

EUROPEAN COMMISSION LEONARDO DA VINCI PROGRAMME

Employability of Vocational Training Graduates, The European SMEs' Approach: European report

Final Report (Version 0)

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1. INTRODUCTION AND METHODOLOGY





1. INTRODUCTION AND METHODOLOGY

1.1. GENERAL INTRODUCTION TO THE RESEARCH

Young people insertion into the labour market is not a new problem. However, it has been a question of growing importance during the last years: increasing competitiveness and accelerated transformations on work organisation, on technologies and on markets are inducing continuous changes on the labour skills required by the companies. This process has great implications in order to adapt vocational training to companies' needs. Not surprisingly, employability has become one of the priorities of the Leonardo da Vinci Call for Proposals 2000 and in general of the European employment and training strategies¹.

On the other hand, it is already well known that SMEs represent the largest share of the European economic tissue, both in terms of employment and turnover. However, very little is known on the perceptions of SMEs themselves about the quality of the vocational training graduates they are incorporating within their enterprises. This is particularly relevant for SMEs, since they do often lack the resources and knowledge for training themselves their workforce, so SMEs have to rely on the existing vocational training fresh graduates supply more than their larger counterparts. Moreover, this situation is aggravated by the fact that SMEs are not generally well appreciated by students (and especially by the best ones), who often prefer to work in larger companies.

This project, namely 'Employability of Vocational Training Graduates: The European SMEs' Approach (EMPLOVET)', is primarily designed to provide first hand information from SMEs' point of view on the employability and acquired skills and abilities of the initial vocational training graduates when entering companies.

Additionally, this research project will pay special attention to the graduates' specific skills on Information and communication technologies (ICTs), a topic that it is currently attracting an increasing attention in Europe. Existing differences per

¹ See for instance:

[•] Towards a Europe of knowledge, Communication from the Commission COM(97)563 final

[•] White Paper on Education and Training: Teaching and Learning-Towards the Learning Society

[•] European Commission, Study Group on Education and Training Report





country, enterprise size and gender considerations will also be highlighted by this project. Finally, different regional policy making approaches will be analysed.

The European Action LEONARDO DA VINCI programme for the implementation of a European Community Vocational Training Policy Programme sets as one of its main objectives the development of knowledge on the field of vocational training through the carrying out of surveys and analysis, so decision-makers and professionals can be helped in the setting-up and application of policies, means and actions at a European level (measure III.2.a). This research project is intended to cover two main Leonardo da Vinci programme objectives, this is, Objective 1 "to improve the skills and competencies of people,..." and Objective 3 "to promote and reinforce the contribution of vocational training to the process of innovation...", as well as Priority 1, this is, Employability.

1.2. OBJECTIVES AND GOALS OF THE RESEARCH

Specifically, this research project is intended to reach the following concrete objectives:

a.) To identify the SMEs' hiring practices of vocational training (VT) graduates, this is, the concrete ways in which SMEs cover their hiring needs of VT graduates

Thus, the research will look into the number of contracted graduates, the SMEs' objectives and motivations behind hiring activities, the positions and tasks covered by the graduates, the main selection channels and the kind of contracts offered.

b.) To obtain first-hand information from SMEs on the VT graduates' skills when they first enter the enterprise

Specifically, the research will analyse the assessment that SMEs make of the hired VT graduates, especially in comparison to the 'old' employees. Topics to be discussed include the adaptation abilities of the graduates, the adequacy of their skills to the current enterprises' requirements, the need of additional training, the promotion possibilities of the graduates or finally, an assessment of their ICT skills.





c.) Comparative analysis of the situation by gender

The research will pay special attention to gender considerations derived from the hiring process. In this sense, the research will identify what are the hiring practices of SMEs in relation to gender, where specific attention will be focused on the SMEs' reasons underpinning these practices.

d.) To analyse the existing perception amongst relevant actors on the employability of VT graduates, especially from the SME perspective

The research will collect first hand information from relevant actors on their perception on enterprises' satisfaction with the existing supply of initial VT courses and training centres, as well as with the graduates trained within these centres. Additionally, specific attention will be paid to the existing communication between enterprises in general (and SMEs in particular) and VT centres.

e.) To analyse the existing schemes and initiatives (public, private or publicprivate partnerships) intended to foster the employability of VT graduates

The research project will review a number of existing initiatives (private, public or public/private) aimed at favouring the employability of the VT graduates within the existing productive tissue, where specific attention will be paid to enterprise size considerations.

f.) Comparative analysis of the situation in the different surveyed countries

Having in mind the results already collected within the framework of the previous objectives, the research will try to provide distinctive features amongst the different surveyed country situations. These distinctions will allow the categorising of the different existing practices, together with the possible identification of 'best practices' amongst both SMEs and public support structures in the topic objective of this research.

g.) Conclusions from the research.

As a final outcome of this research and based on its results, the study will obtain a number of conclusions. In addition, the report will try to provide several recommendations on possible innovations required for facilitating the VT





graduates' access to work positions in the enterprises in general and SMEs in particular.

1.3. METHODOLOGY USED FOR THE RESEARCH

This research has been carried out in five NUT-II regions² located in five countries of the European Economic Area, this is, Austria, France, Norway, Spain and The Netherlands. The finally selected regions can be found in Table 1.1. These regions have been selected according to the presence within them of an important industrial SME population.

Table 1.1. Surveyed regions

Survey regions	Countries these regions belong to	Nicknames (*)
Metropolitan Area of Vienna	Austria	А
Île-de-France	France	F
Counties of Telemark, Eastern Agder and Western Agder	Norway	No
Basque Country	Spain	E
Zuid-Holland	The Netherlands	NL

(*) These nicknames will be used throughout this report. Source: Ikei & ENSR partners, Leonardo Survey 2001.

The work-team has covered these five European regions, and the participating partners have been the following ones:

- Ikei, Basque Institute for Studies and Research (Spain), general coordinator of the research project and responsible of the Spanish information,
- Agder Research Foundation (Norway), responsible of the Norwegian information,
- APRODI, Association for Industrial Promotion and Development (France), responsible of the French information,
- EIM, Small Business Research and Consultancy (Netherlands), responsible of the Dutch information, and finally

 $^{^2\,}$ This regional approach is intended to allow a closer view on the manufacturing SMEs' real needs.





IfGH, Austrian Institute for Small Business Research, (Austria), responsible of the Austrian information.

All these five research institutions belong to the European Network for SME Research (ENSR), currently responsible of the production of the European Observatory for SMEs on behalf of the Directorate-General Enterprise of the European Communities.

The research has been established with a twofold methodological approach:

- a) A quantitative approach based on a representative survey amongst a sample of manufacturing SMEs in each selected region.
- b) A qualitative approach, based on a number of interviews with relevant experts and intended both to complement the previous quantitative results and to identify successful case studies and experiences intended to foster the employability of the VT graduates.

a) Survey of small and medium-sized manufacturing companies

This survey has been directed to a sample of 150 manufacturing industrial SMEs (NACE Section D) per surveyed region. Partners have been requested to select the concrete enterprises according to the following global size breakdown:

- □ Micro enterprises (1-9 employees): 50 enterprises (self-employed without employees are not included in this research)
- **Small Enterprises (10-49 employees): 50 enterprises**
- □ Medium Enterprises (50-249 employees): 50 enterprises

Meanwhile, enterprises have been selected according to the following sector distribution (NACE Section D), where partners were tentatively requested to select 21 enterprises per sector, except for sector 6 (24 questionnaires):

- Food & Beverage (NACE Subsection DA)
- > Textile, Clothing, Leather & Shoes (DB, DC)
- Wood & Furniture (DD, DN)
- Paper & Print (DE)





- > Fuel, Chemical & Plastic (DF, DG, DH, DI)
- > Metal Products, Machinery & Equipment (DJ, DK, DM)
- Electric & Electronics (DL)

The final distribution by enterprise size within each one of the surveyed countries has been the following one:

Table 1.2. Sample breakdown by size and region

ENTERPRI SES'	NUMBER OF ENTERPRISES					
CHARACTERISTICS	Α	Е	F	NL	No	TOTAL
Size (Employment)						
1-9	50	50	50	42	51	243
10-49	50	51	51	52	49	253
50-249	50	49	50	56	49	254
TOTAL	150	150	151	150	149	750

Source: Leonardo Survey 2001

Whereas the final total distribution by sector and enterprise size has been:

Table 1.3. Sample breakdown by size and sector

SECTOR	SI ZI	TOTAL		
SECTOR	1-9	10-49	50-249	TOTAL
Food and beverage	27	35	51	113
Textile, clothing, leather and shoes	43	33	18	94
Woods and furniture	33	36	29	98
Paper and print	36	38	42	116
Fuel, chemical and plastic	31	39	37	107
Metal products, machinery and equipment	39	43	51	133
Electric and electronics	34	29	26	89
TOTAL	243	253	254	750

Source: Leonardo Survey, 2001.

As far as the questionnaire is concerned, it has been fully structured and divided in six main parts, this is,

- Part I- Enterprise identification (questions 1 to 3): Enterprise's name, respondent's name, address, phone/fax, position in the company.
- Part II- Type of enterprise (questions 4 to 5): sector of activity, size of the sur-veyed enterprise





- Part III- Training activities of the enterprise (questions 6 to 7): enterprise's involvement in training activities, availability of a formal and written training plan
- Part IV- Hiring of vocational training graduates during the last 3 years (questions 8): hiring/not hiring of VT graduates.
- Part V- Enterprises that have hired VT graduates in the last three years (questions 9 to 38): Number of hired graduates, usual ways of selection, work areas, difficul-ties in hiring graduates, degree of adequacy and adaptability of graduates to en-terprises' needs, gender considerations, need of additional training, ICT skills, valuation of the existing vocational training system, future expectations.
- Part VI- Enterprises that have not hired VT graduates in the last three years (questions 39 to 50): Reasons for not hiring VT graduates, valuation of the existing graduates, valuation of existing ICT skills, graduates' aspects more valued by SMEs, future expectations.

The questionnaire was conducted by telephone and fax during the time period June-September 2001, and it was directed to the owner or the general manager of the surveyed SMEs. However, in the case he/she was not available, the Human Resources or Personnel Director was requested to be interviewed or, if not, any responsible within the enterprise. The questionnaire was fully structured so that the survey could be conducted by fax or telephone.

Finally, it is important to point out that survey regional results have been reweighted according to the existing size distribution within the different surveyed regions, whereas all surveyed regions have been given the same weighting for obtaining the aggregated European results.

b) A qualitative approach, based on interviews and analyses of case studies

Four interviews have been carried out within each one of the European surveyed regions, basically intended to obtain qualitative information that may complement the previous quantitative results obtained from the Survey.





Experts to be interviewed within each country have included any of the following:

- **A** representative of the regional employers or an SME association
- A public policy maker in the issue of initial vocational training
- A representative of the regional initial vocational training centres/ a general expert in the field
- A vocational training centre with a good reputation in terms of employability of its students in the regional economy

The concrete names and working positions of the interviewed people can be found within each one of the different national reports.

For conducting these interviews, a questionnaire was developed by the report coordinators. This questionnaire intended to obtain information on several points, such as:

- □ The enterprises' satisfaction with the existing supply of new initial vocational training students
- The enterprises' satisfaction with the existing supply of courses and training centres
- The degree of existing communication between regional enterprises and initial vocational training centres
- The description of possible recent initiatives taken in recent years by public authorities, enterprises themselves or vocational training centres intended to foster the employability of the initial vocational training students.
- The analysis of possible future developments in the employability issue, such as envisaged mechanisms/initiatives intended to foster the future employability of the initial regional vocational training students or the enterprises' future expected general skill/abilities needs to be requested to the vocational training students.

In addition to this, participating partners have identified one case study per surveyed region of any best practice initiative intended to foster the employability of the initial vocational training students. The consideration of best practice has been obtained from existing evaluations or from the interviewed experts. These initiatives





could be public or private, and may have been developed (isolated or in collaboration) by a public authority, a business association or an initial vocational training centre.

1.4. STRUCTURE OF THE REPORT

The report will be structured around 8 main chapters, including this introductory one. In this sense, this chapter 1 is concerned with presenting the objectives and main goals of the research, as well as the methodology employed and a brief revision of the Initial Vocational Training concept. Meanwhile, chapter 2 is interested in analysing from a theoretical perspective the issue of school-to-work transition in general and of the initial VT graduates in particular. Thus, several theories developed to explain the main factors underpinning the integration of a young-entrant into the labour market will be reviewed.

Chapter 3 will be primarily concerned with an in-depth description of the existing initial vocational training systems in the surveyed regions, whereas chapter 4 will pay attention to the hiring practices of VT graduates followed by the SMEs located in the surveyed European regions. Topics to be discussed will include, amongst others, the SMEs' perception on the 'indispensability' of the VT graduates, the number of hired graduates, the areas where they develop their work, the most usual ways for contracting VT graduates, the most typical initial contracts offered to these graduates, their labour turnover or the VT graduates' aspects that more influence the SMEs' hiring decisions.

Chapter 5 of this report will be interested in analysing the surveyed SMEs' assessment of the VT graduates, where special attention will be devoted to the surveyed SMEs' degree of satisfaction with their recently hired VT graduates and the SMEs' perception on the need of complementary training that VT graduates require when entering the companies. A discussion on the importance attributed by SMEs to the Information and Communication Technologies (ICTs) in the curricula of VT graduates will be also held.

The information provided in chapter 5 will be complemented in chapter 6, where the surveyed SMEs' assessment of their respective national systems of initial vocational training in general will be assessed. Subsequently, chapter 7 will focus on





detailing examples of best practice initiatives in the surveyed countries/regions intended to facilitate and foster the transition from school-to-work amongst the initial VT graduates. This information will be complemented with the SMEs' information on participation in initiatives for improving the VT graduates' employability, as well as the SMEs' valuation of these initiatives for ensuring the employability of these graduates.

Finally, chapter 8 will provide a summary of the main conclusions obtained from the research.

1.5. THE INITIAL VOCATIONAL TRAINING CONCEPT

As already suggested in a previous section, this research is interested in analysing the issue of employability of the initial VT graduates, always from an SME perspective. For this purpose, it is essential to identify the concept of initial vocational training. Thus, and according to CEDEFOP's definition, vocational training can be defined as those training programmes intended to give participants the practical skills, expertise and knowledge needed to obtain employment in an specific occupation or group of occupations. Successful completion of such programmes leads to a vocational qualification appropriate to the labour market, recognised by the competent authorities in the country where it is obtained.

Vocational education is often divided in two main categories:

- Initial vocational training, basically defined as the first complete course of training for an occupation, and
- Continuing vocational training, that is to say, vocational training supplementary to initial training and which is part of an ongoing process designed to ensure that a person's knowledge and skills are related to the requirements of his/her job and are continuously updated accordingly.

The main goal of this project is solely concerned with initial vocational training. Initial vocational training can be conceived as any form of initial vocational training, including technical and vocational teaching, apprenticeship and vocationally oriented education, which contributes to the achievement of a vocational qualifica-





tion recognised by the competent authorities in the Member State where it is obtained. Thus, this definition implies that:

- Workers obtaining degrees through continuing vocational training for the employed are excluded.
- Only graduates from programmes at upper secondary level (ISCE 3) are included. Graduates from lower secondary level are excluded, e.g. prevocational courses.
- Apprenticeship is considered a possible form of initial vocational training (dual system).

In any case, it should not be forgotten that Europe is characterised by a very wide array of initial vocational training systems, according to a number of factors such as the administration, structure and financing of their systems of initial vocational training at all levels.

Having in mind these considerations, and considering the countries participating in the research, the following national degrees relating to initial vocational training have been included:





Table 1.4. Degrees included/excluded from the initial vocational training concept used in this research

Countries	To be included in the initial vocational training concept	Not to be included in the initial vocational training concept
Austria	 Apprenticeship qualifications (dual system) Secondary technical and vocational schools (BMS) Secondary technical and vocational colleges (BHS) 	 AHS and AHSK (General upper secondary education, short and long cycle). Non-university tertiary education, post secondary courses and higher education institutes.
France	 <i>CAP/BEP</i> are the main type of degrees to be considered. Also <i>Baccalaureat proffesionel</i> and <i>Baccaulaureat technlogique</i> (although the latter seems to be in practice mainly addressed to follow university education). 	• General baccalaureat, nor gradu- ates from higher education (<i>BTS</i> , <i>DUT</i> , <i>DEUG</i> , etc.).
Spain	 Specific intermediate and upper professional training (Training Cycles II and III). Former Vocational Training graduates (FPII). 	 social guarantee programmes nor degrees of occupational training or continuing training.
The Nether- lands	MBO, senior vocational education	 HBO (higher vocational education), nor University (WO)
Norway	 Vocational upper secondary education 	 graduates from technical schools (as this seems to be considered CVT), nor higher education

Elaboration Ikei.

In any case, a complete description of the respective Initial Vocational Training systems analysed in this research can be found in chapter 3.





2. THE TRANSITION FROM SCHOOL TO WORK: SOME THEORETICAL CONSIDERATIONS





2. <u>THE TRANSITION FROM SCHOOL TO WORK: SOME THEORETICAL</u> <u>CONSIDERATIONS</u>

2.1. INTRODUCTION

This chapter 2 is interested in analysing from a theoretical perspective the issue of school-to-work transition in general and of the initial VT graduates in particular. Thus, section 2.2 is concerned with identifying some of the main existing theories that have been developed by economists and sociologists in order to explain the main factors underpinning the integration of a young-entrant into the labour market. Meanwhile, section 2.3 will try to complement the previously suggested theories with some empirical evidence showing common factors in the European Union as far as the transition from education to working life amongst vocational training students is concerned.

2.2. PRELIMINARY THEORETICAL CONSIDERATIONS

The issue of school-to-work transition has gained increasing importance in the political and social debate in the European countries over the past 20 years, due basically to the difficulties found by young people to enter the labour market.

Generally speaking, the integration of a young-entrant into the labour market can be described as a dynamic process whereby a person moves from the educational system to a working position in the labour market. Obviously enough, the essential characteristic of any labour-market entrant is his/her lack of experience on the labour market.

