

Virgós-Sánchez, M., Burguera, J.-L., Pérez-Herrero, M.-d.-H., & Fernández-Fernández, S. (2018). Dual vocational training. a unique-case study from the perspective of the agents involved in its development. In C. Nägele & B. E. Stalder (Eds.), *Trends in vocational education and training research. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 357–363). https://doi.org/10.5281/zenodo.1319716

Dual Vocational Training. A Unique-Case Study from the Perspective of the Agents Involved in its Development

Marta Virgós-Sánchez*

University of Oviedo, virgosmarta@uniovi.es

Joaquín-Lorenzo Burguera

University of Oviedo, burguera@uniovi.es

María-del-Henar Pérez-Herrero

University of Oviedo, henar@uniovi.es

Samuel Fernández-Fernández

University of Oviedo, samuel@uniovi.es

Abstract

Dual Vocational Training (DVT) is a training modality that combines training processes in high schools and companies. In this modality there are several agents involved in training (high school tutors, company tutors and students). The general objective is to know the training needs of agents involved in DVT student training. Through a descriptive-exploratory design, focused on a case study, the training needs of the professionals involved in the development of DVT in a company from Asturias have been analysed. The information is provided by 11 people, with whom discussion groups have been developed that have enabled qualitative analysis of topics related to the implementation of the DVT program, in order to identify needs and propose improvements. Data analysis shows that DVT is located in Asturias in the initial phase of its implementation, focusing on learning by competences in academic-professional contexts, facilitating the insertion of young people in the labour market and allowing the exchange of information between educational system and labor market. As conclusion we can say that it's necessary to improve the coordination between the academic institution and the company, influence the design of individualized training plans for students and activate training strategies for tutors, especially for company tutors.

Keywords

dual vocational training, case study, company tutors
--

^{*} Corresponding author

1 Introduction

Among the objectives of the European Cooperation Strategy regards education and training "Education and Training 2020" (ET2020) undertaken by Spain together with other countries of the European Union and considered priority areas for the period between 2015 and 2010, they are highlighted those ones focused on reducing academic premature drop-out rate and improving the professional qualification of those who are destined to incorporate themselves into a working market in which technologies are getting more and more spotlight.

In that framework, and with the aim of ensuring educational quality, it is compulsory that all social sectors get involved with the correct developing of the training actions. Among those agents, a key role is given to the business and working sector representatives in order to strengthen the link between educative and training systems with the working world by the collaboration of both of them (Eichhorst, 2015). From this point it will be possible to build a thriving and sustainable society able to thrive its citizens' employability (MECD, 2013).

One educational modality which meets the requirements to make the link between work and training formation viable is the Dual Vocational Training (Dual VT) (Martín, 2016; Delautre, 2014; Schmidt & Foster, 1997). First introduced in Spain in 2012, has a large background in European countries such as Germany and France (Hernández, 2012; Euler, 2013). This modality distinguishes itself by combining the teaching-learning process on two institutions, the educational centre where the student performs theoretical and practical activities and the company, in which he develops didactic-productive activities that complement and alternate (Vega, 2005; Araya, 2008).

The purpose of the Dual Vocational Training is that curriculum contents are not only given with a theoretical way from the educational centre, but that the enterprise, that collaborates in the theoretical and practical training of the student of this modality, offers a practical training which complements the one acquired at the educational institution (Molina, 2016). In this way, the person will be able to achieve a development level at a workstation that will be useful in his process of incorporation to the working life (Hoeckel & Schwartz, 2010; Graf et al., 2014).

The formative process is developed, therefore, with an alternation regime of working activity in an enterprise, in which is combined internship and training in the company, with the formative activity, fundamentally theoretical, received in the Professional Education system framework (Deissinger, 2015; CEDEFOP, 2014).

