Andalusia.

Professional Family	2017/2018	2018/2019	2019/2020
Physical and sports activities	7	3	8
Administration and management	50	52	64
Agrarian	20	24	44
Graphic arts	5	3	4
Trade and marketing	39	43	52
Building and civil works	9	12	17
Electricity and electronic	25	29	36
Energy and water	0	1	2
Mechanical manufacturing	14	17	25
Hostel and tourism	14	15	17
Imagen personal	7	8	10
Food industries	10	12	19
Extractive industries	1	1	2
IT and communications	18	28	33
Installation and maintenance	14	17	16
Wood, furniture, and cork	4	4	6
Maritime-fishing	2	2	3
Chemistry	6	6	4
Health	20	28	32
Sociocultural and community services	34	41	53
Textile, clothing, and leather	2	2	2
Transportation and maintenance of vehicles	22	27	34

Source: Pozo-Llorente and Poza-Vilches (2020) [23].

3. Purpose of the Present Study

The work that is presented constitutes the diagnostic part of a broader evaluative study in which the analysis of the implementation process of this training modality in the Andalusian context is addressed [28]. The objective of the study presented is to identify, from the singular perspective and experience of three educational institutions with a trajectory in Dual VET, the strengths of this VET modality and the opportunities offered by the Andalusian context, with the purpose of defining guidelines that direct progress toward its consolidation in the Andalusian Autonomous Community.

It is a qualitative diagnostic study that can be methodologically situated in the paradigmatic context of interpretation and understanding. This study addresses the analysis of the contributions made by the teaching community of three Andalusian institutions in a process of reflection on the situation of Dual VET in Andalusia based on its internal analysis, which has allowed us to identify its strengths and weaknesses, and the analysis of external conditions that pose a threat or opportunity for this training modality.

For this, the questions that have conditioned the reasoned reflection of the teachers participating in the study have been:

#Q1. Which internal factors can be considered as a strength for the success of the Dual VET?

#Q2. Which external aspects can be considered as an opportunity for the success of the Dual VET in Andalusia?

#Q3. Which arguments justify the importance of maintaining a Dual VET in Andalusia from the teacher's perspective?

4. Materials and Methods

4.1. Methodological Approach. Information Collection Strategy

The SWOT technique has been used for this reflection, since it is a strategy capable of collecting opinions and the argumentative diversity present in them.

The teachers involved in Dual VET who participated in this consultation were asked to address the analysis, from an internal and external perspective, of this training modality in Andalusia and provide their opinions in an online survey, ordering their contributions into four main dimensions: Weaknesses, Threats, Strengths and Opportunities.

The SWOT analysis is an ideal technique to carry out an evaluative study and analyse, from the perception of the subjects involved, the internal and external factors that favour or hinder the success of Dual VET in the region under study. It is an information collection strategy that helps to foster an in-depth understanding of the subjects' perceptions and draw operational conclusions to improve the quality of what is evaluated [48–50].

It is a strategy widely used in self-assessment processes for the development of strategic plans that derive from the business sector [51,52], and is relevant as a self-diagnosis method used by the teacher when it comes to a self-assessment of the implementation of Dual VET schemes in the educational centres studied.

The SWOT analysis is an important step in planning and its value is often underestimated due to the simplicity of the tool's design [53].

For a better understanding of the SWOT analysis, we have defined each of the elements that comprise it:

- Strengths: internal aspects of the Dual VET scheme that the participants perceive as working well.
- Weaknesses: internal aspects that, from the teacher's perception, should be improved.
- Opportunities: Positive external factors that favour the success of Dual VET.
- Threats: External factors that negatively affect the successful development of Dual VET.

These external aspects also guide the trends that the institution itself can take as a reference for its future development.

The content analysis has been the methodological strategy followed for the analysis of the collected information, and the category system the tool for its implementation. In this study, we have exclusively focused on the strengths and opportunities identified by the participants. Addressing the strengths and opportunities in this study implies defining and arguing—from the perception of the study's participants—those internal and external factors that favour its success in this region.

4.2. Characterisation of the Sample

The teaching group participating in the SWOT consultation carried out in this study belongs to three educational institutions where, in addition to VET (Basic, Middle and Higher Degree), Secondary Education and Undergraduate Degrees are taught. These institutions have participated in Dual VET since its inception in Andalusia (the 2013–2014 academic year). In the 2018–2019 academic year, the year in which the information was collected, these three institutions offered dual placements across 9 projects presented across 9 training cycles (6 in Middle Grade and 3 in Higher Grade) belonging to the professional sectors of Chemistry, Health, Commerce & Marketing, Electricity & Electronics, Administration & Management and Graphic Arts. These institutions are representative of the two types of educational institutions in Andalusia: public and private (there were two private institutions in this study, one non-denominational and the other religious, where the VET teachings are state-subsidised).