There are a number of theories trying to explain what are the main factors underpinning the process of school-to-work transition (see Table 2.1).





Table 2.1. Theoretical approaches to school-to-work transition processes

Theories	Theories' contents	Main bibliographic references
The human capi- tal theory	This theory suggests that the focus is train- ing itself. Thus, an individual invests in training so long as it adds to his production capacity. Training ends once the updated cost of an additional quantity of training is greater than the updated return –estimated in the form of additional remuneration- that the individual can expect from it.	 Becker, G (1993), 'Human capital. A theoretical and empirical analysis (with special reference to education)', 3rd ed., University of Chicago Press, Chicago and London. Parent D (1995), 'Survol des contributions théoriques et empiriques liées au capital humain', CIRANO, Sdrie Scientifique, No 95s-28, Montreal.
The job search theory	This theory assumes that an individual will or will not accept the jobs he is offered de- pending on his 'reservation' wage (minimum level of pay, which can be revised upwards or downwards depending on his/her career progression)	 Mortensen D (1986), 'Job search and labour market analysis', in Ashen- feiter, O. and Layard, R. (eds), Hand- book of labor economics, Vol. 11, El- sevier Science Publisher. Van Den Berg, G & Van Ours, J (1994), 'Unemployment dynamics and duration dependence in France, the Netherlands and the UK', Economic Journal, 104.
The filter theory	This theory postulates that in a market where information on individual productivity is imperfect, a diploma reveals individuals' innate productive capacity, and for this rea- son it is used as a recruitment criterion not as a proof of the acquisition of knowledge or skills. From the employers' perspective, a diploma may also be one of the signals ena- bling employers to estimate the potential productivity of candidates for recruitment.	 Arrow, KJ (1973), 'Higher education as a filter', Journal of Public Econom- ics, 2. Spence, M (1974), 'Market signalling; informational transfer in hiring and related screening processes', Harvard University Press, Cambridge.
The job competi- tion theory	It assumes that in an universe where jobs are rationed, the diploma then functions as a criterion for ranking job applicants, with diploma holders being assumed to have a greater ability to learn through experience.	 Thurow, L (1975), 'Generating Ine- quality', Macmillan, London.
The job-matching theory	In this theory, not all employer/employee matches are equally good, and their quality is tested in the workplace. Research on good matching takes the form of a series of ex- periments at the start of the working life.	 Jovanovic, B (1979), 'Job matching and the theory of turnover', Journal of Political Economy, 87.

Source: CEDEFOP, The Transition from Education to Working Life; Key Data on Vocational Training in the European Union.

Elaboration: Ikei

Notwithstanding this, all these theories, based on the general assumptions of perfect competition, are currently challenged by other more comprehensive theories that try to integrate social, cultural and economic factors. Thus, and according to





Marsden (1986)³, labour markets can be described as complex mechanisms where a large number of operators act individually and collectively in a given historical, economic and social context, resulting in a particular societal configuration. In this framework, the social and economic organisation of the labour market defines the production of qualifications and the renewal process of labour, affecting therefore the way in which young people are integrated in the labour market.

Thus, the process of integration of a labour-market entrant into working life is dependant on a number of factors, such as:

- □ The economic situation
- **The forms in which the labour market is organised**
- **The nature and organisation of the national educational system and, finally,**
- **The way it is perceived and used by the production system.**

In this sense, one of the most authoritative studies in this school of thought has been conducted by Garonna and Ryan (1989)⁴, who have identified three ways in which vocational trained young people are integrated into the economy, that is to say, regulated inclusion, selective exclusion and competitive regulation. A description of these three ways is presented next:

a.) **Regulated inclusion**: In this type of system, skills are transferable. Initial training is acquired through alternance training, usually in apprenticeship, where social partners negotiate contents and number of places offered. Thus, it is assumed an attitude of co-operation amongst employers, on the one hand and between employees and employers, on the other. In this type of system, and during apprenticeship, the young person acquires both the general and specific skills regarded as necessary but also experience of the workplace and its rules, so the forms of offered training closely match the supply of jobs. Therefore, the risk of youth unemployment among diploma-holders is practically the same as for adults, although young people without certified training are at a clear disadvantage. In this system, pay for labour-entrants is linked

³ Marsden, D (1986), The end of economic man? Custom and competition in labour markets, Wheatsheaf Books Ltd, Brighton.

⁴ Garonna, P & Ryan, P (1989), 'Le travail des jeunes, les relations professionnelles et les politiques sociales dans les economies avancées', Formation - Emploi, 25, January-March





with individual qualifications, and the acquisition of new skills is reflected in pay levels.

- b.) Selective exclusion: According to this system, access to the labour markets is restricted and is organised according to the model of competition for employment described by Thurow (1975), so young people at the start of their working careers have added difficulties for entering the labour market. Meanwhile, and when being recruited, young entrants enter the enterprise at the bottom, although upward progress is possible through years of service and internal promotion. In this system, pay levels are directly linked to the working occupied positions. Additionally, those labour-market entrants holding diplomas, titles or work experience do have advantages for being recruited.
- c.) **Competitive regulation**: This system is characterised by high unemployment and short-term profitability perspectives by employers. In this context, employers benefit from the competition between experienced workers and labourmarket entrants, resulting in wages being kept down and in flexible employment contracts.

According to the model suggested by Garonna and Ryan, and following CEDEFOPs' suggestion⁵, EU Member States can be classified in four groups or clusters according to the prevailing system of labour transition for vocational training labour-entrants:

- a.) <u>Group 1</u>: Countries such as Greece or Italy, close to the model of 'selective exclusion'. In these countries, labour-entrants are at a disadvantage in comparison to their older counterparts when looking for employment, suffer more from risk of unemployment and long-term unemployment and, finally, the jobs they occupy are less skilled.
- b.) <u>Group 2</u>: Countries such as France, Sweden and Finland, characterised by the model of 'selective exclusion' although accompanied by 'competitive regulation' for the least-trained young people, where unemployment risk is moderate for labour-entrants holding diplomas.
- c.) <u>Group 3</u>: Countries such as Belgium, Spain, Ireland, the Netherlands, Portugal or the United Kingdom, characterised by the presence of all three forms of

⁵ CEDEFOP (2001), The Transition from Education to Working Life: Key Data on Vocational Training in the European Union, Luxembourg.





regulation. In this group of Member States, diplomas act less as a discriminating factor than in group 2, young labour entrants are more vulnerable to unemployment than seniors (although the effect of long-term unemployment is lower than in Group 1) and, finally, career progress is closely linked to the years in employment.

d.) <u>Group 4</u>: Formed up by countries such as Denmark, Germany and Austria, where the model of integration of young labour-entrants is close to the 'regulated inclusion' model. Thus, juniors and seniors have a generally similar pattern of employment and activity, although those young people with the lowest diplomas run a considerably higher risk of unemployment.

2.3. THE TRANSITION FROM SCHOOL-TO WORK: SOME GENERAL EVI-DENCE FROM EUROPE

According to CEDEFOP⁶, the transition from education to working life amongst vocational training students in the European countries shows certain common factors amongst the different countries, although always subject to a high degree of diversity in the concrete forms of transition according to local or sector-specific situations.

Thus, these common factors can be summarised as follows:

- In all the European countries young people suffer from a greater risk of unemployment in the early years of experience (up to three years after the theoretical age at which a vocational diploma is obtained). Therefore, a certain adjustment period is required between the end of training and the first stable job.
- Juniors⁷ are at greater risk of unemployment than experienced workers. In any case, these juniors are at less risk of long-term unemployment in all the EU countries.

⁶ CEDEFOP, The Transition from Education to Working Life: Key Data on Vocational Training in the European Union, Luxembourg, 2001

⁷ Juniors are defined as young people who have emerged from training and whose age is close to the typical age at which the diploma they hold is normally obtained.





- Early work experience in the course of the vocational training has an enhancing effect on the integration possibilities of students, either in the form of alternance periods or even short-term work experience.
- Juniors are more often offered with long-term jobs, although in recent years the proportions of juniors and seniors hired on a fixed-term contract are close to each other. In this sense, this practice is better explained by the employers' wish to flexibly adjust their workforce according to the different market developments than by the juniors' lack of experience. In this competition for access to jobs, the level of completed education is an asset, as well as the subject of the obtained vocational training diploma.
- In most countries, a significant share of employers adjusts the volume of employment in their enterprises by offering part-time contracts, especially to female employees. Notwithstanding this, in certain countries such as France, Finland, Sweden and the United Kingdom, this adjustment tool also affects not only to female seniors but also to male juniors.
- In nearly all the European countries, the transition from education to working life depends on the level of education and attained diploma. Thus, those with the lowest diplomas have got the higher possibilities of being unemployed and, once unemployed, they have fewer opportunities to find another job quickly. Therefore, the integration of these people in the labour market is still uncertain in most European countries, despite recent policies on training and aid to find employment that have been introduced in most countries.





3. INITIAL VOCATIONAL TRAINING SYSTEMS





3. INITIAL VOCATIONAL TRAINING SYSTEMS

3.1. INTRODUCTION

This chapter 3 is primarily concerned with an in-depth description of the existing initial vocational training systems in the regions that have been selected for carrying out the survey. In this respect, and having in mind that in most countries the vocational training systems are regulated at central and not at regional level, most of the given information will be national-wide, although specific regional variations will be stressed. On the other hand, and due to the existing differences per countries, the information on each surveyed country/region will be presented separately.

Before going into detail, it should not be forgotten that initial vocational training is defined in this project as any form of training (including technical and vocational teaching, apprenticeship and vocationally oriented education) that contributes to the achievement of a vocational qualification. This qualification has to be recognised by the competent authorities in the Member State in which it is obtained.

3.2. EXISTING INITIAL VOCATIONAL TRAINING SYSTEMS IN THE SUR-VEYED COUNTRIES/REGIONS

As it has already been mentioned in a previous chapter of this report, the existing education and initial vocational training systems vary widely from one country to other as a result of the different social, economic and political considerations existing in the different countries. Obviously enough, the institutional format of each national initial vocational system has a major impact on the process of transition of young people into the labour market.

Thus, factors such as the relative importance of the initial vocational training in the general education system, the nature of the knowledge dispensed or the proximity of the training contents to the enterprises' needs, all of them have a major effect on the configuration of the training supply, on the age at which young vocational trained people are involved in the transition process or even the duration of the transition process itself.





Just to give some data, Graph 3.1 gives a breakdown of participants at ISCED level 3⁸ by general education and vocational education and training (VET). According to the data and on average, 58 % of pupils enrolled in upper secondary education are in the vocational stream in the EU, although important differences can be appreciated. Thus, and whereas most countries are close to this average -Sweden, Finland, France, Denmark, United Kingdom, Belgium and Luxembourg-, a few countries show greater weight on vocational training -The Netherlands, Germany, Italy and Austria-. By way of contrast, general education predominates in Ireland, Portugal, Spain and Greece.





Interestingly also, Graph 3.1 also provides information on the differences in the organisation of vocational training according to the degree of employers' participation. Thus, and in those countries where general education predominates, vocational training tends to take place within the school. By way of contrast, in those Member States where VET is predominant, its organisation varies widely. In this sense, training in the school environment broadly predominates in Belgium, France, Italy, Luxembourg, the Netherlands, Finland and Sweden, although alternance training under a contract of employment may also cover part of the training

UK data not available by place of training. Data for general education is 43%. Source: Eurostat, UOE questionnaire and VET data collection, 1995/1996

⁸ ISCED stands for International Standard Classification of Education, and has been developed by UNESCO. ISCED Level 3 corresponds to a level of (upper) secondary education. For more details see http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm





provision. On the other hand, alternance accounts for a very substantial proportion in Denmark, Germany and Austria.

The remaining part of the chapter will try to provide an insight into the existing initial vocational training systems in the surveyed countries, that is to say, Austria, France, Norway, Spain and The Netherlands.

3.2.1. The Austrian System

Austria's educational system is characterised by a rather heterogeneous structure resulting, above all, from its history. There exists a wide range of different schools young people can attend in order to receive a sound basic education and an even wider range for initial vocational training.

There are several different ways for receiving initial vocational training in Austria. In contrast to other European countries, Austrian youth has to decide rather early for an occupation – generally at the age of 14 or 15. The two main categories of initial vocational training – namely secondary technical and vocational schools and colleges as well as apprenticeship – are briefly described next:

- a.) School-based vocational education and training, which leads simultaneously to both a general qualification for further education (colleges end with the "Matura" qualifying pupils for university entrance, schools lead to a certificate corresponding to a completed apprenticeship training) and a basic occupational qualification. Pre-conditions for attending VET schools and colleges are the successful completion of the 8th grade as well as the successful passing of an entrance examination. In addition to occupation-oriented instruction at school, pupils are in many cases required to do an internship in a company during the summer vacations. In general, secondary technical and vocational schools last between one and four grades, whereas colleges last five grades.
- b.) In addition to school-based education, there is the possibility of an apprenticeship, whereby – in the frame of a dual system – young people receive on-thejob training in a company (supervised by employees besides their productive work) and supplemental theoretical education at a "Berufsschule" (vocational school). The practical training at the company outweighs the theoretical education at school – the apprentice spends about 80 % of the training period at





the company. The theoretical instruction can be organised in various ways: year-round instruction (e.g. 1 day at school each week), block system (e.g. 10 weeks per year) or a seasonal system (e. g. instruction concentrated into a particular season). About 34 of the curricula of vocational schools deals with occupation-oriented matters, and only 1/4 consists of general education (e.g. social studies, German, etc.). About 40 % of the attendants of initial vocational training in Austria participate in an apprenticeship. In order to start apprenticeship training, the 9th school grade has to be successfully fulfilled. Young people are supposed to look for a training company on their own. An apprenticeship contract will be established between the apprentice and an accredited training employer. The training in the company is governed by several regulations (i.e. duration of training, occupational profile, training allowance) and funded by the employer. At the end of the training, apprentices have the possibility to pass a final examination including both a theoretical and a practical part. Apprenticeship training is accepted and supported by all the major societal groups and the population in Austria.

Existing systems	Strong points	Weak points		
School-based voca- tional education and training	 Teaching is provided by peda- gogically trained personnel, Good image in the population Central decision-making con- cerning the curricula 	 Relatively inflexible structures Lack of practical experience Rising costs of the system "Cultural shock" referring to the reorientation from school to work life. 		
Apprenticeship	 Strong orientation on real work life Rapid convertibility of technical innovations into the training cur- riculum Flexibility of curricula and train- ing personnel Early contact of students with real work life. 	 Trainers are not educated in peda- gogical tools Supply of apprenticeships depends on economic factors Supply of apprenticeships is not centrally planned Worse image in the population com- pared to further school-based edu- cation 		

 Table 3.1.
 Advantages and disadvantages of the two categories of initial vocational training in Austria

In Austria, issues in the field of initial vocational training lie in the competence of the Federal Ministry of Education, Science and Culture. "Landtage" (State Parliaments) are restricted to passing implementing acts and approving financing appropriations. State Governments are responsible for the execution of educational legislation. The administration and supervision of schools rests with agencies of the





"Bundesrat" (Federal Government) called "Landesschulräte" (State Education Councils) and their subordinated "Bezirksschulräte" (District Education Councils).

However, not only governmental institutions but also different legal interest groups are involved in the administration of the Austrian education system. Also in "expanded school partnerships", representatives of different interest groups are included. Furthermore, interest groups have the possibility of influencing teacher training taking place at federal academies. Concerning apprenticeship, the role of interest groups (especially the Austrian Federal Economic Chamber) even extends to the organisation of examinations.

The Austrian educational system is regulated by a number of legislative acts. Referring to vocational training, the most important one is the "Berufsausbildungsgesetz" (Vocational Training Law). This Law regulates apprenticeship by defining the rights and duties of apprentices and trainers in the companies. Furthermore, it contains regulations concerning the authorisation of training companies, examinations and the termination of apprenticeship.

Continuous amendments to the various acts have brought a number of changes to the orientation and organisation of vocational schools and colleges and apprenticeship training. Recent examples include:

- The year 1993 brought more autonomy, independence and flexibility as well as more responsibility for school-based vocational education through the 14th amendment of the Organisation of Schooling Act. It was intended that curricula become more oriented towards the needs of the regional labour market.
- The qualification introduced in 1997 called "Berufsreifeprüfung" (Lateral Access to Higher Education) gives apprentices who have successfully completed their training access to a higher-level career or education.
- On September 1st 2000 the Vocational Training Law was changed and led, amongst others, to an extension of the probation period from two to three months offering the employer a longer time period for dismissing a new apprentice. Additionally, the duration for further obligatory employment after finishing apprenticeship was shortened from four to three months

In general, school attendance in Austria is free of charge (leaving aside private schools) and financed by federal, county and municipal budget. Schools are free in





the planning of their investment requirements and in the raising of funds up to \notin 3,633.64 on their own initiative. Funds are allocated to schools annually, whereby schools have the right to manage them autonomously.

In contrast to school-based education, apprenticeship is largely financed by training companies that have to bear not only the wages/salaries of the apprentices and their trainers at the company but also the investment in infrastructure (work places, shop floors, etc.) and the administrative costs. However, employers benefit from a training allowance of in total \in 4,360.37 per apprentice that is paid by the State. By way of contrast, the government financially backs vocational schools for apprentices.

In 2000, about 300,000 young people participated in initial vocational training in Austria. Whereas the number of apprentices and that of attendants of secondary technical and vocational schools has been falling since 1990, secondary technical and vocational colleges become more popular each year. This shows the trend towards education systems enabling access to tertiary education and universities. Two reasons can be suggested for explaining this development. On the one hand, enterprises are demanding more skilled labour force, and apprenticeship still has the (unjustified) image to be better suited for students that are rather unwilling to learn). On the other hand, enterprises prefer to employ school graduates instead of having to finance an apprenticeship.

3.2.2. The Dutch System

The Dutch vocational education system is currently regulated since 1st January 1996 by the Adult and Vocational Education Act (WEB). The WEB brings more cohesion into the Dutch vocational education by organising a framework for all vocational qualifications. In addition to this, the WEB also tries to establish a better link between the vocational education system and the Dutch labour market.