In the design and development of the formative programmes to the established the structure of the Dual VT, there are several agents involved: people in charge of internship coordination in middle school and business training coordinators, institutions and organizations in which alternation internships are held, company tutors (direct and active responsibles for monitoring the training action in direct contact with the training student), academic tutors from schools and students.

All these aspects make that, in this educational proposal, based on the strategic alliance between the company and the educational centre, both institutions participate in a coordinated and interactive task. This should imply that, ultimately, when the student enters the labour market, he can compete as a highly qualified professional. This approach and its implementation make Dual VT becomes a comprehensive training for students and makes it possible for both institutions to benefit. Since, on the one hand, the company receives a contribution of knowledge from the educational centre, and, on the other hand, this, the educational institution updates and enriches its academic work based on the real needs of training.

This kind of training arises to give an answer to the need to adapt high school training to the reality of the labour market. As indicated by Marhuenda, Chisvert and Palomares-Montero (2016) one of the main reasons why this training system has been implemented has been the desire to improve vocational training as strategy to reduce youth unemployment and improve education quality.

In addition, the new demands of the labour market, in terms of work skills, have forced educational systems to complement this academic training. This approach seeks to establish a close relationship between academic education and the workplace, as a result of the need for professionalization to respond demands of the new production systems (Echeverría, 2013).

In this scene, this paper shows the results obtained, through case study, on the Dual VT development in a school in Asturias (Spain) in association with a agrofood industry related multinational company which welcomes the students in internship.

The main goal has been to identify the training needs of the agents involved in the students training within the Dual VT modality, in Asturias (Spain).

This study has been partially funded by "Severo Ochoa" research scholarship (PA-17-PFBP16206) (Asturias – Spain).

2 Methods

In order to reach the proposed objective a qualitative methodology has been used, because it has been considered a perfect strategy to face the Dual VT analysis from a contextual description of the studied object. The aim of turning to this point of view is ensuring the maximum objectivity at reality capture (Taylor & Bogdan, 1992; McMillan & Schumacher, 2007).

On the basis of an exhaustive theoretical revision of the aspects that substantiate the Dual VT and considering the current development of it at Principado de Asturias (Spain), a descriptive survey has been made by means of discussion groups in order to know the reality of the Dual VT within the enterprise or through the opinion of it that the involved agents have.

The strategy has been arranged into an only case study (Stake, 2005), in which the students' enterprise has been defined as the unity of the study analysis, and the involved agents in this process as informers: the students, the enterprise tutors, the educational centre tutors and the technician-operator in charge of the students' tracking.

The simple has been formed by three students from a secondary formation centre of public ownership which have participated in the Dual VT project at a alimentary transformation enterprise, and by the six tutors in charge of their tracking both at the enterprise and at the educational centre.

Creating discussion groups was used for gathering all the information, one of them with the students, the other one with the tutors of the enterprise and other with the tutors of educative centre. Because of that, a protocol and a template have been designed for the "ad hoc" information record. The template has been revised and validated by the opinion of methodology experts with the aim of ensuring the reliability and validity of the investigation. The experts have validated the suggested categories (informant profile, Dual VT development, satisfaction and needs), getting a concordance index of the 89,06% within them.

After that, the information analysis phase has been developed, divided in two fundamental stages: the procedure (processing and organization of the information) and the interpretation of the obtained information (Verd & Lozares, 2016). This process is based on the transcription of the obtained information, categorization and analysis os the data by the MAXQDA (v.10) program and the subsequent interpretation of the reached results, following the perceptive steps of the qualitative analysis of the data (Tójar, 2006; Miles & Huberman, 1994).

3 Results

The analysis of the given information by the agents provides the results presented hereafter, stressing the coincidence and discrepancy points between the people that conformed the discussion groups regarding the variables previously mentioned.

The most significant and coincident results with the assessments of all reporting agents are as follows:

All people argue that a good enterprise tutor must be able to communicate and motivate properly, and also serve as a guide for the student.