72.2% of these teachers work at one of the two private institutions while the remaining 27.8% at the only participating public institution. The participants in this SWOT consultation totalled 94 professors (36.1%) and VET educators (63%) with various teaching experience: experience between 1 and 5 years (26.8%); between 11 and 20 years (24.7%), and; more than 30 years (14.4%). Approximately 30% of these teachers have professional relationships with industry and have worked in at least one role in the sector sometime in the last 10 years.

7.2% of the participants hold management roles at the educational institution, 13.4% work in roles related to the management of dual projects (project coordination or coordination of areas), 19.6% are academic tutors of Dual VET students, 33% teach into these cycles, and 26.8% did not teach into any Dual VET cycle in the 2018–2019 but had previously done so.

4.3. Analysis Procedure and Quality Criteria

As Bisquerra (2004) [54] states, the scientific rigour of qualitative information gathering techniques is based on “procedures that ensure that the description and interpretation of the reality studied actually corresponds to the way of feeling, understanding and living of the people who have provided the information and who are part of it” [54] (p. 275).

On the other hand, and following Bernard and Ryan (2010) [55]; Spencer, Ritchie, Ormston, O’Connor and Barnard (2014) [56], and; Wood and Smith (2018) [57], the detailed explanation of the process, followed in the analysis by the information, the reading and coding of the contributions by more than one researcher and the triangulation of the interpretations made have been some of the strategies with which we have ensured the validity of the process followed.

The system followed for the analysis of the information collected is that proposed by Miles, Huberman and Saldaña (2014) [58] who practically maintain the three tasks proposed by Miles and Huberman in 1994 [59]: the researchers’ knowledge of the subject under study has made it possible to enter into an interpretive analysis of the contributions of the participants, evaluating the numerous arguments presented and associating these with each other in order to identify the most relevant ideas.

Figure 1 shows the process followed for the content analysis. The contributions related to the strengths and opportunities, have enabled us to establish those categories to be analysed. This categorising has allowed us to determine the aspects that favour the success of Dual VET in Andalusia from the teacher’s perspective.



Figure 1. Coding map elaboration process (prepared by the authors).

The category system used to analyse these contributions has been designed from a mixed perspective. The research questions, a review of the theoretical advances on the subject under study and the professional experience of the researchers have been the referents used in the deductive process to establish the macro-categories and categories of analysis used. However, throughout the analysis process (during the coding stage) other aspects of interest emerged that, after their evaluation, were incorporated into the category system as subcategories and analysis units. Thus, the first detailed reading of the contributions allowed us to, in addition to cleaning the data, organize results around two macro-categories: Strengths and Opportunities. In this first reading, it was confirmed that the contributions relating to “Strengths” respond to what we could call key descriptors around which the studies and debates on Dual VET revolve: the model that supports it, the role of educational institutions with dual education offerings, the participation of companies and the involvement of educational agents, specifically students and teachers. Likewise, we were able to confirm that the characteristics of the Andalusian political and productive context were also present in the contributions grouped under the macro-category “Opportunities”.

A second reading of the contributions allowed us to identify, on this occasion in an inductive and emergent way, the subcategories of analysis whose consolidation has been achieved after the open coding of the information. A final review of the category systems by a group of researchers, who were informed about the study in progress and the purpose of the SWOT consultation carried out prior to undertaking the review, ensured the objective and intelligible nature of said systems, these being the results of the analysis carried out.

Table 3 shows the content of the categories that make up the systems used for the analysis of the contributions referred to as “Strengths”, while Table 4 shows the categories and their content in reference to “Opportunities”:

Table 3. Strengths.

Categories	Content
Model	In this category, all the contributions that refer to the model that sustains Dual VET and that represent its strengths have been incorporated. Thus, training at the company and in a specific professional context close to the students, the curricular structure of the dual projects and their adaptation to the needs of companies, the approach from which the teaching & learning processes are addressed, and the quality of the training are some of the content that make up this category.
Institution	In this category, all the contributions that refer to the characteristics of the institutions in which Dual VET is taught and that are seen as strengths have been incorporated. The relationship and knowledge that the institutions maintain within their business context, their management model and their experience in VET are part of the content that make up this category.
Industry	The interest of companies in this training modality, their participation in the training, the quality of the collaborating and interested companies and their employability capability are characteristics of the collaborating companies in the Dual VET system and that strengthen it.
Agents	The motivation of the students enrolled in dual VET cycles, the teaching competences of the teaching staff, their adaptability and dedication are characteristics of the educational agents involved in Dual VET, and therefore seen as strengths.

Table 4. Opportunities.

Categories	Content
Political context	In this category, all the contributions that refer to the current political context and that represent an opportunity for the Dual VET system have been included. The political interest in this type of training and the commitment of the Administration are two of the external factors that provide an opportunity to this VET model.
Productive context	The characteristics of the Andalusian business and productive context, indicated by the participants and that may represent an opportunity for Dual VET are included in this category. The need for business organizations to have specialised personnel with the skills that are currently demanded by a specific work context and which derive mainly from technological transformation are some of the content of these categories under analysis.
Social context	In this category, all contributions related to the social context and that represent an opportunity for Dual VET have been incorporated; the increasing social recognition of VET technicians and the significant diffusion that the alternating modality is achieving via some organizations and social networks represent an opportunity for dual training in the national and regional context.