The Dutch vocational education system can be subdivided into three levels, that is to say, the preparatory or primary level, the intermediate or secondary level and, finally, the higher level of vocational education and training. In this report only the secondary vocational education is described.





The Dutch Secondary vocational education prepares students for national qualifications that are recognised by the government. Most programmes can be followed according to two different educational tracks:

- The part-time work-based route, based on the so-called dual system. The emphasis in this route lies on the 'learning on-the-job' perspective, so the students spend more than sixty percent of the time learning 'on-the-job' through apprenticeship in a company, whereas the remaining time is spent at school. In this route, students have a right to compensation for the work done, whereas the employer can, under certain conditions, get a tax advantage.
- The full-time college-based route, where this track focuses on 'learning at school'. In any case, and under this route, the students spend at least 20 and no more than 60 percent of their time learning at school, whereas the remaining time is spent 'learning on-the-job'. Students in this route have the right to have access to a financial grant, provided they are not older than twenty-seven.

There are no specific regulations concerning how the 'on-the-job' training is organised, although, it is always necessary to make a contract between the school, the employer and the pupil. There are, however, formal regulations (provided within the Adult and Vocational Education Act (WEB)), regarding the quality of the 'on-the-job' training.

The Dutch secondary vocational education and training system offers around 700 different courses, where all qualifications need to be registered in a national 'qualification structure'. In this qualification structure, all skills and knowledge included in these 700 vocational courses are described, along with the examination standards. Regional Training Centres (ROC's) and Agricultural Training Centres (AOC's) provide these training programmes. Meanwhile, Table 3.2 provides a comprehensive picture of the different levels existing in the Dutch secondary vocational education system, the duration of these levels and their associated routes.





Table 3.2. Levels, duration and education routes in the Dutch secondary vocational education system

Level	duration	education route
level 1: assistant training	1/2 - 1 year	work-based route or college-based route
level 2: basic vocational training	2 - 3 years	work-based route or college-based route
level 3: vocational training	2-4 years	work-based route or college-based route
level 4: middle management training	3-4 years	work-based route or college-based route
level 4: specialist education	1-2 years	work-based route

There are a number of key agents within the Dutch secondary vocational education system:

- Firstly, the Ministry of Education, Culture and Sciences, who is responsible for the Dutch educational system and subsequently of the provision of the required financial means.
- Secondly, the so-called 'National Vocational Bodies' (LOB's). These bodies, governed by sector-based employers organisations and labour unions (the so-cial partners), have the key role of identifying the skills and knowledge required for each qualification. In addition to this, they are responsible of defining the standards at sector-level, of guaranteeing a sufficient number of placement addresses for 'on-the-job' training for students and, finally, of assessing regularly the quality of the training facilities provided by companies. Each main Dutch sector has its own body, and there are in total 21 bodies at national level.
- Thirdly, the so-called Vocational education and training centres (ROCs and AOCs). As far as the ROCs are concerned, there are currently 46 ROCs in three sectors, i.e. engineering and technology, economics, and social care. The Ministry of Education, Culture and Sciences finances them. The ROCs offer a broad range of initial and post-initial degree programmes in every region. In addition, they also play a role in the training of adults, unemployed and youth with a vulnerable position on the labour market. These ROCs have a great deal of autonomy, which allows them to develop their own initiatives in the context of the specific needs of the regions where they are located, always in consultation with the regional community. In addition to their legal obligations, ROCs can carry out contract-based activities for third parties. Besides the ROCs, there are 18 agricultural vocational education and training centres (AOCs) and three innovation and practice centres (IPCs), which provide primary and sec-




ondary agricultural vocational education. The Ministry of Agriculture, Nature Management and Fisheries finances the AOCs and IPCs.

From a statistical perspective, around half of the Dutch people over the age of sixteen opt for a course in vocational education. Having in mind the figures of the academic year 2000/'01 (see Table 3.3), 425,000 students attended a full-time course in secondary vocational training (272,000 followed the college-based route and 153,000 the work-based route).

Table 3.3. Number of students (x 1000) in the different routes and sectors (1995/'96-2000/'01)

	1005 //0/				2000/′01	
	19957-96	1998/-99	19997-00	total	man	women
College-based route	289	275	272	272	133	138
Of which:						
Technology	87	82	79	76	63	13
Economy	95	97	97	101	52	49
Agriculture	17	17	16	16	9	7
Heath and social care	73	78	79	79	10	69
Other	17	2	0			
Work-based route	116	131	143	153	101	52
Of which:						
Technology		69	73	75	73	3
Economy		26	30	35	19	16
Agriculture		8	8	8	6	2
Heath and social care		27	32	35	4	31

Source: CBS - Onderwijsstatistiek

Interestingly, most of the Dutch students who leave school after following the work-based route try to find work, while many students that follow the college-based route continue their education elsewhere (see Table 3.4).

Table 3.4.destination of school-leavers of secondary vocational training
(2000), in percentages

Route/level of education	study	work-based route	paid work	unem- ployed	other
work-based route, level 1/2	2	18	78	0	2
work-based route, level 3/4	3	2	92	1	3
collage-based route, level 1/2	21	10	65	2	2
collage-based route, level 3/4	36	3	58	1	2
Sources DOA					

Source: ROA





To end with this description of the Dutch secondary vocational training system, it is possible to suggest that the new system, introduced in 1996, seem to be well embedded in the national education system and is able to respond better to labour market changes than before.

In any case, the current main problem of the Dutch labour market is related to the existing labour shortages, in particular of those people who have a degree in vocational education. In order to solve, at least partially, this situation, in the last years, it is possible to identify a number of public and private initiatives within the vocational training domain. Examples include:

- The Technocentra, regional institutions aiming at fostering relations between regional training centres, municipalities and enterprises in the region, and basically intended to improve the connection between the needs of regional enterprises and the vocational training graduates' skills (quantitatively and qualitatively). These Technocentra are partially sponsored by the Ministry of Education.
- Tax reduction measures for employing apprentices in the initial vocational training program (work-based route). Essentially, this tax reduction has contributed to an increasing number of students in the work-based route.

3.2.3. The French System

In France, it is the State the main body responsible of the general education system and the vocational training system in particular. Thus, the State defines the teaching orientations and programmes, ensures the hiring, training and management of the staff and their wages. In addition, the State fixes the statute and the functioning rules of the establishments as well as the administrative and teaching staff posts attribution through the intermediary of the rectorates ("recteurs"). It is the Minister in charge of national education the main body responsible, although assisted by a Research Minister and by a Minister delegated to vocational training. This Ministry Delegated to Vocational Training has been created in April 2000.





The French secondary school ("école secondaire") allows the possibility to follow several degree possibilities:

- The general degree course ("enseignement géneral"), leading in 7 years to a general A-level ("Bac general"),
- □ The technological course ("enseignement technique"), leading in 7 years to a technological A-level ("Bac techno") and, finally,
- □ A family of different courses leading to various vocational degrees, i.e.
 - CAP ("certificat d'aptitude professionnelle") certificate of vocational aptitude (5 or 6 years),
 - BEP ("brevet d'études professionnelles") certificate of vocational education (5 or 6 years).

Around 30 % of the students having finalised their CAP or BEP pursue their degree course and obtain a "Bac techno" (2 years more) or a "Bac Pro" (vocational A-level) (2 years more). The "Bac Pro" is meant to lead mainly to get a job, while the "Bac Techno" is meant to permit to lead to higher diplomas.

Within the framework of this study, the initial vocational training degree courses of secondary school taken into account are four, that is to say, CAP, BEP, Bac Techno and, finally, Bac Pro.

In any case, it is important to underline that every vocational diploma, whatever its level, can be obtained in a secondary school (LEP: "Lycée d'enseignement pro-fessionnel") (800,000 students) or in an apprenticeship centre (CFA: "Centre de formation des apprentis") (300,000 students), the apprentice having an apprenticeship work contract with a firm.

From a legal perspective, it is worth mentioning the Orientation Law of 10th July 1989 (Loi d'Orientation), where education is defined as the first national priority. In this sense, one of the main objectives of the Law has been to bring a whole age group to the BEP or CAP level (or to an higher level), and 80% of this group to the baccalaureate level before 2000. These objectives have been partly reached, since from 1990 to 1999 the proportion of people leaving the school with at least a A-level ("Bac") has raised from 56 % to 69 %. Moreover, this increase has been mainly due to the vocational training domain, since the proportion of people get-





ting a "Bac Pro" or a "Bac Techno" has raised from 23 % to 35 %, while the proportion of people getting a general A-level ("Bac Général") lagged around 34 %. This Law has also defined compulsory periods of training at working place in firms for all vocational training degree courses.

The five-year law of the 5th December 1993 concerning work, employment and vocational training completes this legal framework, in the sense that it reckons the Ministry of education's particular responsibility concerning the professional integration of the youth. Thus, in its article 54, the principle is that "every young receives a vocational training before he leaves the educational system, whatever his educational level is".

From a regional perspective, the 1982 and 1983 decentralisation laws have increased the role of territorial authorities. Thus, regions are currently responsible for the building and the maintenance of the premises of the secondary schools (i.e. "lycées") and for the technological equipments, whereas Departments have the same competencies for the secondary schools ("collèges"). In any case, the ministries delegate a lot of decision to their (most of times) regional representatives (rectorates), and the rectorates define many actions in co-operation with local partners and authorities.

Besides, the law (1993) has instituted the regional youth vocational training development plans. These plans are elaborated after a preliminary consultation of the academic councils of the national Education, and are then approved by the regional council after consultation. The yearly applications precise the State and Region financing programme, and are co-signed by the concerned academic authorities. Nonetheless, the main stream of the orientations comes from national decisions, the regional and local levels adapting them to their situation.

From a statistical perspective, around half of the French students entering secondary school follow an initial vocational training degree course, although in the surveyed region within this report (IIe-de-France), this percentage is lower in comparison to the national average. The distribution of students by different types of degrees can be found in Table 3.5. Moreover, and from a dynamic perspective, the importance of initial vocational training seems to be growing, especially since the introduction of the vocational secondary school diplomas ("Bac Pro" and "Bac Techno").





Table 3.5. Number of students/apprentices in the French vocational (professional or technological) secondary schools (overseas included), September 2000

	Number of pupils / apprentices	Percentage of girls
Pupils in a CAP course	73 450	52 %
Pupils in a BEP course	444 939	45 %
Pupils in a Bac Pro course (and other professional diplomas)	181 856	47 %
Pupils in a Bac Techno course	357 889	Nd
Total pupils	1 058 134	Nd
Apprentices in a level V course (mostly CAP or BEP)	230 059	Nd
Apprentices in a level IV course (mostly Bac)	62 903	Nd
Total apprentices ⁹	292 962	Nd
General total	1 351 096	Nd

Sources : Ministère de l'Education nationale : 78 actions pour la voie des métiers, bilan d'étape, January 2002 & Ministère de l'Education nationale, RERS (Repères Références Statistiques), Edition 2001.

Meanwhile, and as far as the number of initial vocational training centres is concerned, in France there are currently 1,746 professional secondary schools (for the CAP, BEP and Bac Pro courses). On average, each of these centres has got 342 pupils, where the number of teachers is, approximately, of 62,000.

Referring to the existing relationship between firms and the French educational system, it is worth mentioning that the Ministry of Education has developed several tools:

Firstly, the ministries have signed 33 General Co-operation Agreements ("conventions Générales de Coopération") with branch federations, and 13 Specific Agreements ("Accords-Cadres") with large enterprises or employers organisations. These 5 years (most common case) agreements define actions to be led in common, with specific aims, ranging from exchange of professionals and teachers, to the study of the evolution of sensible competencies, or the creation of NTIC pedagogic tools. These agreements are national, and constitute the basis for local agreements.

⁹ Apprentices do not depend of secondary schools : they share their time between a firm, which offered them a work contract of apprentice, and a CFA ("Centre de Formation des Apprentis": apprentice training centre) where are taught and prepare their initial vocational training diploma.





- Secondly, the Professional Consultative Commissions (CPC: "Commissions Professionnelles Consultatives"), already created in 1945. They are the main tool for the definition of the contents of diplomas when they are created, renovated or suppressed. The CPC are organised by the Ministry of education. There are 17 CPCs, which advice about the content of the 744 vocational diplomas. In each one of these CPCs, there are sector-based representatives of employers, employees and public authorities. Since September 2000, the CPCs have been especially active, first with the adaptation of the BEPs to the new rules about in-firm training periods, and second in 2001 with the renovation of the CAPs.
- Thirdly, it is worth mentioning the Study Centre for the Pedagogic Renovation of Technical Teaching (CERPET: "Centre d'études pour la renovation pédagogique de l'enseignement technique"). The CERPET is part of the Ministry of education.
- The FCIL ("Formation complémentaire d'initiative locale"), or Local Initiative Complementary Training, in English. These FCILs have been created in 1985 and are local agreements between one or several initial vocational training centres and a firm (or several ones). The aim is to provide young initial vocational training graduates with a complementary training dedicated to their possible future job in the firm.

In addition to these initiatives, a number of recent new initiatives have been taken in order to reinforce the communication between enterprises and the vocational educational system as well as to promote the employability of young people (see French national report for this purpose). In this sense, special efforts are being put in the reinforcement of the quality of vocational training studies. In any case, it is also worth mentioning that there is still a social perception in France by which the 'best students' are directed towards a degree course having quite no vocational content.





3.2.4. The Norwegian System

The Norwegian Vocational training and education (VT) is defined as those training programs intended to give participants the practical skills, expertise and knowledge needed to obtain employment in a specific occupation or group of occupations.

The Ministry of Education, Research and Church Affairs (Kirke, Utdannings og Forskningsdepartementet) has the overall responsibility for public education and vocational training in Norway. Meanwhile, other ministries are also responsible and control resources that affect continuing training, such as the Ministry of Local Government and Regional Development and the Ministry of Trade and Industry.

Meanwhile, authorities at county level are responsible for arranging vocational education and training. The county authorities build and run the secondary schools, which normally offer both academic and vocational education.

The Norwegian system appears to be well integrated, in the sense that vocational education and training is given equal status with general education. All youths that want to attend vocational studies in Norway have to pass compulsory basic education. Four years of vocational education and training lead to a formal certificate. Vocational graduates can obtain further education and training to obtain a master certificate.

From a practical perspective, vocational education and training in Norway is divided in two time periods, that is to say, two years at school as a student and two years in a company as an apprentice. While the education at school represent a broad theoretical fundament directed to vocational work, the in-company training is aimed at providing specialisation for an specific occupation. The first year at school is called 'foundation course' and is followed by Advanced Course 1 (second year). There are a total of 13 foundation courses, each covering a general range of subjects (see Table 3.6).





Table 3.6. Vocational studies in Norway

Vocational studies in Norway
Health and social studies
Arts, crafts and designs studies
Agriculture, fishing and forestry
Hotel and food-processing occupations
Building and construction occupations
Technical building occupations
Electrical occupations
Engineering and mechanical occupations
Chemical and processing occupations
Woodworking occupations

Normally apprentices use two years in an enterprise to obtain vocational training. During this apprenticeship-training period, the enterprises have got the responsibility for the apprentices learning. The two years are located entirely at the work-place, with the education and training element being reduced progressively and the productive work element being correspondingly increased. Legally, the apprentice is an employee of the enterprise and has the rights and duties that follow from statues and wage arrangements. In June 1997, there were more than 180 recognised occupations in which training is completed by an apprentice period in an enterprise or in the public sector. The apprentice finalises the training period by a piece of work or an apprentice's final exam.

Before taking in an apprentice an enterprise or public institution must be approved by the county authorities as a training organisation. In order to obtain such approval, the organisation must be in a position to meet the training requirement of the curriculum for the recognised occupation. Meanwhile, it is the so-called training office that co-ordinates these activities. Subsequently, an apprenticeship contract is drawn up between the apprentice and the training office. Training offices (or training circles) are in most cases established on the initiative of the employers' association within the recognised occupations, but sometimes the county vocational training committees take the initiative. Training offices and circles have also to be approved by the County Authorities.

The vocational education and training structure is based on the so-called 'Reform 94', that covers general and vocational education and training at upper secondary level. It gives a statutory right to all young people, in the age bracket 16 to 19, three years of secondary education, as well as public follow-up service for pupils who do not accept this offer. One of the most significant changes of the Reform is





related to the introduction of plans to integrate learning in all parts of the whole education and training arrangement/ structure. By this structure, apprenticeship has been bonded to the school system, at the same time as the school system has been adapted to employers and the labour market needs. The reform thereby has led to a much better balance between the need for broad and basic training and the need for specialisation. In addition, the reform has opened the route of vocational training towards university studies, as well it has introduced more theoretical subjects related to general education in the vocational training curriculum.

3.2.5. The Spanish System

The general organisation of the Spanish educational system has suffered a dramatic change with the passing in 1990 of the Organic Law for the General Ordination of the Educational System (Ley de Ordenación General del Sistema Educativo), commonly known by its Spanish acronym, LOGSE.

This Law, applicable throughout the whole of Spain, has brought a number of important changes to the Spanish educational system, such as the rising of the minimum age for compulsory education from 14 to 16 or the deep modification of the whole Initial Vocational Training (VT) System.

According to the Spanish Ministry of Education, Culture and Sports, the new Spanish VT system brought about by LOGSE intends to provide students with the required practical knowledge and experience to improve their professional qualification and, hence, increase their employability. In fact, one of the driving forces of the reform has been the adaptability of the VT system to the constant changes in productive systems so that education is brought, at least to a certain extent, closer to labour market functioning.

In this sense, the LOGSE identifies two possible types of VT degrees, Intermediate VT Degrees (after 1,300 training hours) and the Upper VT Degrees (after 2,000 training hours). These different degrees are divided into 'ciclos formativos' (training levels), composed by 'módulos formativos' (training units). The contents and profiles for each training level are defined by experts in each of the corresponding fields, together with representatives of business associations and unions.





Interestingly enough, every degree has to include compulsory practical experience in workplaces ('Módulos Formativos en Centros de Trabajo'), that represents around a 20% of the total amount of training hours. This practice is new in comparison to the old Spanish Initial Vocational Training system, where practical training was optional. Currently there are 22 defined Training Families comprising 61 Intermediate and 75 Upper VT Degrees, respectively.