"I have this obsession with trying to leave some kind of legacy behind. In our case it is clear that the exchange has to be mutual, we have to receive a benefit in return, even if it is intangible. I am not talking about an economic benefit, or a benefit because that person ends up working with me, which does not have to be [...] there are many benefits: from developing other people to help them in their mentoring, to developing training tasks for people who are surrounded by them, helping you to improve a process, to optimizing or creating training material" (Tutor 3).

"This is what I always try to transmit to them [...] we focus more on skills that are not taught anywhere, but they are very important in working life [...] many related to proactivity, responsibility, commitment, leaving the comfort circle, being a person who adapts to change, because that's what we see that we're going to have to suffer in the future, be empathic, work with other people" (Tutor 1).

People stress that there is no specific training for becoming a tutor, making tutorial competences more difficult, so it is required a training that allows the tutor of the company to achieve skills to train the apprentice.

"We have training on how to lead teams, how to manage them, in this if we are trained, [...] because we work with people [...] aimed at taking out the potential of the people who work with us, trying to get the best out of the people who are part of the organization, but not specific training to be tutors " (Tutor 2).

"They are trained in experience, but as a training, they have job training, which they have given to them to work there. But as trainers I do not think so" (Student 2).

From the results obtained, is concluded the need for coordination between the educational centre and the company, since all the informants consider that they should open channels of fluent communication so that there is a bidirectional knowledge of the aspects and student profile

"We have seen, both the educational centre and we (the company), that coordination must improve [...] the relationship is made and intertwined, now it has to be forged, it must take shape, that in some way it must conform to this structure and that it must not be released to improve. We are there, this is completely incipient, so we are with good intentions, but we are beginning" (Tutor 1).

In relation with the satisfaction of the involved agents, they mostly point out positive aspects about the development of the program, the learnings of the students and the tasks carried out by the tutors.

"Then, finally, this is a mutual training, in quotation marks go. Although they, the students will obviously absorb much more than we can absorb, but it always helps you with respect to contact with people, to teach giving them feedback and so on, that makes you grow as a professional " (Tutor 4).

Regarding the discrepancies at the feedback, we highlight the following aspects.

Students point out that the don't have meetings with the tutor of the enterprise, except for the welcome of the FCT and at the end of it. Nevertheless, the tutors stress that every 15 days they have a meeting with the students to know better their evolution.

"Do we dedicate the necessary time? Maybe we could, or we should spend more time [...] I think that many times what we lack is time to focus and think what that person may need. I hold fortnightly meetings to see how things are going" (Tutor 3).

"Well, there were two times we talked about, there were not many more [...] And we talked to her at the beginning and end of the practices" (Student 2).

Professionals in charge of the students' training disagree with the students concerning the satisfaction with the tutor tasks and the organization of the activities developed by the students.

The results obtained allow us to conclude that it is necessary or advisable to continue gathering more intel from different agents, emphasize the convenience of improving the organizational structure, carry on deepening the relevance of activating proposals for collaborative action among the involved institutions (educational and business), and, above all, improve the tutor's training (academic and business) in aspects such as communicating with students, monitoring and reception of students in the company, the development of training plans adapted to each individual characteristics of the students, the need for coordination between the school administration and the school, the training for the student's capability and the evaluation of their skills in order to improve the quality of this training.

4 Conclusions

The needs assessment carried out has made it possible to know, through a study of the specialized literature and the corresponding regulations, the different aspects of Dual Vocational Training. Its development in Europe, Spain and Asturias has been analysed, elaborating a theoretical and normative framework that allows knowing the state of the art of this training modality.

Through the empirical study based on the discussion groups, it has been possible to find out if the detected needs coincide with the state of the matter previously described in the theoretical foundation. It has also allowed to establish a series of training needs within the company in regard to the training of Dual Vocational Training students.

From the results analysis, we conclude that this is an initial experience in which all the agents involved express a high degree of satisfaction with this kind of training, despite the fact that there are difficulties and shortcomings that can be improved.