The following tables (Tables 5 and 6) show the category systems designed as a result of the analysis itself:

Table 5. Category system used for Strengths analysis.

Categories	Subcategories	Analysis Units
Model	Character	Practical Training
		Specialized Training
		Contextualized Training
	Focus	Curricular
		Methodological
	Collaboration	Centre-company
	Quality	Prestige
Results		
Offer		
Centre	Opening	Environment relationship
	Governance	Management model
	Experience	Centre preparation
	Image	Image and projection of the centre
Company	Implication	Participation
		Interest
	Quality	Companies/Productive fabric
Agents	Students	Motivation
		Experience
		Training
		Professional insertion
		Professional development
	Teachers	Training
		Attitude
Upgrade		

Table 6. Category system used for Opportunities analysis.

Categories	Subcategories
Political context	Interest
Productive context	Transformations
	Coordination
	Recruitment
	Qualification
Social context	Recognition
	Diffusion

Finally, the quantitative analysis of the qualitative contributions has allowed us to understand the degree of presence of the strengths and opportunities indicated and to identify those that are more regularly recurring. The coding has been carried out with the help of the MAXQDA software version 2020.

5. Results

Next, we show the analyses carried out and address their interpretation, relying on the textual citations with which the participants have justified, classifying them into strengths and opportunities that condition the success of Dual VET in the Andalusian context.

5.1. Strengths

We begin with the analysis of the internal factors that, according to the respondents, are functioning as strengths for Dual VET offerings in Andalusia. Specifically, it is shown how the identified strengths are distributed in terms of percentages amongst the categories defined in the system used for said analysis (Figure 2).

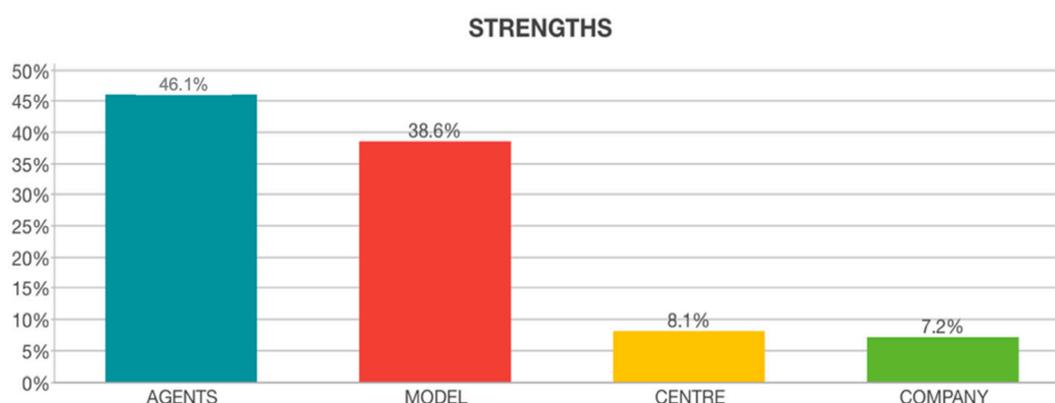


Figure 2. Strengths. Categories (Percentage of presence).

As we can see, most of the identified strengths revolve around the category “agents” (46.1% of contributions), which implies that, according to the participants in the consultation, the characteristics of the teachers and students involved in Dual VET are its strength. The “model” that supports this training modality is also a strength, with 38.6% of the contributions making reference to it. Only 8.1% and 7.2% of the contributions are associated with the characteristics of the institutions and companies respectively as generators of the strengths of Dual VET in this region.

Considering the subcategories, the following graph (Figure 3) highlights how the subcategory “students” and within this subcategory, the unit of analysis “professional insertion” is the aspect most noted as a strength by the interviewees. Undoubtedly, an aspect closely related to the “character” and “focus” of this training model that provides “quality”. All this also motivated by the ‘teachers’ who participate in this training modality.

Breaking down the map of categories defended in the analysis procedure, and in respect to the subcategory groupings, we must point out that out of 100% of the contributions, the subcategory “students” (corresponding to the category “agents”) is the one that includes the largest number of coded comments, with a weight of 29.7%, followed by the subcategories “focus” (13.5% of the coded contributions) and “character” (12.4%) which, according to their percentage of presence, are those subcategories with the most associated comments within those that have to do with this “model” of training (Figure 3).

The governance model and the experience of the institutions were not frequently noted as strengths (with 0.6% and 1.1% contributions respectively) (Figure 3).