	Intermediate VT degrees	Upper VT degrees
Agrarian activities	Х	Х
Sea & fishing	Х	Х
Sport activities	X	х
Administration	Х	х
Graphic arts	X	х
Commerce & marketing	Х	х
Communication, image & sound	Х	х
Construction & civil works	Х	х
Electricity & electronics	Х	х
Mechanic production	Х	х
Hotel industry & tourism	Х	х
Hairdressing & beauty	Х	х
Food industry	Х	х
Computer science	NO	х
Wood & furniture	Х	х
Maintenance of self-propelled vehicles	Х	х
Maintenance & services to production	Х	х
Chemicals	Х	х
Health	Х	х
Socio-cultural & community services	NO	Х
Textile & tailoring	Х	Х
Glass & pottery	Х	х

Table 3.7. Professional families in the Spanish Initial VT system.

Source: VT Directorate, Basque Government.

The LOGSE reform also offers VT students the possibility to proceed on to further education, such as university, related to their academic background.

Recently in time, a draft bill on VT was approved by the Cabinet and transferred to the Parliament for its upgrading into the category of law on December 14th 2001. Among others, the following changes are regarded:

- Integration of the three VT systems: Initial, Occupational and Continuous VT.
- Document system by which individual professional experience can be easily traced.





- > Setting up of a National Qualification File, following European guidelines.
- > Evaluation system in order to adapt VT supply to labour market needs.

Nonetheless, the following aspects of the draft bill have turned out to be controversial, especially among Regional Governments, because they claim that their educational competencies are to be invaded.

As far as funding is concerned, vocational training centres are financed according to different sources depending on their public/private nature. Thus, and as far as public VT centres are concerned, they are financed by the public sector (either regional governments for those regions with education competencies or the Spanish Ministry of Education for the remaining ones). Meanwhile, the private centres can be divided into totally private ones and those that have reached some kind of agreement with public administration, so called concerted centres.

From a regional perspective, the LOGSE determines that the Ministry of Education, Culture and Sports is in charge of the recognition of qualifications together with the definition of the overall framework of the VT system, that is, the minimum contents and general objectives for each VT Degree. This way, all Spanish regions share a common approach.

However, there are a number of Spanish regions that have the political competencies to regulate on the Vocational Training domain, although provided that the general framework stated by the LOGSE is respected. Thus, these regions have the freedom to define curricula for each degree as long as the minimum content requirements and overall framework are met. More specifically, around 55% of the curriculum is determined nationally, while the remaining 45% can be adapted to the peculiarities of the regions (30% by the corresponding regional government and 15% by the regional VT centres). Those regions with educational competencies can also decide on the implementation pace of training levels, which is the reason why there is currently a very heterogeneous situation as far as VT is concerned in Spain.

Referring specifically to the Basque case, the main responsible body is the Basque Government's Department of Education, Universities and Research, which has got a specialised VT Directorate.





In addition to this, it is worth mentioning that the Basque Government did approve in 1997 the Basque Plan of Vocational Training. It is defined as the basic instrument for both the identification and satisfaction of the qualification needs and requirements of the labour market. This Plan arises from a broad and anticipatory vision of the relationship between training and employment and is embedded in a framework of constant and accelerated change. In addition to this, an individual competence registry is established, which allows tracking the training and experience of every single person.

Finally, there are three additional relevant Basque VT related institutions, that is to say,

- The Basque Council on Vocational Training, where several departments from the Basque Regional Government are represented, along with provincial government delegates, business associations, unions and both private and public training centres. Its main goal is to co-ordinate actions carried out by different institutions in order to maximise resources and avoid over-lapping between them. It is also in charge of defining the Basque VT Plan.
- □ The Observatory for the Basque System of VT, intended to provide all the necessary information for the planning of VT and Human Resource policies, and
- □ The Basque Institute of Qualifications and VT, with the purpose of defining and monitoring the Professional Qualification System.

In addition to these public initiatives, the Basque Business Association (CONFE-BASK) has launched several initiatives for fostering the employability of the Basque VT students. Examples include the Shared Vocational Training Programme (Programa de Formación Profesional Compartida), run until 1997 and intended to bring VT centres and enterprises closer to each other through the fostering of internships for VT students so that they can get first hand professional experience. In addition to this, CONFEBASK has signed up an agreement, Urratsbat, with seven VT centres throughout the Basque Region in order to foster entrepreneurship among VT students.





4. CONTRACTING OF VT GRADUATES BY SMEs





4. CONTRACTING OF VT GRADUATES BY SMEs

4.1. INTRODUCTION

This chapter is primarily concerned with the hiring practices of VT graduates followed by the SMEs located in the surveyed European regions. In this sense and firstly, section 4.2 gives information on the SMEs' perception on the 'indispensability' of the VT graduates to the jobs they are contracted for. Subsequently, sections 4.3 and 4.4 provide in-depth information on the number of hired graduates, the areas where they develop their work, the most usual ways for contracting VT graduates, the most typical initial contracts offered to these graduates or their labour turnover. Linked to this point, section 4.5 identifies those VT graduates' aspects that more influence the SMEs' hiring decisions.

Meanwhile, section 4.6 pinpoints the percentage of SMEs that suggest experiencing difficulties in enrolling VT graduates, where a typology of these difficulties and their recent evolution in time are also assessed. Additionally, section 4.7 is interested in describing the SMEs' hiring practices as far as gender considerations are concerned, as well as the main reasons underpinning these decisions.

Finally, section 4.8 is providing, respectively, the main reasons for not hiring VT graduates amongst those SMEs that have decided not to hire any of them, whereas section 4.9 is concerned with the SMEs' general expectations about future hiring decisions of VT graduates.

4.2. INDISPENSABILITY OF VT GRADUATES

Before going into the concrete hiring practices of the European SMEs in relation to the initial VT graduates¹⁰, it is relevant to know what is the SMEs' perception on the 'indispensability' of these VT degrees for the type of jobs that these SMEs generate. In this sense, up to 63% of the surveyed SMEs that have hired VT graduates in the past three years suggest that the availability of a VT degree is a necessary condition for certain jobs in the enterprise (see Graph 4.1). Meanwhile, this per-

¹⁰ VT graduates from now onwards





centage goes down to 32% when referring to those SMEs that have not hired VT graduates. Interestingly also, this 'indispensability' is generally more perceived the larger the SMEs are, irrespectively of the fact that SMEs may have hired or not VT graduates.

Graph 4.1. SMEs that suggest that having a VT degree is indispensable for certain jobs in the enterprise, by enterprise size⁽¹⁾



(1) Data referred to all enterprises Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, sector considerations (see Graph 4.1) show that, for all the surveyed manufacturing sectors and as it could be expected, SMEs that have effectively hired VT graduates in the past three years think that these VT graduates are more indispensable than those SMEs who have not. In any case, there are a number of sectors in which SMEs seem to detect a higher dependency of VT graduates. Thus, and referring solely to those SMEs hiring VT graduates, the food and wood SMEs have the highest percentages of SMEs suggesting the indispensability of VT graduates (82 and 69%, respectively), followed although at a larger distance by the





metal, electronic and chemical SMEs (62%, 62% and 60%, respectively). Meanwhile, it is also worth mentioning the high dependency identified by those electronic SMEs that have not hired any VT graduate in the past three years.

Interestingly enough, this 'indispensability' is not equally felt in all the surveyed European regions (see Graph 4.2), in the sense that it is the Dutch and Norwegian ones where this situation is particularly felt by local SMEs. By way of contrast, the Spanish SMEs seem to have the lowest perception on the essential need of VT degrees for their jobs, whereas the Austrian and French SMEs seem to have a much more intermediate position.

Graph 4.2. SMEs that suggest that having a VT degree is indispensable for certain jobs in the enterprise, by surveyed regions⁽¹⁾



(2) Data referred to all enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

4.3. LEVEL OF CONTRACTING AND AREAS OF WORK

Up to 36% of the surveyed SMEs have contracted vocational training (VT) graduates during the last 3 years (see Graph 4.3), where this percentage is positively related to enterprise size considerations. Thus, and whereas around 29% of the micro enterprises¹¹ have contracted VT graduates, this percentage goes up to 49% and 72% amongst the small¹² and medium sized¹³ enterprises, respectively.

¹¹ Enterprises with 1 to 9 employees

¹² Enterprises with 10 to 49 employees

¹³ Enterprises with 50 to 249 employees





Graph 4.3. Percentage of enterprises that have contracted Vocational Training (VT) graduates during the last 3 years, by enterprise size⁽¹⁾



(1) Data referred to all enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, sector considerations show that important differences can be appreciated, in the sense that whereas in some sectors a large part of SMEs have hired VT graduates in the last three years (i.e. electronics, metal or food sectors, with around 1 out of 2 SMEs effectively hiring), this percentage is much lower amongst other sectors such as textiles or chemicals (16% in both cases).

Interestingly enough, data by surveyed countries (see Graph 4.4) show that the percentage of SMEs involved in contracting VT graduates is very similar in nearly all countries, where the two extremes are given by Austria and the Netherlands (43% and 30%, respectively).





Graph 4.4. Percentage of enterprises that have contracted Vocational Training (VT) graduates during the last 3 years, by surveyed regions⁽¹⁾



Data referred to all enterprises Source: Ikei & ENSR partners, Leonardo Survey 2001

Concerning the number of hired VT graduates by those SMEs who have effectively hired any (see Table 4.1), up to 88% of the surveyed SMEs have hired between 1 and 5 VT graduates during the last 3 years, whereas the remaining 11% have hired more than this number. Obviously enough, enterprise size considerations play a major role in this result, in the sense that whereas up to 99% of the micro enterprises hiring VT graduates have contracted less than 5 graduates, this percentage goes down to 50% amongst the medium sized enterprises. In fact, up to 15% of these latest enterprises has contracted more than 10 graduates.

Table 4.1. Number of hired VT graduates and areas of work, by enterprise $size^{(1)}$

Veriables	Enterprise size					
Valiables	1-9	10-49	50-249	Total		
Number of VT graduates hired during the last 3 years						
• 1-5	99	85	50	88		
• 6-10	2	11	29	8		
• 11-25		3	12	3		
More than 25			3	0		
• DK/NA		2	6	1		
Areas of work of hired VT graduates(*)						
Production/Quality control	81	74	73	78		
Administration/Finance	6	17	27	12		
 Information technol. –Computers 	3	2	9	3		
Marketing/Sales	7	11	17	10		
• Other	11	20	26	16		

(*) More than one answer possible

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001





As far as the main areas of work of the hired VT graduates are concerned, and irrespectively of enterprise size considerations, the largest share of SMEs (78%) hire VT graduates for their production/quality control areas, although this specialisation is specially relevant amongst the microenterprises group (81% of enterprises in comparison to 74% in the remaining size categories).

Meanwhile, the remaining areas of work receive a significant less attention from SMEs. Thus, VT graduates for the administration/finance area are only hired by 12% of surveyed SMEs, whereas this percentage is slightly lower for the market-ing/sales area (10%). Once again, enterprise size considerations show that larger SMEs have got a broader scope of areas for which VT graduates are hired.

From a sector perspective, no important differences can be appreciated amongst the different sectors. Thus, production/quality control is the main area or work of the hired VT graduates for all sectors, and in all sectors the largest share of SMEs have hired between 1 and 5 graduates. In any case, it is worth mentioning the chemical sector, where the data show that the low percentage of SMEs hiring VT graduates is compensated by a largest number of graduates in comparison to the average.

Interestingly also, regional considerations show that the largest share of SMEs hire VT graduates for the production/quality control area, independently of the surveyed regions. In any case, this specialisation seem to be particularly relevant amongst the Dutch, Spanish and specially Norwegian SMEs, whereas the Austrian and the French SMEs do hire VT graduates for a broader scope of work areas. In this sense, Austrian and French SMEs hire a significant share of graduates for the administration/finance work area (see Table 4.2).

Areas of work of bired VT graduates (*)	Regions of					
Areas of work of hired v1 graduates(^)	Α	Е	F	NL	No	Total
Production/Quality control	64	87	63	86	93	78
Administration/Finance	18	8	21	7	4	12
Information technol. –Computers	6	6	2	2		3
Marketing/Sales	17	2	11	12	5	10
Other	23	13	23	17	2	16

Table 4.2.	Areas of work of h	ired VT graduates,	by surveyed regions ⁽¹⁾
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(*) More than one answer possible

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001





4.4. CONTRACTING WAYS AND GRADUATE TURNOVER

This section is interested in analysing the most usual ways SMEs have for contracting VT graduates, as well as the most common type of employment contracts SMEs offer to the VT graduates when entering the company. Additionally, some discussion will be held on the labour turnover of the hired VT graduates in the contracting enterprises.

To start with, and concerning the most usual ways SMEs have for contracting VT graduates, SMEs are able to contact a wide network of possible agents for this purpose (see Table 4.3). Data also illustrate that three channels are specially used by the surveyed SMEs, that is to say, direct contacts with training centres, advertising in newspapers and, finally, personal contacts (22%, 19% and 18%, respectively). By way of contrast, other channels are less used, such as apprentice-ship/training practices in the company or employment agency/public service (14% and 11%, respectively), whereas only a minority 3% make use of personnel selection firms.

Enterprise size considerations show that the smaller the enterprise size is the wider the scope of channels for contracting VT graduates are (see Table 4.3). Meanwhile, larger SMEs seem to rely in a much more limited number of channels for satisfying their recruitment needs, where these larger enterprises seem to use particularly the direct contacts with the training centres.





Variables		Enterprise size					
Valiables	1-9	10-49	50-249	Total			
Most usual way for contracting VT graduates							
 Through apprenticeship or training practices in the company 	15	12	16	14			
 Direct contacts with training centres 	20	23	24	22			
 Personal contacts (family, friends, relations) 	20	18	12	18			
 Employment agency or public service 	14	8	10	11			
 Newspaper advertising 	18	21	20	19			
Personnel selection firms	3	4	5	3			
Other	9	13	10	11			
• Dk/Na°	1	2	3	2			
Most usual type of initial contract with the VT graduates							
Temporary contracts	57	55	63	57			
Permanent contracts	35	45	35	38			
Other type	3	1	3	2			
Dk/Na	4			3			

Table 4.3. Usual ways of hiring, by enterprise size⁽¹⁾

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Available data also show that the largest share of surveyed SMEs offer initially temporary contracts to their hired VT graduates (57%), although it is precisely the largest ones (medium enterprises) who make more use of this type of contract. In any case, around 76% of surveyed SMEs¹⁴ suggest that VT graduates usually stay for long, so they become permanent workers after a period. From an enterprise size perspective, microenterprises suggest to have the highest labour turnover, in the sense that up to 30% of them contract VT graduates for short periods of time (see Graph 4.5). In any case, low labour turnovers are characteristic of all surveyed SMEs, irrespectively of enterprise size considerations.

¹⁴ Percentage referred to those enterprises that have answered to this questions (Do not know/no answer replies are not therefore included).







Graph 4.5. Labour turnover of VT graduates, by enterprise size⁽¹⁾

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years and that expressed an opinion on the issue.

Source: Ikei & ENSR partners, Leonardo Survey 2001

From a sector perspective (see Table 4.4), direct contacts with training centres is the most typical way of hiring for several sectors (food, textile, chemical and metal) whereas newspaper advertising is the most common way for the wood and paper sectors. Finally, electronic SMEs prefer personal contacts (family, friends, relations) to identify suitable candidates, although newspaper advertising also plays a crucial role in this sector. Meanwhile, and with the only exception of the wood sector, all the remaining sector initially offer temporary contracts to their hired VT graduates, where this practice is particularly relevant amongst the metal sector SMEs. Finally, in all surveyed industrial sectors VT graduates usually stay for long, so they become permanent workers after a period.





Table 4.4.	Usual w	ays of	hiring,	by	sector ⁽¹⁾
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Madahlar				Sectors	5		
Variables	Food	Textile	Wood	Paper	Chemi cal	Metal	Electr
 Most usual way for contracting VT graduates Through apprenticeship or training practices in the company 	20	10	21	17	2	16	9
 Direct contacts with training centres 	20	40	21	12	23	29	16
 Personal contacts (family, friends, relations) 	20	8	9	15	21	25	20
 Employment agency or public service 	5	18	9	12	11	9	19
Newspaper advertising	12	3	25	41	19	13	19
Personnel selection firms	7	10	3	1	5		2
Other	16	11	13	3	5	6	16
Dk/Na			1		15	2	1
Most usual type of initial contract with the VT graduates							
Temporary contracts	50	46	44	53	54	73	63
Permanent contracts	46	41	51	48	31	26	33
Other type	5	1	6		1	2	
• Dk/Na		12			14		4

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Regional considerations show that the most usual ways for SMEs to contract VT graduates differ significantly from one region to the other (see Table 4.5). Thus, and referring exclusively to the most common method, the Austrian SMEs seem to rely particularly on newspaper advertising, whereas the Spanish SMEs are the ones that trust more on personal contacts. Meanwhile, French and Norwegian SMEs (specially the latest ones) are particularly confident on the possibilities derived from direct contacts with the training centres, and Dutch SMEs rely particularly on training and apprenticeship periods in the company.





	Regions of					Tatal
	А	Е	F	NL	No	Total
Most usual way for contracting VT graduates						
 Through apprenticeship or training prac- tices in the company 	10	6	19	30	7	15
 Direct contacts with training centres 		27	21	8	44	22
 Personal contacts (family, friends, rela- tions) 	22	30	12	14	13	18
 Employment agency or public service 	14	17	11	5	9	11
 Newspaper advertising 	34	14	18	23	5	19
 Personnel selection firms 	1	6	0	9	2	4
Other	9		13	10	20	11
• Dk/Na			6		3	2

Table 4.5. Usual ways of hiring, by surveyed regions⁽¹⁾

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, and as far as the most usual type of initial contracts offered to the VT graduates are concerned (see Graph 4.6), temporary contracts are the most typical contract offered by SMEs in the Dutch, Norwegian and specially Spanish regions, whereas in the Austrian case the opposite is true. Meanwhile, SMEs in the French region seem to have a more balanced hiring policy, in the sense that the percentage of SMEs offering permanent or temporary contracts is very similar (although slightly higher for the permanent contracts).