Although the company tutors have an internal training related to the development of people, they lack specific training to be tutor of students that allows them to contribute to their integral development.

The functions of the company tutor, coinciding with the opinions of both the company tutors and the operators who are responsible for monitoring the students are training and professional enrichment of the student, the management and guidance of people and give feedback. All this coincides with the functions established in the "Guide for company tutors" of the Bertelsmann Foundation (Caballero & Lozano, 2016).

In the same way, the people involved in the students training in the company, consider that a good company tutor must have communication skills, be able to motivate and have skills to know how to train students. In addition, it must make a good reception and serve as a guide in the internship development of the student. This statement resulting from the result analysis is also consistent with what the Bertelsmann Foundation points out in its "Guide for tutors" on the functions and tasks that the company tutor should have (Caballero & Lozano, 2016).

All the informants agree on the need to develop a training program focused on the student characteristics. All the stakeholders involved in the development of Dual VT, say there is a lack of coordination between the educational centre and the company. The visits of the high school tutors to the company are not regular, as the comments on the matter disagree among the informants.

Company professionals indicate there is a communication lack with the students, since they do not know their motivation to develop a Dual Vocational Training program, their previous experience and their interests, as well as their satisfaction level with tasks performed.

Students consider that the necessary tutorial sessions for their formation in the educational centre and in the company are not carried out.

From the different instances, the Dual Vocational Training modality is not advertised as would be necessary.

Both students and academic tutors at the high school point out that it would be appropriate if internships in the company and the high school training to be taught at the same time, so that simultaneous training in both institutions would be possible.

Thus, taking into account all of the above, we can say that immersion in internship institutions is an important educational opportunity for students. Especially in what refers to putting into practice acquired knowledge in the educational centre that is complemented by the professional skills acquisition that allow them, in the future, to develop in the workplace.

For training as future professionals, it is necessary to have contact and integrate in real contexts. It is a fundamental component in the training process, since not only should the theoretical content and practical activities carried out in each degree be limited, but it should be observed and participated in the reality that we will face in the future as professionals. Therefore, training in a workplace is an element that improves the quality of education. For these reasons, the Dual Vocational Training modality is a key element in the partnership between the educational system and the labour market.

References

- Araya, I. (2008). La formación dual y su fundamentación curricular. *Revista de Educación*, 32(1), 45–61.
- Caballero, M. A., & Lozano, P. (2016). *Manual de tutores de empresa en la FP Dual*. Barcelona: Fundación Bertelsmann.
- CEDEFOP. (2014). On the way to 2020: Data for vocational education and training policies, Country statistical overviews update 2013. Retrieved from http://www.cedefop.europa.eu/files/3066_en.pdf
- Deissinger, T. (2015). The German dual vocational education and training system as "a good practice"? *Local Economy*, *30*(8), 557–567.
- Delautre, G. (2014). Le modèle dual allemande. Caractéristiques et évolutions de l'apprentissage en Allemagne [Document d'études numéro 185]. Paris: DARES.
- Echeverría Samanes, B. (2016). Transferencia del sistema de FP Dual a España. Revista de Investigación. *Educativa*, 34(2), 295–314
- Eichhorst, W. (2015). Does vocational training help young people find a (good) job? *IZA World of Labor*, 112, 1–10.
- Euler, D. (2013). *Germany's dual vocational training system: A model for other countries?* Gütersloh: Bertelsmann Stiftung.
- Graf, L. et. al. (2014). Duale Studiengänge im globalen Kontext: Internationalisierung in Deutschland und Transfer nach Brasilien, Frankreich, Katar, Mexiko und in die USA. Köln: DAAD.
- Hernández Franco, V. (2012). Formación profesional dual. Revista padres y maestros, 348, 3.
- Hoeckel, K., & Schwartz, R. (2010). *Learning for jobs. OECD reviews of vocational education and training*. Germany: OECD Publishing. Retrieved from http://www.oecd.org/germany/45668296.pdf
- Marhuenda Fluixà, F., Chisvert Tarazona, M. J., & Palomares-Montero, D. (2016). La formación profesional dual en España. Consideraciones sobre los centros que la implementan. *RIO-Revista Internacional de Organizaciones*, 17, 43–63.
- Martín Rivera, J. (2016). Los retos de la formación profesional: La formación profesional dual y la economía del conocimiento. *Revista Internacional de Organizaciones*, 17, 141–168.
- McMillan, J. H., & Schumacher, S. (2007). *Investigación educativa*. Madrid: Pearson Educación, S.A.
- MECD. (2013). Objetivos educativos europeos y españoles. Educación y formación 2020. Madrid: MEC.
- Miles, M., & Huberman, M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