On the other hand, following a more detailed analysis, we can see the interrelationships of ideas that the participants have exposed through their contributions (Figure 4). In this sense, and from the cluster that is exposed below, it is revealed that, in general, the interviewees indicate more than one idea in their contributions, interconnecting some strengths with others. From this cluster we can highlight how the contributions related to the “professional insertion” analysis unit are completed

with other comments associated with strengths related to the “training” of the students and their “professional development” as well as ideas related to the “training model”, its “curricular focus”, the “contextualized training”, the “offers” or the learning “results”, among other units of analysis; associations that highlight the quality of dual VET in terms of results, that is, of laboral insertion.

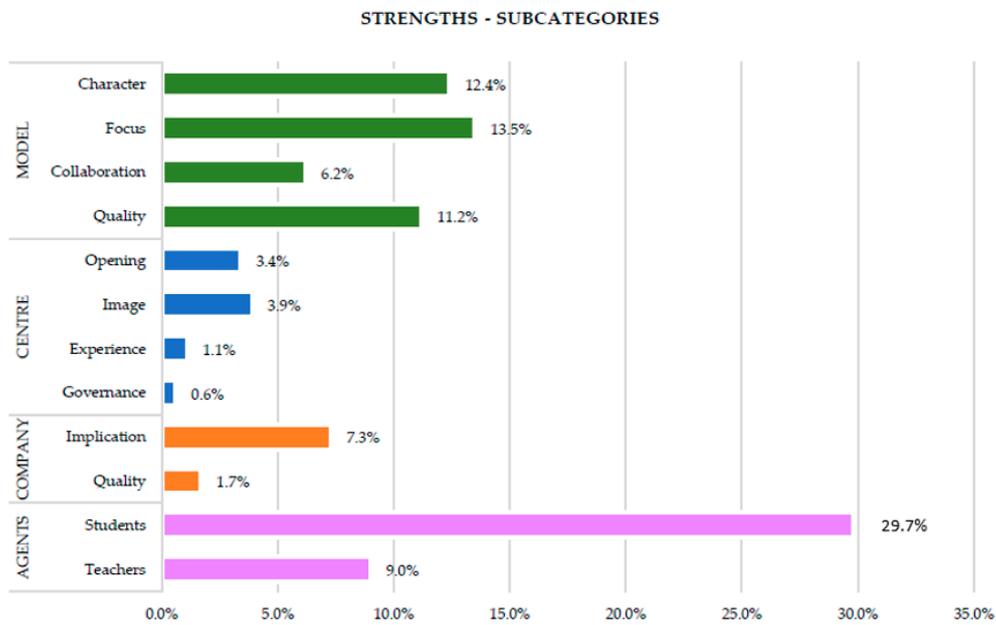


Figure 3. Percentage of presence of subcategories (strengths).