Graph 4.6. Most usual type of initial contract with the VT graduates, by surveyed regions



(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001





Finally, labour turnover considerations show that in all the surveyed regions VT graduates predominantly stay in the enterprises for long, so subsequently they become contracted on a permanent basis. In this sense, the French, Spanish and Dutch regional cases show the lowest percentages of SMEs involved in this practice, 68%, 73% and 74%, respectively, whereas this percentage goes up to 80% and 83% in the Norwegian and Austrian cases.

4.5. MOST VALUED ASPECTS FOR CONTRACTING

Concerning the aspects most valued by SMEs when contracting VT graduates, the available responses suggest that two aspects are particularly appreciated by enterprises, that is to say and in this order, the personal virtues of the graduates and their availability of work-place practice (see Table 4.6). These two values are present in all enterprise sizes, and irrespectively of the fact that SMEs may hire or not VT graduates. Meanwhile, other aspects such as the reputation of the VT centre where the graduate graduated or their ICT knowledge are less appreciated by SMEs, where the academic records of the graduates are not particularly valued by SMEs, specially by the smallest ones.

	SMEs hiring VT graduates				SMEs not hiring VT graduates			
	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total
Aspects								
 Availability of work-place practice 	57	54	52	55	49	52	39	50
 IT knowledge 	6	10	15	8	13	18	18	14
 Personal virtues 	73	83	78	77	64	64	61	64
 Good academic record (school grades) 	3	11	13	7	9	9	13	9
 To have complementary training 	26	21	21	24	19	22	16	19
 Reputation of VT centre/school where graduated 	12	6	7	9	7	4	6	7
Other aspects	12	7	8	10	9	12	8	10
• DK/NA	12	9	7	10	30	19	40	28

 Table 4.6.
 Main aspects most valued by SMEs for contracting a VT graduate, by enterprise size

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

Interestingly also, these two aspects of personal virtues of the graduates and their experience in previous work-place practice are constantly repeated and in this or-





der in all the surveyed sectors and regions, although in this final case some exceptions can be appreciated (see Table 4.7). Thus, Norwegian SMEs tend to give a major importance to the complementary training of graduates, where this aspect is ranked as second below personal virtues both by those SMEs hiring and not hiring VT graduates. Meanwhile, the French SMEs not hiring VT graduates put also a main emphasis on the previous work-place experience of graduates as the most valued aspect, well above the graduates' personal virtues. Spanish and Dutch SMEs also give more importance to the academic records of the graduates in comparison to their European counterparts.

Table 4.7. Main aspects most valued by SMEs for contracting a VT graduate, by surveyed regions

Acresta	SMEs hiring VT graduates					SMEs not hiring VT graduates				
Aspects		Е	F	NL	No	А	Е	F	NL	No
 Availability of work-place prac- tice 	66	65	63	48	32	49	71	70	47	11
 IT knowledge 	7	11	11	8	4	18	12	18	14	9
 Personal virtues 	67	91	73	71	84	62	74	45	56	82
 Good academic record (school grades) 	6	13	1	13	4	10	13	0	14	6
 To have complementary training 	15	16	11	21	56	4	18	13	15	46
 Reputation of VT centre/school where graduated 	5	4	24	15	0	3	9	16	3	2
 Other aspects 	30	0	5	4	6	28	5	1	10	7
• DK/NA	5	1	13	21	14	27	0	38	40	37

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

4.6. EXPERIENCED DIFFICULTIES IN HIRING VT GRADUATES

Around 32% of the European surveyed SMEs that have effectively hired VT graduates in the last three years have experienced difficulties in enrolling them (see Table 4.8). It is the small enterprises group the one that seems to be more affected (47% of this enterprise group suggest so), well above the medium and specially the micro enterprises (32% and 24%, respectively).

Regional differences show that the Spanish, French and Dutch regional SMEs seem to be more affected by this problem (40% of SMEs suggest so in the three cases), especially in comparison to the Austrian and Norwegian SMEs (25% and 20%, re-





spectively) (see Graph 4.7). Meanwhile, sector considerations show that SMEs in two sectors seem to have the highest difficulties for enrolling VT graduates, that is to say, chemical and metal SMEs.





(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Concerning the concrete difficulties identified by the SMEs suggesting difficulties, the survey shows that up to 71% of SMEs argue a lack of students of the specialities needed as the main difficulty, well above of other difficulties (see Table 4.8).





Up to 16% of the surveyed SMEs identify 'other reasons', whereas 9% suggest that the main difficulty is given by the fact that the large companies take the most gualified graduates. Meanwhile, only 4% of SMEs identify a lack of training centres in their hinterland as a major problem. Regional and sector considerations also show that this lack of students is the main problem in all the surveyed regions, although the Spanish and the electronic SMEs seem to be also particularly affected by the competition from large enterprises.

(1)
ise size
is

Variables	Enterprise size					
Variables	1-9	10-49	50-249	Total		
SMEs experiencing difficulties in enrolling VT graduates needed (last 3 years)	24	47	32	32		
Typology of difficulties ⁽²⁾						
 The large companies take the most qualified graduates 	11	6	8	9		
 There are not training centres in the area you are located 		7	7	4		
 There is a lack of students of the specialities you need 	83	60	71	71		
Other	6	26	13	16		
• Dk/Na		2	1.5	1		
SMEs' opinion of increasing/decreasing difficulties ⁽²⁾						
 Difficulties increasing in general for all types of graduates 	29	39	36	35		
 Difficulties increasing for graduates of certain specialities 	31	47	46	40		
 Difficulties not increasing 	35	5	10	18		
• DK/NA	6	9	7	7		

(1): Data only referred to enterprises that have hired VT graduates in the last 3 years

(2): Data only referred to SMEs experiencing difficulties

Source: Ikei & ENSR partners, Leonardo Survey 2001

Once again, enterprise size considerations suggest that it is amongst microenterprises where the lack of students seems to be particularly relevant (83% of them identify this problem in comparison to 71 % and 60% of the medium and small enterprises). Microenterprises are also more affected than their counterparts by the competition for VT graduates coming from large enterprises, although differences are not that important.

Referring specifically to those SMEs who have identified difficulties in hiring VT graduates, a large majority of them (up to 75%) suggest that these difficulties are increasing. Small and medium sized enterprises seem to be more affected by this problem in comparison to their micro enterprise counterparts (86% and 82%, in comparison to 60%, respectively). The data also confirm that these increasing dif-





ficulties are specially felt by enterprises for finding graduates of certain specialities, where this result is valid for all enterprise size categories (see Table 4.8).

Regional variations suggest that in all the surveyed regions, SMEs experiencing difficulties suggest that these difficulties are increasing in the last years (see Graph 4.8), where this situation is particularly felt by the Dutch SMEs (86%), followed by the Spanish and French SMEs (74% of them in both cases). The Spanish SMEs seem to be the ones that are more affected by difficulties for hiring graduates of certain specialities, where this problem is suggested by up to 67% of the surveyed SMEs. On the other hand, sector considerations show that difficulties are felt to be increasing in all sectors, although it is perhaps in the food, textile, electronic and metal ones, where SMEs are particularly affected (see also Graph 4.8).





Graph 4.8. SMEs' opinion of increasing/decreasing difficulties for hiring VT graduates, by regional variations



Data only referred to enterprises that have hired VT graduates in the last 3 years and that experience difficulties

Source: Ikei & ENSR partners, Leonardo Survey 2001





4.7. HIRING GENDER PRACTICES

Concerning the gender hiring policies of the surveyed European SMEs in relation to VT graduates, the survey shows that SMEs hire preferably men in comparison to women (see Table 4.9). Thus, up to 56% of the surveyed SMEs hire only men, and 11% hire mainly men. By way of contrast, only 10% of SMEs hire only women, and 6% hire mainly women. Meanwhile, 17% of the SMEs hire men and women on an equal basis. Enterprise size considerations show that men are preferably contracted by enterprises, irrespectively of the size of enterprises. In any case, micro enterprises are precisely the group where enterprises hire both more men and women in comparison to the remaining groups, due basically to the low existing percentage of micro enterprises that hire both gender groups on an equal basis.

Table 4.9. VT graduates gender hiring policies by SMEs, by enterprise $size^{(1)}$

Variables	Enterprise size							
Valiables	1-9	10-49	50-249	Total				
Sex of the hired VT graduates								
All men	64	47	40	56				
Mainly men	6	14	27	11				
 Both equal 	13	22	23	17				
 Mainly women 	4	11	6	6				
All women	14	6	4	10				
 Don't know 								

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years

Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, sector considerations show that gender policies are strongly influenced by sector considerations (see Graph 4.9). In this sense, two sectors (textile and paper-printing activities) hire preferably women, whereas in the remaining sectors SMEs prefer men for fulfilling their vacancies for VT graduates (specially the metal and wood sectors).







Graph 4.9. VT graduates gender hiring policies by SMEs, by sectors⁽¹⁾

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

VT men graduates are more hired than their women counterparts in all the surveyed regions (see Graph 4.10). In any case, this situation seems to be particularly relevant in the Spanish region, followed by the Norwegian and the Dutch ones (81%, 73% and 71% of the regional SMEs hiring all or mainly men, respectively). By way of contrast, the French and the Austrian regional SMEs are the ones who tend to hire less men (52% and 59%, respectively), where it is in France that SMEs tend to hire more both gender groups on an equal basis.



Graph 4.10. VT graduates gender hiring policies by SMEs, by surveyed regions⁽¹⁾

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001





The Leonardo Survey 2001 also provides several interesting hints about the reasons that SMEs argue for their gender hiring decisions (see Graph 4.11). In this sense, and as far as those SMEs hiring men or mainly men are concerned, the more quoted reason is because most graduates applying for the jobs are of this sex, with 63% of responses, whereas 30% of SMEs hiring men suggest that they are more suited for the jobs they are contracted for. No important differences can be appreciated by enterprise size.



Graph 4.11. Reasons for hiring men or women, by enterprise size⁽¹⁾

By way of contrast, those SMEs hiring preferably women tend to suggest a wider scope of reasons for explaining this. Thus, up to 51% of SMEs suggest that most graduates applying for the jobs are women, whereas 24% argue that women are better suited for the jobs they are contracted for. Moreover, a 12% of SMEs argue that they hire women because they are better trained than men, where this reason is particularly quoted by the micro enterprises. Finally, a 13% of SMEs suggest that other reasons are also important for hiring women.

⁽¹⁾ Data only referred to enterprises that have hired VT graduates in the last 3 years. Source: Ikei & ENSR partners, Leonardo Survey 2001





4.8. REASONS FOR NOT CONTRACTING VT GRADUATES

This section of chapter 4 is interested in analysing what are the main reasons underpinning those SMEs that have decided not to hire any VT graduate in the last 3 years (see Table 4.10). In this sense, the main reason is basically the lack of need to contract people of that skills level, where this answer is suggested by a majority of enterprises (62%), irrespectively of size or sector considerations. Up to a 16% of SMEs argue that the main reason for this was their inability to find VT graduates well suited to their needs, whereas a 13% suggested other reasons. In these cases, no relevant size considerations can be appreciated. Sector considerations show that metal and electronic SMEs are particularly affected vis-à-vis the remaining sectors by their inability to find VT graduates well suited to their needs.

Table 4.10	Rationale of S	SMEs tha	at have	decided	not to	hire any	VT gra	duate
	in the last 3 y	/ears, by	enter	orise size	•			

Variables	Enterprise size					
Valiables	1-9	10-49	50-249	Total		
Reasons for not contracting any VT graduate in the last 3 years $^{(1)}$						
There was no need to contract personnel of that skills level	64	54	71	62		
 You preferred to contract personnel without a VT degree 	8	13	6	9		
 You couldn't find VT graduates suited to your needs 	15	19	14	16		
Other reasons	12	14	7	13		
• Dk/Na	1		2	1		
Additional reasons for those SMEs who suggested they needed personnel with VT skills but did not hire them ⁽²⁾						
• VT graduates are not properly trained according to your needs	25	15	24	23		
 The large companies take the most qualified graduates 	5	3		5		
 There are not training centres to resort in the area you are located 	2	6	4	3		
 There is a lack of students of the specialities you need 	28	23	25	27		
Other reasons	40	53	46	43		

(1) Data only referred to enterprises that have not hired VT graduates in the last 3 years

(2) Data only referred to enterprises that needed personnel of that skills level

Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, and referring exclusively to those SMEs who suggested they needed personnel with VT skills but did not hire them (see also Table 4.10), surveyed SMEs argue the importance of the lack of students and the poor training levels of students.

Regional considerations provide distinctive reasons within the different surveyed regions (see Graph 4.12). Thus, and whereas the lack of need to contract person-





nel of that skill level is suggested as the main reason in all the regions, this reason seems to be particularly relevant in the Spanish case. Meanwhile, French and especially Dutch SMEs seem to be particularly affected in comparison to their European counterparts of a higher inability to find VT graduates suited to their needs. Norwegian SMEs seem to prefer to contract personnel without VT degrees more than their European counterparts.





(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

4.9. SMEs' FUTURE EXPECTATIONS ABOUT HIRING VT GRADUATES

To end with this chapter 4 on hiring practices of VT graduates by SMEs, the Leonardo Survey 2001 provides several interesting results on the SMEs' expectations on hiring VT graduates in the future (see Table 4.11). In this sense, and distinguishing between those SMEs that have hired VT graduates and those not hiring, the available data show that, as far as the first group is concerned, only a minority 5% of SMEs suggest they do not expect to need VT graduates in the future, whereas this percentage goes up to 32% amongst those SMEs that have not hired any graduate in the past three years.





Moreover, and again referring to those SMEs hiring VT graduates, around 32% of them suggest they expect to hire graduates with higher qualification levels than now, whereas the majority (60%) argue for contracting graduates with similar to present qualification levels. As far as those SMEs not hiring VT graduates are concerned, the available information shows that the largest share of SMEs (33%) foresee to hire graduates with similar to present qualification levels, whereas a 23% and an scarce 3% argue they will need graduates with higher/lower qualification levels than current ones, respectively.

Table 4.11 SMEs' future expectations on hiring of VT graduates, by enterprise size

Exportations	SMEs	hiring '	VT grad	uates	SMEs not hiring VT graduates			
Expectations	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total
SMEs' future expectations on hiring of VT graduates								
 Graduates with higher qualification levels than now 	29	33	44	32	21	29	46	23
 Graduates with similar to present qualification levels 	61	62	52	60	31	40	32	33
 Graduates with lower qualification levels than now 		1	1		4	3		3
• Don't expect to need VT graduates	7	3		5	34	25	17	32
• DK/NA	3	1	3	3	11	4	5	9

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

From an enterprise size perspective, two important results can be appreciated. Thus, and on the one hand, there is a positive relationship between enterprise size and the percentage of SMEs suggesting to need graduates with higher qualification levels in the future, irrespectively of the fact that these SMEs may hire or not VT graduates. On the other hand, a negative relationship can be appreciated between enterprise size and the percentage of SMEs who suggest not to need any graduate in the future, where this relationship is again present irrespectively of the fact that these SMEs may hire or not VT graduates (see Graph 4.13).




Graph 4.13. Percentage of SMEs explicitly stating that they do not expect to hire VT graduates in the future, by enterprise size and sector



All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, sector considerations show that, amongst those SMEs that have hired VT graduates in the past three years, the percentage of SMEs stating explicitly that they do not expect to hire VT graduates in the future is practically irrelevant, being the only exception the textile sector (see Graph 4.13). Meanwhile, this percentage is much more relevant amongst those SMEs that have not hired any VT graduate, especially as far as the textile and the chemical sectors are concerned.

From a regional perspective, and referring to those SMEs hiring VT graduates in the last three years, the largest share of them expect to hire graduates with similar to present qualification levels in all the surveyed regions. This result is particularly relevant in the Dutch case. Meanwhile, Norwegian, Spanish and especially French SMEs are specially interested in hiring graduates with higher qualification levels (see Table 4.12).





Table 4.12. SMEs' future expectations on hiring of VT graduates, by surveyed regions

Expostations	SME	SMEs hiring VT graduates					SMEs not hiring VT graduates				
Expectations	Α	Е	F	NL	No	Α	Е	F	NL	No	
SMEs' future expectations on hiring of VT graduates											
 Graduates with higher qualification levels than now 	31	38	40	13	36	17	13	38	16	32	
 Graduates with similar to present qualification levels 	62	48	54	80	60	26	32	27	34	44	
 Graduates with lower qualification levels than now 	0	0	0	2	0	6	2	0	8	0	
 Don't expect to need VT graduates 	6	12	1	0	4	39	48	28	28	15	
• DK/NA	1	2	6	5	0	13	5	6	14	9	

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

By way of contrast, and referring to those SMEs who have not hired VT graduates in the last three years, again it is the French SMEs who seem to suggest a higher need for higher qualified graduates. Meanwhile, the Spanish SMEs, together with the Austrian ones, seem to be the ones more reluctant to need VT graduates in the future.





5. SMES' ASSESSMENT OF THE VOCATIONAL TRAINING GRADUATES





5. <u>SMES' ASSESSMENT OF THE VOCATIONAL TRAINING GRADUATES</u>

5.1. INTRODUCTION

Chapter 5 of this report is primarily concerned with analysing the surveyed SMEs' assessment of the VT graduates. Thus, section 5.2 provides information on the surveyed SMEs' degree of satisfaction with their recently hired VT graduates, where several aspects are analysed such as the graduates' adequacy and adaptability to work requirements, their training and skills in concrete domains or their comparison with former workers. Meanwhile, section 5.3 is interested in looking into the SMEs' perception on the need of complementary training that VT graduates require when entering the companies, as well as the enterprises' responses in this sense (i.e. through provision of training courses). Finally, section 5.4 is concerned with the analysis of the importance attributed by SMEs to the Information and Communication Technologies (ICTs) in the curricula of VT graduates.

5.2. SMEs' SATISFACTION WITH HIRED VT GRADUATES

This section is interested in analysing the degree of satisfaction of the European surveyed SMEs with their recently hired VT graduates. Thus, the surveyed SMEs seem to be satisfied with their recently hired VT graduates, so enterprises rate them with a 66 grade from 0 (very dissatisfied) to 100 (very satisfied). Enterprise size considerations show that this positive perception is slightly better the larger the SMEs are (see Table 5.1).