- Molina, I. (2016). La formación dual: Un nuevo enfoque de la formación profesional. *Revista Internacional de Organizaciones*, 17, 129–139.
- Schmidt, K., & Foster, P. (1997). Germany's dual vocational training system. *Tech directions*, 57(3), 15–17.
- Stake, R. E. (2005). *Investigación con estudio de casos*. Madrid: Morata.
- Taylor, S. J., Bogdan, R. (1992). *Introducción a los métodos cualitativos de investigación*. Barcelona: Paidós Básica.
- Tójar, J. C. (2006). La investigación cualitativa: Comprender y actuar. Madrid: La muralla.
- Vega, L. (2005). Evaluación programa en administración de oficinas 2000-2004 (Informe de evaluador externo). Heredia: Universidad Nacional, Escuela de Secretariado Profesional.
- Verd, J. M., & Lozares, C. (2016). *Introducción a la investigación cualitativa*. Madrid: Editorial Síntesis.

Biographical notes

Marta Virgós-Sánchez, (ORCID: 0000-0002-1312-0197) is graduated in Pedagogy by University of Oviedo, and nowadays is a PhD student in this university. Her research is focused on dual educational and vocational training programs, in particular on training of company tutors. This research is funded by Asturian regional government within Severo Ochoa Official Research Program (PA-17-PFBP16206).

Joaquín-Lorenzo Burguera, (ORCID: 0000-0001-5944-2012). PhD in Pedagogy from the University of Oviedo, Bachelor of Philosophy and Education Sciences (Pedagogy section) by the University of the Basque Country. Assistant Doctor Teacher, Department of Education Sciences, in the Area of Research Methods and Diagnosis in Education at the University of Oviedo. His main research lines are: internships-practicum, teaching methodology and innovation in education, research methodology in social sciences, evaluation of socio-educational programs and tutoring and educational guidance. Participates in different regional, national and international projects and coordinates an Erasmus + Project.

María-del-Henar Pérez-Herrero, (ORCID: 0000-0003-1861-373X). Contracted Doctor Teacher, Education Sciences Department, Research Methods and Diagnosis in Education Area at the University of Oviedo. Vice-Dean of Postgraduate and Director of Master in Teacher Training of Compulsory Secondary Education, Baccalaureate and Vocational Training. PhD in Psychology, Bachelor of Psychology and Pedagogy. She has participated in regional, national and European (Erasmus+) and teaching innovation projects on higher education, practicum, and Master's Thesis. Her papers and research lines are: Tutoring and educational guidance; Teaching methodology and innovation in Higher Education; Family-educational guidance and school-families-community relationships.

Samuel Fernández-Fernández, (ORCID: 0000-0003-3934-1390). Professor at the University of Oviedo, Department of Education Sciences. Area of Research Methods and Diagnosis in Education. Develops a research line on Quality and Educational Evaluation. In recent years he has directed, among others, European projects on quality "Quality Assurance for the Higher Education Change Agenda" (QAHECA) and other regional on school absenteeism. He's a national and international evaluator of university education programs, has published papers on methodological development in evaluation of programs for people with disabilities, presented at ECER 2011 and AIDIPE 2013.