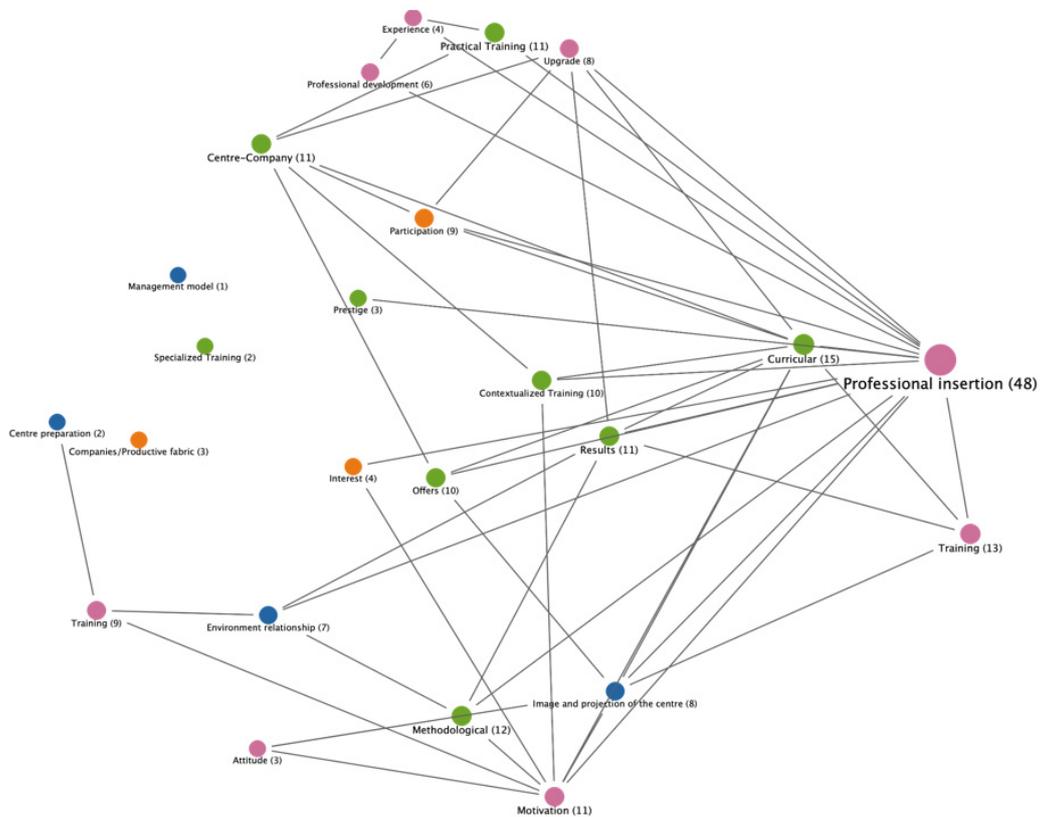


Figure 4. Relational cluster of participants’ contributions by units of analysis (strengths).

On the other hand, it is very peculiar that there are other isolated units of analysis that are not connected with other ideas such as the “management model” (category institution), “specialized training” (category model) and “company/productive fabric” (category company). The comments associated with strengths linked to these units of analysis are minimal, but in themselves are relevant due to the strengths they represent. A global analysis of all the contributions has allowed us to identify that the Dual VET governance model proposed by the Educational Administration itself is the object of permanent criticism. The resources assigned by the Administration to the centres that offer Dual VET education, and the existence of Dual VET and non-Dual VET students in the same training cycle are aspects of the governance model that are cross-sectionally considered to be weaknesses by the teachers of the participating centres.

Finally, taking into account the frequency of the participants’ contributions according to the units of analysis, we must highlight that there is a strength that stands out above the others with 48 associated comments, representing 21.7% of the total contributions (Table 7).

Table 7. Frequency and Percentage of Analysis Units (Strengths).

Category	Subcategory	Analysis Unit	Frequency	Percentage
Agents	Teacher	Upgrade	8	3.6%
		Attitude	3	1.4%
		Training	9	4.1%
	Student	Professional development	6	2.7%
		Professional insertion	48	21.7%
		Training	13	5.9%
		Experience	4	1.8%
Company	Quality	Companies/Productive fabric	3	1.4%
	Implication	Interest	4	1.8%
		Participation	9	4.1%
Centre	Governance	Management model	1	0.4%
	Experience	Centre preparation	2	0.9%
	Image	Image and projection of the centre	8	3.6%
	Opening	Environment relationship	7	3.2%
Model	Quality	Offers	10	4.5%
		Results	11	5%
		Prestige	3	1.4%
	Collaboration	Centre-Company	11	5%
	Focus	Methodological	12	5.4%
		Curricular	15	6.8%
	Character	Contextualized Training	10	4.5%
Specialized Training		2	0.9%	
Practical Training		11	5%	
SUM			221	100%

For almost 50% of the teachers participating in this consultation, one of the greatest strengths of Dual VET is its ability to facilitate the “professional insertion” of students with arguments such as those shown in the following graph (Figure 5).

As the analysis of the contributions indicates, labour insertion is the driving strength of this modality in Andalusia. Alongside this, it is necessary to highlight other characteristics of Dual VET associated with the students that are seen as strengths, and here we refer to the enthusiasm and motivation of the students and the quality of the training that they receive, - a comprehensive and eminently practical and experiential based training; training that is accompanied by an educational model whose curricular structure and methodological approach have also been highlighted as added values:

“Most of the content has a great practical load, students learn by doing” (Centre 1. S.17).

“A new vision of Vocational Training, proving the student with the realities of work from the outset and a ‘know-how’ approach to learning” (Centre 2. S.57).

“Working in small groups is very advantageous and facilitates the students’ progress” (Centre 3. S.59).

Finally, we want to highlight an aspect that has been referred to as benefit in only two contributions and the different meaning noted in other contributions has forced us to see that it may be a “double-edged sword” -the specialised nature the formation:

“The specialization of the training of students is detrimental to the versatility that VET graduates must have and that the world of work currently needs” (Centre 2, S.77).

“It is necessary to be careful because with a very specialised training the student is prepared for entry into a specific company and for very specialised work that is often limited to just that company” (Centre 3, S.85).

Therefore, the detailed analysis of these contributions allows us to highlight how the practical and contextualised nature of Dual VET has been identified as a strength compared to its specialized nature, which has been considered as such in only two contributions. General training or specialised training is a question that has generated very interesting debates. As stated by Barrientos, Martín-Artiles, Lope and Carrasquer (2019) [24], although it is true that specific training allows greater laboral insertion by better adapting to the needs of a company, this specialization reduces the possibilities of laboral mobility for graduates. On the other hand, one cannot lose sight of the fact that the educational system must provide general training that is easily transferable from one professional context to another, and from some companies and job positions to others within the same field. Versatility is one of the requirements of the current professional context.

5.2. Opportunities

Regarding the external factors that, according to the respondents, are providing opportunities for Dual VET in Andalusia, we should note that, although they are represented by a lower number of contributions, they are relevant and show real opportunities supported by other studies.