Notwithstanding this positive attitude, surveyed SMEs seem to have a slightly worse opinion when concrete aspects of these graduates are analysed (see also Table 5.1). Thus, and referring to the adequacy of VT graduates' initial training to the current job requirements demanded by SMEs, they rate this adequacy as 55 from 0 (very low) to 100 (very good). Meanwhile, SMEs rate the adaptability to work of the hired VT graduates as 60, in a scale from 0 (very difficult) to 100 (very easy). Finally, and when SMEs are requested to compare the newly contracted VT graduates to former workers of the company in the same type of jobs, the new graduates obtain just a mere 50 grade from 0 (much worse trained) to 100 (much





better trained). Interestingly enough, and in all these three cases, the SMEs' valuation is directly related to the size of the enterprises.

Table 5.1. Satisfaction of SMEs with recently hired VT graduates, by enterprise size⁽¹⁾

Variables		Enterprise size						
Variables	1-9	10-49	50-249	Total				
SMEs' satisfaction with the recently contracted VT graduates ⁽²⁾	64	69	69	66				
Adequacy of VT graduates' initial training to actual job requirements ⁽³⁾	52	58	61	55				
VT graduates' training and skills in concrete domains $^{\rm (4)}$								
 Theoretical knowledge 	65	70	75	68				
Practical knowledge	52	50	56	52				
 Work planning, organisation 	51	47	53	50				
 Teamwork, communication 	82	79	76	80				
Use of IT	55	68	79	63				
 Decision making capacity, pro-active attitude 	49	45	51	48				
Adaptability to work of VT graduates ⁽⁵⁾	60	60	61	60				
Comparison of the newly contracted VT graduates to former workers of the company in the same type of jobs ⁽⁶⁾	45	55	56	50				

(1) Data only referred to enterprises that have hired VT graduates in the last 3 years

(2) Average from 100 (very satisfied) to 0 (very dissatisfied)

(3) Average from 100 (very good) to 0 (very low)

(4) Average from 100 (good) to 0 (bad)

(5) Average from 100 (very easy) to 0 (very difficult)

(6) Average from 100 (much better trained) to 0 (much worse trained)

Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, and referring to the SMEs' opinion on the VT graduates' training and skills in concrete domains, all domains are positively valued by SMEs with the only exception of the decision making capacity/pro-active attitude of the graduates (see Table 5.1). In this sense, the most valued domains include teamwork/communication abilities, theoretical knowledge and ICTs command (rated as 80, 68 and 63 in a scale from 0-bad- to 100-good). By way of contrast, other domains seem to be less valued such as practical knowledge or the work planning/organisation abilities of the graduates (52 and 50, respectively on the same scale). With the only exception of teamwork/communication abilities, a positive relationship (on general terms) can be found between enterprise size and satisfaction degree in the remaining domains.





It is interesting to compare these results with the opinions collected amongst those SMEs not hiring VT graduates on the domains regarded as important in the initial vocational training of the graduates (see Table 5.2). For this SME group, the more important domains include primarily the practical knowledge of the graduates, where this answer is given by 65% of the respondents. Meanwhile, the remaining domains are less suggested as important by the surveyed SMEs, perhaps with the only exception to this the teamwork/communication abilities of graduates (suggested by 34% of the surveyed SMEs).

Table 5.2.Domains regarded as important in the initial vocational training
of the graduates, by enterprise size⁽¹⁾

Variables	Enterprise size							
Variables	1-9	10-49	50-249	Total				
Concrete domains								
 Theoretical knowledge 	14	18	21	15				
 Practical knowledge 	66	62	71	65				
 Work planning, organisation 	22	23	16	22				
 Teamwork, communication 	33	39	35	34				
Use of IT	11	10	13	11				
 Decision making capacity, pro-active attitude 	26	21	25	25				
Others	24	22	11	23				
Dk/Na	4	5	7	4				

(1) Data only referred to enterprises that have not hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

From a sector perspective (see Graph 5.1), the SMEs that have hired VT graduates in the past 3 years seem to be generally satisfied with them, whereas the extreme perceptions do not differ very much from the different sectors. Meanwhile, and referring to the surveyed SMEs' opinion on some concrete aspects of these graduates, several results can be pointed out (see Graph 5.2). Thus, and as far as the adequacy of VT graduates' initial training to the current job requirements demanded by SMEs are concerned, SMEs in all sectors rate it above 50 from 0 to 100, where food and wood SMEs provide the best rate (58 each). In addition to this, SMEs rate the adaptability to work of the hired VT graduates as adequate, in the sense that no sector rates it below 55 in the scale from 0 to 100. Finally, the comparison of the newly contracted VT graduates to former workers of the company in the same type of jobs shows that, with the exceptions of the paper, chemical and electronic SMEs, the remaining sectors rate this comparability as below 50 on the 0 to 100 scale.









Data only referred to enterprises that have hired VT graduates in the last 3 years (1) Average from 100 (very satisfied) to 0 (very dissatisfied) Source: Ikei & ENSR partners, Leonardo Survey 2001





Data only referred to enterprises that have hired VT graduates in the last 3 years

(1): Average from 100 (very good) to 0 (very low)

(2): Average from 100 (very easy) to 0 (very difficult)

(3): Average from 100 (much better trained) to 0 (much worse trained)

Source: Ikei & ENSR partners, Leonardo Survey 2001

From a regional comparative perspective, SMEs in all the surveyed regions seem to have a positive degree of satisfaction with the recently hired VT graduates (see Graph 5.3). In this sense, the best opinion is given by the Austrian SMEs, whereas





the worst one corresponds to the French SMEs (72 and 60 grades, respectively, from 0 -very dissatisfied- to 100 -very satisfied-). Meanwhile, the Spanish, Dutch and Norwegian SMEs have a more intermediate opinion, ranging from 65 in the Spanish case to 67 and 68 in the Dutch and Norwegian cases.

Graph 5.3. SMEs' satisfaction with the recently contracted VT graduates, by surveyed regions (1)



Data only referred to enterprises that have hired VT graduates in the last 3 years (1) Average from 100 (very satisfied) to 0 (very dissatisfied) Source: Ikei & ENSR partners, Leonardo Survey 2001

In any case, this general positive attitude towards the hired VT graduates by the regional SMEs can be further refined if concrete aspects of these graduates are analysed (see Graph 5.4). Thus, and referring to the adequacy of VT graduates' initial training to actual job requirements, the Austrian SMEs seem to have the best opinion, whereas the French ones do have the worst ones, being the only ones not giving a 'pass' to their graduates.

Meanwhile, and as far as the SMEs' perception on the adaptability to work of the VT graduates is concerned, again Austrian and French SMEs have the two extreme positions (with respective grades of 66 and 54). Finally, and referring to the comparison that surveyed SMEs make of the newly contracted VT graduates in comparison to former workers of the company in the same type of jobs, the Spanish SMEs seem to have the best opinion on this issue (rating of 60). By way of contrast, the two regions where SMEs seem to have the lowest opinion on this issue correspond to the French and specially the Dutch ones, rating the new graduates 45 and 39, respectively.





Graph 5.4. Satisfaction of SMEs with recently hired VT graduates in specific aspects, by surveyed regions



Data only referred to enterprises that have hired VT graduates in the last 3 years

(1): Average from 100 (very good) to 0 (very low)

(2): Average from 100 (very easy) to 0 (very difficult)

(3): Average from 100 (much better trained) to 0 (much worse trained)

Source: Ikei & ENSR partners, Leonardo Survey 2001

5.3. NEED AND PROVISION OF COMPLEMENTARY TRAINING TO VT GRADUATES

The Leonardo Survey 2001 also provides some interesting information on the SMEs' perception on the need of complementary training that VT graduates require when entering the companies (see Graph 5.5). In this sense, SMEs suggest that VT graduates have a moderate need of complementary training. Thus, those SMEs that have hired VT graduates in the past 3 years rate their need of additional training as 59 on an scale from 0 (not at all) to 100 (very much). Meanwhile, those SMEs who have not hired any graduate rate their need as 61 on the same scale from 0 to 100. Enterprise size considerations do not show important differences amongst the different sizes, although those SMEs not hiring VT graduates suggest a higher need of complementary training than their hiring counterparts.









(1) Average from 100 (very much) to 0 (not at all). Source: Ikei & ENSR partners, Leonardo Survey 2001

Despite this moderate perception on the need for further training, a majority share of SMEs¹⁵ (53%) never provide specific formal training courses to the newly contracted VT graduates, whereas a 19% provides them on an occasional basis and a 28% on a regular basis (see Graph 5.6). As it might be expected, enterprise size considerations show a negative relationship between enterprise size and the percentage of enterprises that never provide training (ranging from 58% amongst the micro enterprises to 48% and 39% amongst the small and medium sized enterprises, respectively). By way of contrast, the percentage of SMEs involved in regular training activities increases with the size of enterprises.

¹⁵ Data only referred to SMEs hiring VT graduates





Graph 5.6. Percentage of SMEs that provide specific formal training courses to the newly contracted VT graduates, by enterprise size



(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Interestingly also, and referring to those SMEs that have hired VT graduates in the last 3 years and that provide also specific formal training courses to the newly contracted VT graduates, only a minority of them are able to provide this training in-house (see Graph 5.7). Thus, only a 35% and 20% of these SMEs have specific personnel/special training facilities for providing additional in-house training, respectively. From an enterprise size perspective, it is possible to identify a positive relationship between the size of the enterprises and the percentage of them who have got specific personnel/facilities for the provision in-house of training.

Graph 5.7. SMEs with specific personnel/special training facilities for providing additional in-house training, by enterprise size⁽¹⁾



(1) Data only referred to SMEs that have hired VT graduates in the last 3 years and that provide also specific formal training courses to the newly contracted VT graduates Source: Ikei & ENSR partners, Leonardo Survey 2001

Sector considerations provide some interesting results. Thus, it is possible to identify a wide perception amongst SMEs on the need of complementary training





amongst VT graduates when entering the company (see Graph 5.8). Referring to those SMEs that have hired VT graduates in the past three years, this need is felt as particularly relevant by the textile SMEs, well above the need felt in other sectors such as metal or electronics. Meanwhile, and with the only exception of the food and textile SMEs, in the remaining sector SMEs the need of complementary training is felt more deeply by those SMEs that have not hired any VT graduate in the past three years.





(1) Average from 100 (very much) to 0 (not at all). Source: Ikei & ENSR partners, Leonardo Survey 2001

Referring exclusively to those SMEs that have hired VT graduates in the past three years, sector considerations show that with the exception of paper, chemical and metal SMEs, in the remaining sectors the percentage of SMEs that never provide specific formal training courses to the newly contracted VT graduates surpass the percentage of those SMEs who do it (see Graph 5.9). Particularly relevant seems to be the textile case, in which up to 73% of SMEs never provide additional training and despite the fact that this sector was the one with the higher detected need of additional training.









(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Regional differences (see Graph 5.10) confirm that, consistently with previous results, French regional SMEs are the ones who suggest a higher need of complementary training, both by the SMEs hiring VT graduates as well as by those ones not hiring. Meanwhile, both the Austrian and Spanish SMEs seem to be the ones who suggest a lowest need of complementary training. With the only exception of the Dutch case, in all the remaining regions SMEs not hiring VT graduates suggest a higher need of complementary training in comparison to their hiring counterparts (in Norway, both collectives rate the need in the same scale).

Graph 5.10. Need of complementary training amongst VT graduates when entering the company⁽¹⁾, by surveyed regions



^{(1):} Average from 100 (very much) to 0 (not at all). Source: Ikei & ENSR partners, Leonardo Survey 2001





These regional variations can also be appreciated when analysing the percentage of SMEs that effectively provide formal training courses to the newly contracted VT graduates¹⁶ (see Graph 5.11). Thus, and consistently with previous results, French SMEs are the ones who devote more efforts to additional training, so 77% of them provide formal training (42% on a regular basis, 35 on an occasional basis). By way of contrast, only a minority share of the Norwegian SMEs do additional training for their recently hired VT graduates, so 84% of the regional SMEs do not provide any training. Meanwhile, Austrian and Spanish SMEs do provide less training than their French or Dutch counterparts, a result that is fully consistent with their lower perception on the need of complementary training amongst VT graduates when entering the company.

Graph 5.11 Percentage of SMEs that provide specific formal training courses to the newly contracted VT graduates, by surveyed regions



(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

5.4. IMPORTANCE OF ICTS IN THE CURRICULA OF VT GRADUATES

An additional aspect that surveyed SMEs have been requested to analyse relates to the importance of the so called Information and Communication Technologies (ICTs) as a content in the curricula of the VT graduates. For this question, posed to all enterprises irrespectively of the fact that they may have hired or not VT graduates in the past three years, several interesting results can be underlined (see Table 5.3).

¹⁶ Data only referred to SMEs hiring VT graduates





Thus, up to 68% of the surveyed SMEs that have hired VT graduates in the past three years suggest that ICTs are an important content in the curricula (17% argue to be a key training area and a 51% a training area as important as others). Meanwhile, this percentage of SMEs suggesting ICTs to be important is slightly smaller amongst those SMEs not having hired any VT graduate (62%), of which 18% label ICTs as a key training area and the remaining 44% as a training area as important as others.

Table 5.3. Importance attributed by SMEs to ICTs as a training area, by enterprise size

Importance of ICTs		hiring	VT grad	uates	SMEs not hiring VT gradu- ates			
	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total
SMEs' opinion on ICT								
 A key training area 	12	23	24	17	19	16	27	18
 A training area as important as others 	51	49	60	51	41	53	51	44
 An unimportant training area 	31	28	15	28	32	28	19	31
• DK/NA	6	1	2	4	8	3	4	7

All enterprises.

Source: Ikei & ENSR partners, Leonardo Survey 2001

From an enterprise size perspective, a positive relationship between size of enterprises and importance attributed to ICTs can be detected. Thus, and whereas up to 31% of the micro enterprises that have hired VT graduates in the last three years rate ICTs as an unimportant training area, this share goes down to 15% amongst the medium sized enterprises. A similar enterprise size pattern can also be appreciated amongst those SMEs that have not hired any VT graduate in the past three years (see Table 5.3). Finally, sector considerations show that ICTs are regarded as an important training area by a majority of SMEs in all sectors, although perhaps the paper and specially the electronic SMEs tend to have the strongest opinion on this.





6. SMEs' ASSESSMENT OF THE INITIAL VOCATIONAL TRAINING SYSTEM





6. SMES' ASSESSMENT OF THE INITIAL VOCATIONAL TRAINING SYSTEM

6.1. INTRODUCTION

If chapter 5 was interested in analysing the surveyed SMEs' assessment of the VT graduates, chapter 6 of this report is concerned with investigating the SMEs' assessment of their respective national systems of initial vocational training in general. For this purpose, section 6.2 provides a valuation of the degree to which the national initial vocational training systems answers the enterprises' needs, always from the SMEs' own perspective. Subsequently, this information is complemented with section 6.3, where some discussions are held on the type of training (polyvalent/specific) that SMEs prefer from the initial vocational training system.

6.2. VT SYSTEM RESPONSE TO SMEs' NEEDS

According to the available data, SMEs' general valuation of the degree to which the national initial vocational training system answers properly to their needs shows several interesting results (see Graph 6.1). To start with, SMEs provide a sufficient valuation of the existing system, rating it as 54 in an scale ranging from 0 (not at all answers) to 100 (very much answers). Interestingly enough, this perception is clearly poorer than the perception that SMEs have of the recently contracted VT graduates (see Table 5.1), 66 on a scale from 0 to 100. From an enterprise size perspective, both micro and small enterprises seem to rate it in the same grade (53 in both cases), whereas medium sized enterprises manifest a better opinion.





Graph 6.1. SMEs' general valuation of the degree to which the national initial vocational training system answers properly to their needs, by enterprise size ^{(1) (2)}



(1): Average from 100 (very much) to 0 (not at all)

(2): Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

Meanwhile, sector considerations (see Graph 6.1) show that all surveyed sectors show a sufficient valuation of the existing system, in the sense that no sector provides a rate below 50 in the scale ranging from 0 to 100. In any case, the existing differences amongst sectors are not very wide, so the two sectors with the best opinion are the textile and the electronic sectors (with respective ratings of 58 and 56, respectively).

From a regional perspective (see Graph 6.2), the available data confirms that this 'sufficient' perception is spread over the different surveyed regions, perhaps with the only exception of the Dutch region. Thus, SMEs in this region rate the existing initial vocational training system as a 43 grade in the previously suggested scale from 0 to 100. Meanwhile, Spanish and Norwegian SMEs have an equal perception of the suitability of the existing system (rating it as 54 in both cases), whereas the Austrian and French SMEs have the better opinion (with grades of 57 and 58, re-





spectively). In all the surveyed regions, SMEs have a better perception of the recently contracted VT graduates (see Table 5.1) than of the systems these graduates come from.

Graph 6.2. SMEs' general valuation of the degree to which the existing initial vocational training system answers properly to their needs, by surveyed regions^{(1) (2)}



(1): Average from 100 (very much) to 0 (not at all)(2): Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001

6.3. SMEs' PREFERENCE ON TYPE OF TRAINING

One of the most typical questions in relation to the educational system in general and the initial vocational training system in particular is referred to the convenience for the productive tissue to have polyvalent or highly specialised trained graduates. This question was posed to the surveyed SMEs, basically referring to the SMEs' preference for polyvalent or specialised training provided by the initial VT system to students.

According to the available results (see Table 6.1), surveyed SMEs prefer the initial VT system to provide polyvalent-trained students rather than specialised ones, where this preference is shown irrespectively of VT graduates hiring policies or enterprise size considerations. Notwithstanding this, two additional considerations can be made. Thus, and on the one hand, the preference for polyvalent-trained students seems to be more important amongst those SMEs that have hired VT





graduates in the last three years in comparison to those ones that have not. On the other hand, this preference for polyvalent-trained students is more present the larger the enterprises are, irrespectively of the fact that they may have hired or not VT graduates in the past three years. Sector considerations show that this preference for polyvalent-trained students is well spread amongst the majority of manufacturing sectors.

Table 6.1.SMEs' preference on type of training provided by the initial VT
system to students, by enterprise size

	SME	s hiring	VT gradu	ates	SMEs not hiring VT graduates				
	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total	
SMEs' preference on type of training									
 Polyvalent training 	52	57	58	54	48	54	52	49	
 Specific & specialised training 	45	37	34	41	42	37	36	41	
• DK/NA	3	6	8	4	10	9	12	10	

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

From a regional perspective (see Graph 6.3), the available data show that this preference for polyvalent-trained VT graduates is particularly felt amongst the French and Norwegian SMEs whereas, by way of contrast, the Spanish SMEs seem to slightly prefer specialised-trained graduates. In all these three cases, this preference does not depend on the SMEs' VT graduates hiring policies. Only the Dutch SMEs having not hired VT graduates in the past three years argue preponderantly for specialised-trained graduates.





Graph 6.3. SMEs' preference on type of training provided by the initial VT system to students, by surveyed regions



All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001





7. INITIATIVES INTENDED TO FOSTER EMPLOYABILITY AMONGST VOCATIONAL TRAINING GRADUATES





7. <u>INITIATIVES INTENDED TO FOSTER EMPLOYABILITY AMONGST VO-</u> CATIONAL TRAINING GRADUATES

7.1. INTRODUCTION

This chapter 7 is interested in analysing some of the most important existing initiatives in the surveyed countries/regions intended to facilitate and foster the transition from school-to-work amongst the initial VT graduates. In this sense, section 7.2 will try to identify some of these initiatives. Meanwhile, section 7.3 provides some first-hand information from surveyed SMEs on their participation in initiatives for improving the VT graduates' employability (i.e. apprenticeship of training practices schemes), as well as their valuation of these initiatives for ensuring the employability of these graduates.

7.2. IDENTIFIED NATIONAL CASE STUDIES INTENDED TO FOSTER EM-PLOYABILITY AMONGST VOCATIONAL TRAINING GRADUATES

7.2.1. The Austrian case study

In order to overcome the main deficit of school-based VT in Austria, a range of initiatives have been introduced into curricula during the last years to provide vocational training students not only with theoretical but also with practical experience. One of these measures is the project "JUNIOR" in which young persons have to found, run and afterwards liquidate a company. The project aims at fostering work practice and the understanding of business transactions as well as the development of key qualifications of young people. Thereby, JUNIOR answers to the needs and requirements of the Austrian economy in general, and SMEs in particular.

JUNIOR is a project of the registered association "JUNIOR Österreich" (JUNIOR Austria) which co-ordinates the project. The association is anchored into the "Volkswirtschaftliche Gesellschaft Österreich" (Economic Society of Austria), an educational institution of a network of non-profit organisations with national and international partners. The tasks of the Economic Society of Austria with respect to the JUNIOR project are several, such as the co-ordination of the project, public





relations and fund raising activities, the organisation of the national JUNIOR contest, the controlling of the JUNIOR enterprises, etc.

The project is supported by the Austrian Federal Economic Chamber and the Federal Ministry for Education, Science and Culture. Other partners of JUNIOR constitute the Federal Ministry for Economic Affairs and Labour, "Junge Wirtschaft Österreich" (Junior Chamber Austria) and the "Industriellenvereinigung" (Federation of Austrian Industry), as well as many other institutions (including finance institutes and Austrian companies) that mainly back the project financially.

The initiative was introduced into Austrian school curricula in 1995/96¹⁷. In the school year 2000/01 72 projects were run throughout Austria, rising up to 100 (in which 1,300 students were involved) in 2001/02 and the tendency is still increasing.

The JUNIOR enterprise might be established as a compulsory or a voluntary subject in the school curricula. The initiative is targeted at students attending a secondary technical and vocational school or college¹⁸, a pre-vocational course or general upper secondary education at the age of 15 to 19 years.

Through the JUNIOR initiative, students are able to get to know all the entrepreneurial tasks and fulfil them in their company, such as company set-up and management, organisation of work processes, sourcing of resources, production, marketing and sales, finance or accounting issues. JUNIOR enterprises produce real commodities and handle real money, so students have to bear real economic risk.

From an evaluation perspective, the Federal Ministry for Economic Affairs and Labour suggests that JUNIOR enterprises contribute to making education more practice oriented and more entrepreneurial, which is something seen to be especially important in order to foster the annual number of company formations. Not sur-

¹⁷ JUNIOR projects also exist outside of schools. They may be operated by public institutions such as the employment service in order to support and train unemployed youth. Furthermore, there exist JUNIOR enterprises that are attached to an industrial company. In this case, the commodities are rarely produced by the JUNIOR enterprises themselves. Both kinds are not considered in this report.

¹⁸ with the exemption of those for occupations in the business sector (i. e. schools for business and colleges for business administration qualifying students for white-collar commercial and administrative jobs)





prisingly, about two thirds of all participants in JUNIOR enterprises state that they can imagine becoming an entrepreneur in the future.

Each year, the Economic Society of Austria undertakes a survey amongst participating students and teachers in order to gain information about students' progress and to find weaknesses of the projects that might be improved. The "Evaluation 2000"¹⁹ comes to the result that the project leaves a favourable impression at students and teachers and is, therefore, in general recommended to potential future participants. 80 % of the participating students indicate to dispose of a better understanding of economic connections than before the project, and three quarters of them say to be more interested in the economy than before managing the JUNIOR enterprise. According to the students and their teachers it is the capacity of teamwork, autonomy, social competence and creativity that are the key qualifications that have been considerably ameliorated during the JUNIOR-year.

However, next to all the strengths mentioned above the JUNIOR projects also shows some weak points. First of all, the time period of one year for all the tasks that have to be fulfilled seems to be rather short. Secondly, the concept of "learn-ing-by-doing" seems to lack a kind of appropriateness as students who are – in most cases – by no means familiar with economic thinking have to fulfil all entre-preneurial tasks on their own. This problem is particularly serious if the supporting teacher neither has any experience in these fields.

In any case, and looking into the future, the executive director of JUNIOR Austria aims at doubling the number of annual JUNIOR enterprises within the next years and votes for making the project a compulsory part of school curricula. Moreover, the project is planned to be extended to the target group of 19 to 27 year old students, basically aimed at university students. On the other hand, it is planned to create a network of former participants in the project (basically through "Ex-Alumni-Club"). Finally, improvements as far as support of teachers is concerned would be recommendable.

¹⁹ According to the project management of JUNIOR, there is not much difference amongst the various evaluation reports of the different years.





7.2.2. The Dutch case study

The Dutch case study is paying attention to the activities developed by the 'Investeringsplan TechnoCircle Rijnmond', launched in 1999 by the 'Kennisinfrastructuur Mainport Rotterdam' (KMR) Foundation. The main objective of the KMR Foundation entails to promote a knowledge infrastructure by means of publicprivate close co-operation in order to upgrade know-how, expertise and training in Mainport Rotterdam, so the region's competitive edge can be increased and existing frictions in the labour market be reduced.

In this sense, tasks assumed by the KMR Foundation Bureau include:

- Brokerage and link provider between other actors in private enterprise, municipal bodies, training institutions and research think-tanks
- **G** Stimulation of co-operation between public and private organisations
- Drafting plans and progress-flow reporting
- **Rendering information and co-ordination**
- Acquisition of funds and investment funding

Meanwhile, TechnoCircle's core activities include:

- Acceleration of knowledge circulation, diffusion and application of know-how, between educational sectors as well as vis-à-vis actors in private enterprise
- Joint investment and utilisation of high-grade expertise, training facilities and training equipment
- Upgrading of matching of vocational training to the needs of actors in private enterprise, as well as tackling bottlenecks transpiring in the regional labour market and, finally,
- **D** Promotion of and rendering information about the technology.

TechnoCircle focus their activities on the four main sectors existing in the Rotterdam Mainport, that is to say, maritime shipping, haulage-cum-logistics, the processing-cum-petrochemical industry and the metal-processing-cum-electrotechnical industry.





Rather than adopting an extensive formal structure, the KMR Foundation maintains a management board and a (limited) programme bureau. Subsequently, the KMR Foundation approaches third parties for all activities outside this core structure, thereby creating a network of enterprises, training institutions and research thinktanks fostering the creation and the dispersal of know-how development and technological innovation. The existing plans require an envisaged investment of 60 million Euro approximately.

7.2.3. The French case study

The French case study is paying attention to the so-called FCIL ("Formation complémentaire d'initiative locale"), that is to say, Local Initiative of Complementary Training in English.

The FCIL system was set up in 1985 by the French Ministry of Education. Each FCIL is defined by an agreement between the initial vocational training centre(s) and a firm (or several ones). These agreements establish, amongst other things, the organisation and the schedule of the training, the contributions of both parts and, finally, the prospects of employment after the training.

Each FCIL is established accordingly to the specific local workforce needs identified by local firms, although the decision to create a FCIL is taken under the request of an initial vocational training centre. Therefore, the main aim of a FCIL is to provide young initial vocational training graduates (CAP, BEP, Bac Pro and Bac Techno) with a complementary and specialised training which is not contemplated in the general national level-defined curriculum. As the specialisation needed are defined by firms or professional organisations, young people having this complementary training benefit from superior chances to get a job.

The training period of a FCIL is comprised between 3 and 9 months. The training is carried out partly in the vocational training centre and partly in a firm (2/3 of the whole duration at the maximum). At the end of his/her FCIL training, the young trainee receives a certificate, where a description of the acquired competencies is included. Additionally, a specific mention is added to his/her initial diploma.





FCIL agreements are generally concluded for one year. They can be renewed or stopped easily, depending on the needs of the professionals, so the system is very flexible in its response. As far as funding considerations are concerned, it is basically the Regions who support the FCILs, although enterprises may also contribute to the costs derived from several side aspects such as accommodation or advertising expenses, depending on the agreement with the vocational training centre.

In 1999, 615 FCILs have been carried out, involving 7,460 young graduates. In most cases, students get a job immediately after their FCIL training. Currently, the FCIL system is positively regarded by enterprises. Perhaps, the main weak point in relation to FCILs is related to their promotion and advertising amongst students. In the next future, the FCIL system is not meant to be subject to major changes.

7.2.4. The Norwegian case study

The Norwegian case study is referred to the so-called 'partnership agreements', basically intended to foster the existing communication between vocational training schools and local enterprises (single or in network), so well skilled workers can be supplied to the labour market. In this sense, partnership agreements can be defined as a mutual obliged co-operation between enterprises and schools. These agreements have been particularly fostered by the Confederation of Norwegian Business and Industry (NHO).

Partnership is a framework for different pedagogical work that the enterprise and the school agree about. The commitments are defined in detail in a mutually signed contract. Usually, co-operation takes place both in the school and in the enterprise. The agreements can include a number of different activities, according to the enterprises' interests, such as the use of enterprise representatives as lecturers, teacher internships in enterprises, participation of teachers in enterprises' interests in enterprises, practical experiences of students in enterprises, etc. The time period for each partnership degree varies according to needs.

Clearly enough, there are two main parts in every partnership agreement, that is to say, the school on the one hand and the enterprises (represented by a training office) on the other hand. This training office is responsible for the administration





and organisation for the concrete arrangements, where these training offices are very often established as a network for enterprises within the same business sector. The offices receive economical support from the county as well as from the participating enterprise members.

Two examples of concrete partnership agreements are provided next:

- The partnership between Opplæringskontoret for Verkstedsindustrien i Telemark (the Training office for mechanical industry in Telemark) (OVT) and Osebakken videregående skole, represented by the department of mechanical subjects has been established in year 2001. The term of the partnership is three years. The training office includes both large and small enterprises. 7 out of 9 enterprises in the partnership agreements are SMEs. The office is especially important for the smallest enterprises that normally have fewer resources for administrating partnership contracts. The partners will evaluate the partnership when the contract period is run out. If the co-operation is successful it will be continued.
- The partnership agreement between Hitra Upper Secondary School and the enterprise Astor AS has been established in 1996. The contract is signed for three years. Astor AS produces fish products, mainly of salmon. The enterprise employs 120 persons. The agreement implies students' visits and student training in the enterprise. Employees with specific competence can teach in the school and the students can carry through practical projects in the enterprise. On the other hand, the school can offer language expertise or market-ing-projects by the students.

7.2.5. The Spanish case study

The Spanish case study is paying attention to the Machine-Tool Institute (Instituto de Máquina Herramienta, IMH). This Institute, located in Elgoibar (Gipuzkoa, Basque Country), is a training centre aimed to render services both to industry and the community through the provision of training for new professionals demanded by producers and users of machine-tool equipment.

The initial stages of the IMH date back to 1986. At that time, a team of professionals in the field of education, more specifically the managing team of the VT Centre





of Elgoibar, led a project supported by Basque enterprises and institutions, which eventually turned into the Foundation for Technical Training on Machine-Tool. This institution officially inaugurated the IMH in 1991. Since its foundation, the IMH has specialised on specific technical training for the metal and mechanics industry, focusing on those areas related with machine-tool.

As a result of its success and although originally it was geographically aimed at covering the Basque Country, other Spanish regions have gradually become interested in its range of services and training programmes. Additionally, the IMH has welcomed South East Asian technicians and has also launched co-operation programmes with Latin American countries. Nowadays, the IMH is regarded as a reference centre at Spanish level in issues related with machine-tool industry, which even led to its taking part in the definition of curricula for some degrees in the fields of mechanisation and mechanics.

The main strengths of the IMH can be summarised in the following points:

- Strong and fluent relationships with enterprises, especially local ones. These relationships provide first hand knowledge of enterprises' demands.
- A very active Job Section that allows the IMH to have real knowledge of the professional profile demanded by businesses.
- IMH policy is intended to the fostering of continuous learning to keep the qualifications in line with new technologies and thus providing enterprises with qualified and innovating staff.
- Continuous improvement is a permanent goal of the IMH, as a result of which it became the first VT Centre to be awarded with the ISO 9001 quality certificate for the whole of its activities (Initial VT, Continuous VT and Alternate Business Engineering), in July 1998.
- It is the first centre of the Basque Public VT Network to become a Technological Innovation Centre, in November 1998.
- The R&D Department employs up to 15% of the IMH staff and it is aimed at keeping up with both all the latest technological developments in the machinetool field and the qualifications demanded by the enterprises. This also implies innovating traditional teaching methods.





The IMH, in addition of being a training centre (both as far as initial and continuous vocational training are concerned), renders support services (quality, consulting, design, etc) to SMEs in the machine-tool sector.

The supply of Initial VT degrees offered by the IMH includes the following ones:

Table 7.1. Supply of existing initial VT degrees provided by the IMH

Intermediate Degree Training Levels	Upper Degree Training Levels
Mechanising, (M)	 Development of Mechanical Projects (DMP) Mechanised Production, (MP) Maintenance of Industrial Equipment, (MIE)
Courses IN411	

Source: IMH

Initial training provided by the IMH is designed to foster students' intellectual development in order to provide them with required qualification not only to enter the labour market but also to contribute to the technological and economical development of the region.

All initial VT degrees include compulsory Professional Training Units (PTU) at the latest stages of the respective degrees –this is legally required-, which involve following internship programmes at enterprises for the sake of complementing the theoretical skills acquired at the IMH. PTU last for three months and they are supervised by both a tutor from the IMH and a mentor at the enterprise. As a result of the PTU, approximately 20% of the training given to students takes place in enterprises and consequently, they are provided with valuable professional experience, which, in turn, increases their employability. The IMH offers the possibility to complete the PTU abroad when grants are available.

With regards to employability, the IMH offers a Job Section for all those students who have completed their degrees with the aim to ease their transition on to the labour market. In any case, the available empirical information shows that the IMH has got a high employability record for their students. Thus, and for both school years 1999 and 2000, up to 97% of their respective graduates were employed six months after completing their degrees, whereas in 1998 school year the employ-ability record reached a 100%. Moreover, and according to recent data regarding working conditions of former IMH graduates, generally speaking their income are high, most of the graduates have been made permanent or partners (in the case of





co-operatives) and, finally, they are very positively valued at their respective enterprises.

7.3. SMEs' PARTICIPATION IN INITIATIVES FOR IMPROVING THE VT GRADUATES' EMPLOYABILITY

The Leonardo Survey 2001 also provides some interesting information on the percentage of SMEs that participate in apprenticeship or training practices (alternance) schemes, one of the most important tools for fostering the 'employability' of the VT graduates (see Table 7.2). According to the available data, around 62% of the surveyed European SMEs that have hired VT graduates in the past three years do participate in this type of initiatives, whereas this percentage is lower amongst those SMEs that have not hired any VT graduate (34%).

In this sense, and as far as the first SME group is concerned, up to 42% of them participate in these initiatives on a regular basis, whereas only 20% do it on an occasional basis. Meanwhile, up to 38% of these SMEs suggest they never participate. Concerning the second SME group (that is to say, those SMEs who have not hired VT graduates in the past three years), around 17% of these SMEs argue that they participate in apprenticeship/alternance schemes on a regular and on an occasional basis. A majority 66% suggests they never do it.

	SMEs	hiring	VT gradua	SMEs not hiring VT graduates				
	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total
SMEs participating								
 Yes, usually 	35	48	54	42	16	17	36	17
 Only occasionally 	21	17	22	20	14	27	24	17
No, never	43	35	23	38	70	55	40	66
• Dk/Na					1	1		1

Table 7.2 Percentage of SMEs participating in apprenticeship or training practices (alternance) schemes, by enterprise size

All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

Enterprise size considerations show that, irrespectively of the SMEs' VT graduates hiring practices, both SME groups show a positive relationship between enterprise size and participation in this type of activities, specially as far as regular participation is concerned.





Meanwhile, sector considerations show several results (see Graph 7.2). Thus, SMEs that have hired VT graduates in the past three years tend to participate more in apprenticeship or training practices in comparison to those SMEs that have not hired any VT graduate, irrespectively of sector considerations. On the other hand, and with the only exception of the textile and paper sectors, more than half of SMEs that have hired VT graduates in the remaining sectors do participate in these practices, where it is worth mentioning the chemical, food and wood SMEs.