Specifically, it is shown (in terms of percentages) how the opportunities identified are distributed amongst the categories defined in the system used for said analysis (Figure 7).

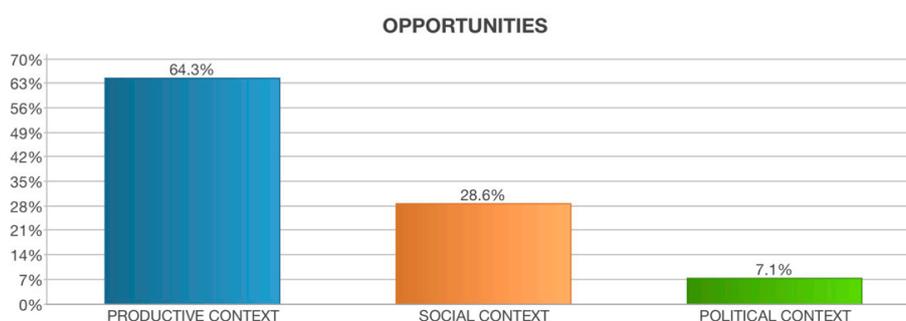


Figure 7. Opportunities. Categories (Percentage of presence).

The previous graph (Figure 7) identifies the three main dimensions from which the most outstanding opportunities associated with Dual VET are projected. The “productive context” category

is one that brings together most of the identified opportunities (64.3% of the contributions), which implies that, according to the participants in the consultation, the business and productive fabric is the great external ally that is helping increase the success of this training modality. 28.6% of the contributions of the participants revolve around the “social context” highlighting the dissemination and social recognition of this training modality as an external aspect that is conditioning the success of Dual VET. Finally, with 7.1% of the contributions, the participants consider that the “political context” is also an external factor conditioning said success.

The cluster shown in the following figure (Figure 8) shows that there are three subcategories from amongst those that have been identified that the participants have interconnected in their comments, and that have to do with the “Qualification” and the “Recruitment” of future workers by part of the business fabric, and in turn both opportunities correlate, through the comments of the participants, with the category of social “Recognition” that this training modality is achieving.

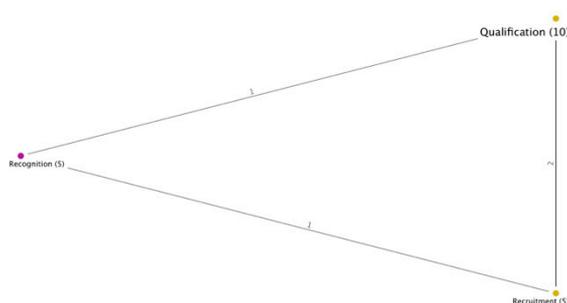


Figure 8. Relational cluster of participants’ contributions by subcategories (opportunities).

Finally, taking into account the frequency of the contributions of the participants according to the subcategories of analysis, highlights how within the “productive context” category, the “Qualification” and “Recruitment” subcategories are the two aspects most seen as opportunities by the interviewees. This is undoubtedly an aspect that contributes “recognition” to this training modality in the “social context” at the same time as it increases “interest” as a result of the “political context”. There is a circumstance external to the dual training model and within the productive context that provides a great opportunity to said model—we refer to the need of the productive and business context to have qualified workers (30.9%) (Figure 9).

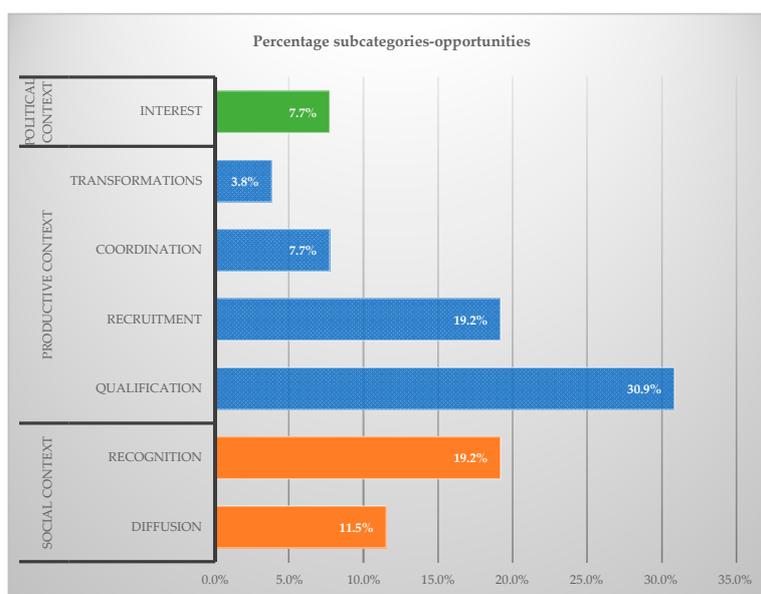


Figure 9. Percentage of presence of subcategories (Opportunities).

The analysis of the contributions made by the teachers in this enquiry, position the opportunities of this VET modality in the productive context. The most common arguments that justify this consideration underline that the training received by the student of this VET modality in the companies, qualifies them as future workers of those companies. The companies are not only providing competitive training to develop their task in the specific workplace, but also training them into the own culture of the company.

In a close relationship with the previous arguments, some others emphasize the fact that with this VET modality, the companies recruit workers and tackle their generational replacement without the repercussion in their productive ability nor the quality of their products (“recruitment”—19.2% of the contributions). The remainder arguments that those teachers, that replied to the survey, used to justify these opportunities for Dual VET in the productive context can be grouped in three different groups: (1) arguments based on the increasing social recognition of this formative modality and its great dissemination and attention from the business organizers and foundations with high prestige as “Fundación Bertelsmann” (“recognition” with the 19.2% of the contribution and “diffusion” with the 11.5%); (2) other arguments are based on the interest of the productive system in their correlation with the educational system, between other reasons, for the contemplation in the training of the competencies of professional action required in the working context (“coordination” with the 7.7% of the contributions); (3) arguments that highlight the fact of the great opportunity that is considered the use of the VET modality in the Andalusian politics (“interest” with the 7.7% of the contributions). Finally, and outside these groups, we want to highlight, although with a very low incidence and relevance (3.8% of contributions), the allusion that some of the participants have made to the technological transformations that the 4.0 revolution is generating in the national productive context and slowly into in Andalusian context, and how they represent an opportunity that VET in general and Dual VET in particular should not miss. A global analysis of all the contributions in this section has allowed us to confirm that the interest of companies in this training modality lies in the possibility that it offers a company to hire future workers trained according to the needs and culture of their companies, and thus to reduce the costs of on-boarding new staff. However, and in a transversal way, reference is also made to the numerous obstacles for the implementation of the dual VET scheme, which have to do with the productive and business context: a lack of incentives for SMEs and micro-enterprises to ensure their involvement in Dual VET, a lack of academically trained company tutors to deliver training to students and a lack of flexibility to modify academic curricula

and teachings that would enable their adaptation to a changing context such as the productive context, are some of these obstacles that can put at risk the interest of companies for this training modality. Figure 10 shows some of the textual contributions as an example of this assessment.

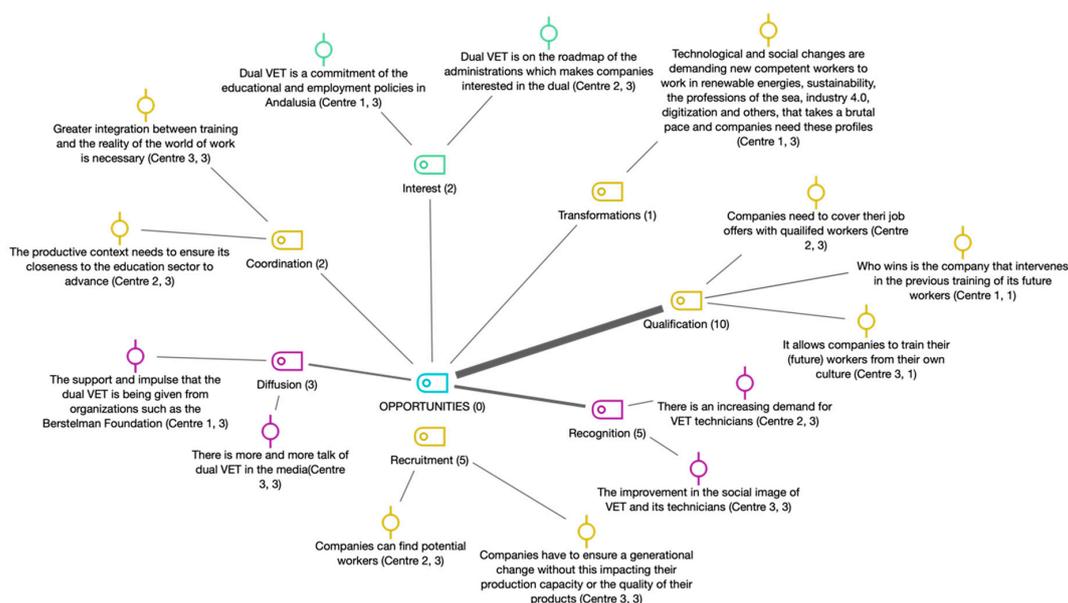


Figure 10. Contributions related to the most relevant units of analysis.

The strengths and opportunities described by the participants in this consultation, and the object of the analysis carried out, constitute weighty arguments that justify the commitment that this Autonomous Community must continue to have for Dual VET. A backing that must be accompanied by a greater investment in terms of budgets and of educational and business research and innovation.

6. Discussion and Conclusions

Addressing the analysis of the Dual VET, and highlighting its strengths and the opportunities it poses may seem an erroneous and difficult approach given the large number of obstacles that have accompanied it since its launch in Spain 2012–2013. However, and despite the obstacles to its implementation pointed out by both the institutions and the companies, there are many strengths of this training model that justify its relevance and sustainability in the Andalusian context.

These strengths must be the starting point from which to design lines of action aimed at the consolidation of a quality Dual VET model in the Andalusian context.

Based on the scenario drawn in the analyses shown above, we suggest some guidelines to capitalise on some of the identified strengths and take advantage of their opportunities.

This study has contributed to consolidating the idea that labour insertion is one of the greatest strengths of Dual VET [60–63]. Thus, in Andalusia it is also worth noting the ability of this model to facilitate the incorporation of its graduates into the labour market. Maintaining this degree of labour insertion requires an in-depth analysis of the structure and sectoral specialization of the Andalusian economy, identifying what the competence requirements of the productive sector are in order to address the design of an updated dual training offer. This analysis is especially important today in the strategic design of VET and Dual VET. Specifically, the education and employment Administration cannot turn its back on two facts: the great impact that the current health crisis is expected to have on future professions and future skills needs, and the major productive, economic and commercial transformations that accompany the birth of the fourth industrial revolution that is generating new professional profiles, profiles in which technological competence will play a leading role across all productive sectors [12,64].

The motivation of the students involved in Dual VET is, without a doubt, another of the great strengths of this training modality in Andalusia. In this sense, educational guidance becomes one of the best tools to guarantee this motivation and prevent dropout rates climbing. In this regard, it is suggested to include the Tutorial Action Plan that will accompany those students who finally access Dual VET in the projects presented annually by educational institutions to the Andalusian Government for their approval; the quality of this Action Plan must be decisive for the acceptance of the Dual VET Project and therefore, it must be subjected to an *ex ante* evaluation, to an intermediate follow-up and to a final evaluation.

In relation to the teaching staff, it is the Educational Administration that has it in its power to ensure their commitment to achieving success and it must recognise, support job well-being (ensuring their stability and permanence within the educational institution) and the training of these educators.

The strengths of the dual model in this Autonomous Community highlighted in this study should be reinforced. The practical, specialised and contextualized nature of the training, its curricular structure and the didactic methodology are aspects that must be consolidated. Facilitating specific teacher training educators involved in Dual VET is the best strategy for such consolidation and to move toward integrative, inclusive, active and innovative didactic approaches, as well as toward localised and flexible curricular structures that incorporate 'into their training corpus aspects such as sustainable development, inclusion, equality, social responsibility, internationalization, entrepreneurship or transit into a digital society' [28] (p. 27).

The relationship that Andalusian educational institutions maintain with their closest business context is a strength that must be reinforced by the Education and Employment Administration, promoting the creation of networks of institutions and companies, with the collaboration of Chambers of Commerce and business macro-organizations, through action protocols and procedures for monitoring them. In this way, the institution-industry relationship must not be conditioned by the personal contacts that Dual VET educational managers have with their immediate business environment, and it would help to underpin the aspects that are defended in Royal Decree 1529/2012 [2] and that support a more active participation of companies, strengthening the ties between them and educational institutions. Likewise, the task of prospecting for companies should not be conditioned by the economic viability of an annual call, but should be integrated as one more function in the regulatory framework of Dual VET and be recognized by the Administration.

Although it is true that in the internal analysis of the Dual VET carried out by the participants, the companies do not stand out for being an added value (only 7.2% of contributions make references to this), in the analysis carried out by the participants about the opportunities that the conditions external to the dual model provide, it is in the business and productive context where the greatest opportunities are identified. As stated by Wolter and Mühlemann (2015) [42], in an analysis simulating costs and benefits of Dual VET, the business context will be an opportunity for dual training whenever this training model means an investment from the business perspective. The fact that different companies implement Dual VET within their corporate responsibility framework is an initiative that can favour the employment of young people and that, therefore, deserves to be further studied and encouraged.

As the participants in this consultation point out, in the Andalusian context, opportunities for Dual VET are also the need for companies to reduce the costs of adapting newly hired staff, to promote qualification from specific action competencies in the professional sector, to ensure generational change and to improve their productivity by adapting to technological demands quickly; these aspects pointed out by many authors as the reasons behind the interest of companies to get involved in Dual VET [32,63,64].

We conclude this study with the same idea with which we started: it is possible to move toward a sustainable, contextualized and Europeanised Dual VET model in Andalusia, and to do so it is necessary to begin with its strengths and opportunities. A model that cannot turn its back on the educational, economic and productive panorama that the current health crisis has caused. An advance that must be accompanied by the promotion of education and the promotion of VET as a training

modality with a great capacity to adapt to new circumstances. In this advance, and as Goirigolzarri (2020) [65] puts it, “job orientation emerges as a fundamental pillar” [65] (p. 16).

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