All enterprises

Data desegregated by surveyed regions shows important differences (see Graph 7.2). Thus, and referring to those SMEs that have hired VT graduates in the last 3 years, the two regions where SMEs participate more correspond to the Dutch and Norwegian ones (86% and 65%, respectively), whereas in the remaining regions the participation never goes down of 50%. Meanwhile, and as far as the SMEs not hiring VT graduates are concerned, the differences seem to be more extensive, where the two extremes are given by the French and the Norwegian ones (48% and 20%, respectively).

Source: Ikei & ENSR partners, Leonardo Survey 2001









All enterprises

Source: Ikei & ENSR partners, Leonardo Survey 2001

The enterprise's perception on these apprenticeship/training practices schemes for ensuring the employability and adequacy of the qualification of VT graduates seems to be positive (see Graph 7.3). Thus, those SMEs that have hired VT graduates in the past three years rate these initiatives as 67 on a scale from 0 (very bad) to 100 (very good), whereas this rating is very similar (68) amongst those SMEs that have not hired any VT graduate.





Graph 7.3. Rating of apprenticeship or training practices (alternance) schemes for ensuring the employability and adequacy of the qualification of VT graduates⁽¹⁾, by enterprise size



⁽¹⁾ Average data from 100 (very good) to 0 (very bad)

Source: Ikei & ENSR partners, Leonardo Survey 2001

From an enterprise size perspective, it is worth mentioning two opposite situations. Thus, the available data suggests a positive relationship between size and the rating provided by those SMEs who have hired VT graduates. A negative relationship can be appreciated in this rating amongst those SMEs who have not hired VT graduates.

Sector considerations (see Graph 7.3) show that apprenticeship and training practices are positively valued by SMEs belonging to all sectors, irrespectively of the fact that SMEs may hire or not VT graduates. In this sense, it is worth mentioning that with the exception of paper, chemical and metal SMEs, in the remaining sectors SMEs that have not hired any VT graduate in the past three years have a better opinion on apprenticeship than those SMEs that have hired. Chemical, paper, food and electronic SMEs seem to rate these practices higher than the remaining manufacturing sectors.

All enterprises





Regional considerations (see Graph 7.4) show that the Spanish SMEs seem to have the best opinion on the suitability of these initiatives for assuring the employability of VT graduates, whereas the more critical opinions (although still positive) can be found amongst the French SMEs. All SMEs in all surveyed regions rate this practices above 50, irrespectively of the fact they may or not have hired VT graduates in the past three years.

Graph 7.4. Rating of apprenticeship or training practices (alternance) schemes for ensuring the employability and adequacy of the qualification of VT graduates⁽¹⁾, by surveyed regions



(1) Average data from 100 (very good) to 0 (very bad)
 All enterprises
 Source: Ikei & ENSR partners, Leonardo Survey 2001

To end with this section, the Leonardo Survey 2001 also provides some relevant information on the percentage of SMEs that participate in any other type of initiative or programme intended to improve the VT graduates' employability (see Graph 7.5). In this sense, up to 31% of the surveyed SMEs suggest participating in this type of initiatives, where the existing differences by enterprise size can not be labelled as important. This participation varies very much amongst the different surveyed regions, in the sense that up to 52% of the Norwegian SMEs argue to participate in these initiatives, this percentage is much lower amongst the French and specially the Spanish enterprises (23% and 8%, respectively).




Graph 7.5. Percentage of SMEs participating in any other type of initiative or programme intended to improve the employability of VT graduates and the quality and adequacy of their training⁽¹⁾, by enterprise size



(1) Data only referred to enterprises that have hired VT graduates in the last 3 years Source: Ikei & ENSR partners, Leonardo Survey 2001





8. CONCLUSIONS FROM THE RESEARCH





8. <u>CONCLUSIONS FROM THE RESEARCH</u>

8.1. CONCLUSIONS FROM THE LITERATURE SURVEY

- The issue of school-to-work transition has gained increasing importance in the political and social debate in the European countries over the past 20 years, due basically to the difficulties found by young people to enter the labour market. In this sense, the essential characteristic of any new labour-market entrant is his/her lack of experience on the labour market.
- 2. There are a number of theories trying to explain what are the main factors underpinning the process of school-to-work transition. Examples of these theories include the human capital theory²⁰, the job search theory²¹, the filter theory²², the job competition theory²³ or the job-matching theory²⁴. These theories, based on the general assumptions of perfect competition, are currently challenged by other more comprehensive theories that try to integrate social, cultural and economic factors.
- 3. Thus, and according to these more comprehensive theories²⁵, labour markets can be described as complex mechanisms where a large number of operators act individually and collectively in a given historical, economic and social context, resulting in a particular societal configuration. In this framework, the social and economic organisation of the labour market defines the production of qualifications and the renewal process of labour, affecting therefore the way in which young people are integrated in the labour market.
- The transition from education to working life amongst vocational training students in the European countries shows several common factors in all countries. These common factors can be summarised in several points. Firstly, in all the

 $^{^{20}}$ For instance see Becker, G (1993), 'Human capital. A theoretical and empirical analysis (with special reference to education)', 3rd ed., University of Chicago Press, Chicago and London.

²¹ For instance see Mortensen D (1986), 'Job search and labour market analysis', in Ashenfeiter, O. and Layard, R. (eds), Handbook of labor economics, Vol. 11, Elsevier Science Publisher.

 ²² For instance see Arrow, KJ (1973), 'Higher education as a filter', Journal of Public Economics, 2.
 ²³ For instance see Thurow, L (1975), 'Generating Inequality', Macmillan, London.

 $^{^{\}rm 24}$ For instance see Jovanovic, B (1979), 'Job matching and the theory of turnover', Journal of Political Economy, 87.

²⁵ See for instance Marsden, D (1986), The end of economic man? Custom and competition in labour markets, Wheatsheaf Books Ltd, Brighton.





European countries young people suffer from a greater risk of unemployment in the early years of experience. Secondly, juniors²⁶ are at greater risk of unemployment than experienced workers, although at less risk of long-term unemployment. Thirdly, early work experience in the course of the vocational training has an enhancing effect on the integration possibilities of students. Fourthly, juniors are more often offered with long-term jobs, although in recent years the proportions of juniors and seniors hired on a fixed-term contract are close to each other. Fifthly, a significant share of employers adjust the volume of employment in their enterprises by offering part-time contracts. Finally, the transition from education to working life is directly dependent on the level of education and attained diploma.

- 5. The existing education and initial vocational training systems vary widely from one country to other as a result of the different social, economic and political considerations existing in the different countries. This institutional format of each national initial vocational system has a major impact on the process of transition of young people into the labour market. Thus, influencing factors include the relative importance of the initial vocational training in the general education system, the nature of the knowledge dispensed or the proximity of the training contents to the enterprises' needs.
- 6. 58 % of pupils enrolled in upper secondary education are in the vocational stream in the EU. Most Member States are close to this average (Sweden, Finland, France, Denmark, United Kingdom, Belgium and Luxembourg), a few countries show greater weight on vocational training (The Netherlands, Germany, Italy and Austria), and general education predominates in Ireland, Portugal, Spain and Greece. In those Member States where general education predominates, vocational training tends to take place within the school. Meanwhile, training in the school environment broadly predominates in Belgium, France, Italy, Luxembourg, the Netherlands, Finland and Sweden, although alternance training under a contract of employment may also cover part of the training provision. Finally, alternance accounts for a very substantial proportion in Denmark, Germany and Austria.
- 7. Initial vocational training can be defined as any form of training (including technical and vocational teaching, apprenticeship and vocationally oriented

²⁶ Juniors are defined as young people who have emerged from training and whose age is close to the typical age at which the diploma they hold is normally obtained.





education) that contributes to the achievement of a vocational qualification. This qualification has to be recognised by the competent authorities in the Member State in which it is obtained.

8.2. CONCLUSIONS FROM THE LEONARDO SURVEY 2001

- 8. On average, and according to the Leonardo Survey 2001, one out of three SMEs have hired VT graduates in the last three years. A positive relationship between enterprise size and percentage of SMEs hiring VT graduates can be appreciated. Food, electronic and metal SMEs are the sectors with a higher demand of VT graduates. Austrian SMEs are the more active in hiring VT graduates, clearly in contrast with the Dutch ones.
- 9. Two thirds of the surveyed European SMEs that have hired initial vocational training (VT) graduates in the past three years suggest that the availability of a VT degree is a necessary condition for fulfilling certain jobs in the enterprise. This percentage is lower (one/third) when referring to those SMEs that have not hired VT graduates. This 'indispensability' is generally more perceived the larger the SMEs are. Food and wood, as well as Dutch and Norwegian SMEs, suggest the highest 'indispensability' of VT graduates.
- 10. VT graduates are usually hired for the production/quality area. Larger SMEs hire graduates for a broader scope of areas. No important differences by sectors or regions can be detected.
- 11. SMEs use predominantly three main channels for contracting VT graduates, this is, direct contacts with training centres, advertising in newspapers and personal contacts. The smaller enterprises make use of a wider scope of ways. Important differences in the most preferred ways can be found by sectors and regions. Thus, and referring exclusively to the most common regional method, the Austrian SMEs seem to rely particularly on newspaper advertising, whereas the Spanish SMEs are the ones that trust more on personal contacts. Meanwhile, French and Norwegian SMEs are particularly confident on the possibilities derived from direct contacts with the training centres, whereas Dutch SMEs rely particularly on training and apprenticeship periods in the company.
- 12. The largest share of surveyed SMEs offer initially temporary contracts to their hired VT graduates, specially the medium enterprises. This result applies to all





sectors (exception of wood) and the Dutch, Norwegian and Spanish SMEs, whereas the opposite is true in the Austrian SMEs. French SMEs have a more balanced hiring policy. In any case, the surveyed SMEs show a low labour turnover, irrespectively of enterprise size, sector and regional considerations. Thus, VT graduates predominantly stay in the enterprises for long to become subsequently contracted on a permanent basis

Table 8.1. Employability of VT graduates: strong and weak points identified by the European SMEs

	Strong Points:
>	VT graduates are regarded as indispensable by the large percentage of SMEs that have hired VT graduates in the past three years
	Lasting working relationships with hired VT graduates, due to the low existing labour turnover
>	Positive expectations regarding hiring of VT graduates in the future.
>	Good level of satisfaction with the recently hired VT graduates, especially as far as their adaptability to work is concerned.
>	ICT skills are regarded as important, where the VT graduates' ICT skills are positively valued.
>	High participation rate of the European SMEs in apprenticeship or training practice schemes. Positive valuation of these activities for ensuring the employability and ade- quacy of the qualification of the VT graduates.
Weak Points:	
>	A significant share of SMEs (1 out of 3) identify difficulties for hiring VT graduates, where the majority suggest that these difficulties are increasing in the last three years specially in certain specialities.
	Female vocational training graduates have important difficulties for being offered a job, especially in certain sectors and countries.
	The decision making capacity/pro-active attitude of the graduates is poorly valued by the \ensuremath{SMEs}
>	According to the SMEs' opinion, the new VT graduates are not significantly better than former workers of the company in the same type of jobs.

- Sufficient valuation of the existing vocational training system in general by SMEs.
- 13. Personal virtues of the graduates and their availability of work-place practice are the most valued aspects by SMEs, irrespectively of enterprise size, sector, activity/inactivity in hiring VT graduates or regional considerations





- 14. One out of three SMEs that have hired VT graduates in the last three years have experienced difficulties in enrolling them. The small, chemical and metal SMEs, as well as the Spanish, French and Dutch SMEs, particularly feel these difficulties. Lack of students of the specialities needed is the main difficulty for SMEs to hire VT graduates, especially for the smallest enterprises²⁷. All sectors and regions also identify this problem, although the Spanish and the electronic SMEs seem to be also particularly affected by the competition from large enterprises.
- 15. Three out of four SMEs suggest increasing difficulties in enrolling VT graduates, especially of certain specialities²⁸. This situation is particularly felt by the larger SMEs, by the Dutch, Spanish and French SMEs and by the food, textile, electronic and metal SMEs.
- 16. Surveyed SMEs hire preferably men in comparison to women irrespectively of the size of enterprises or the regions. Meanwhile, and with the exception of textile and paper-printing activities, in the remaining sectors SMEs prefer men for fulfilling their vacancies for VT graduates.
- 17. Lack of need to contract people of that skills level is the main reason suggested by the majority of SMEs that have not hired any VT graduate in the past three years, irrespectively of size, regional or sector considerations. Up to a 16% of SMEs argue also their inability to find VT graduates well suited to enterprises' needs as the main reason. Norwegian SMEs seem to prefer more to contract personnel without VT degrees than their European counterparts.
- 18. Only a minority 5% of SMEs having hired VT graduates in the past three years suggest they do not expect to need VT graduates in the future, whereas this percentage goes up to 32% amongst those SMEs that have not hired any graduate in the past three years. From an enterprise size perspective, and on the one hand, there is a positive relationship between enterprise size and the percentage of SMEs suggesting to need graduates with higher qualification levels in the future. On the other hand, a negative relationship can be appreciated between enterprise size and the percentage of SMEs the other hand, a negative relationship can be appreciated between enterprise size and the percentage of SMEs who suggest not to need any graduate in the future.

 $^{^{\}rm 27}\,$ Data only referred to SMEs hiring VT graduates in the past three years and that have experienced difficulties when hiring VT graduates.

²⁸ Data only referred to SMEs hiring VT graduates in the past three years and that have experienced difficulties when hiring VT graduates.





- 19. Surveyed SMEs seem to be satisfied with their recently hired VT graduates irrespectively of sector or regional considerations (rate of 66 from 0 –very dissatisfied- to 100 –very satisfied-). This positive perception is slightly better the larger the SMEs are. Austrian SMEs have the best opinion, whereas the worst one corresponds to the French SMEs. Meanwhile, the surveyed SMEs rate as moderate the adequacy of VT graduates' initial training to the current job requirements demanded (rate of 55 from 0 –very low- to 100 –very good-, although this perception is better the larger the SMEs are. Food and wood SMEs, together with the Austrian SMEs, provide the best rate.
- 20. Concerning the VT graduates' skills in concrete domains, and with the only exception of the decision making capacity/pro-active attitude of the graduates, the remaining domains are positively valued by SMEs. In this sense, the most valued domains include teamwork/communication abilities, theoretical knowledge and ICTs command. A positive relationship can be found between enterprise size and satisfaction degree in all domains, being the only exception to this the teamwork/communication abilities. SMEs rate as good the adaptability to work of the hired VT graduates (60 on an scale from 0 –very difficult- to 100 –very easy-, where this perception is better the larger the SMEs are. Austrian SMEs have the best opinion on this issue.
- 21. SMEs rate the newly contracted VT graduates in comparison to former workers of the company in the same type of jobs as sufficient (grade of 50 in an scale from 0 –much worse trained- to 100 –much better trained-), although this perception is better the larger the SMEs are. Sector considerations show that, with the exceptions of the paper, chemical and electronic SMEs, the remaining sectors rate this comparability as insufficient. Spanish SMEs seem to have the best opinion on this issue, whereas the worst corresponds to the French and specially the Dutch ones.
- 22. SMEs suggest that VT graduates have an important need of complementary training, irrespectively of the fact that SMEs have hired or not VT graduates in the past three years. No strong differences can be appreciated by enterprise size. Textile and French regional SMEs suggest the higher need of complementary training, whereas the opposite is true for the Austrian and Spanish SMEs.
- 23. In any case, and despite this perception on the need for further training, a majority share of SMEs (53%) never provide specific formal training courses to





the newly contracted VT graduates, whereas a 19% provides them on an occasional basis and a 28% on a regular basis. Enterprise size considerations show a negative relationship between enterprise size and the percentage of enterprises that never provide training. By way of contrast, the percentage of SMEs involved in regular training activities increases with the size of enterprises. Sector considerations show that with the exception of paper, chemical and metal SMEs, in the remaining sectors the percentage of SMEs that never provide specific formal training courses to the newly contracted VT graduates surpass the percentage of those SMEs who do it. French SMEs are the ones who devote more efforts to additional training, where the opposite is true for the Norwegian ones.

- 24. Two thirds of the surveyed SMEs suggest that ICTs are an important content in the curricula, where this result is shared by SMEs hiring/not hiring VT graduates. All sectors and regional SMEs share this importance. From an enterprise size perspective, a positive relationship between size of enterprises and importance attributed to ICTs can be appreciated.
- 25. SMEs that have hired VT graduates in the past three years show a sufficient valuation of the existing vocational training system, rating it as 54 in an scale ranging from 0 to 100. Medium sized enterprises manifest a better opinion than their smaller counterparts. No important differences can be appreciated by sectors, whereas this 'sufficient' perception is spread over the different surveyed regions, perhaps with the only negative exception of the Dutch region.
- 26. Surveyed SMEs prefer the initial VT system to provide polyvalent-trained students rather than specialised ones, where this preference is shown irrespectively of enterprise size considerations, sectors or SMEs' activity/inactivity in hiring VT graduates. Only Spanish SMEs seem to slightly prefer specialisedtrained graduates. In any case, the preference for polyvalent-trained students is more present the larger the enterprises are, irrespectively of the fact that they may have hired or not VT graduates in the past three years.
- 27. Around 62% of the surveyed European SMEs that have hired VT graduates in the past three years do participate in apprenticeship or training practice schemes, whereas this percentage is lower amongst those SMEs that have not hired any VT graduate (34%). There is a positive relationship between enterprise size and participation in this type of activities. Important differences in participation can be appreciated by sectors and regions.





28. SMEs positively value these apprenticeship/training practices schemes for ensuring the employability and adequacy of the qualification of VT graduates, irrespectively of size or sector considerations²⁹. The Spanish SMEs seem to have the best opinion on these initiatives for assuring the employability of VT graduates.

8.3. SUGGESTED POLICY ACTIONS FOR FACILITATING VT GRADUATES' ACCESS TO WORK

- 29. Generally speaking, it is possible to identify an increasing emphasis on the need to bring the national vocational training systems closer to the enterprises' real needs. In this sense, nearly all the surveyed countries have taken a number of recent new initiatives in order to either reinforce the communication between enterprises and the vocational educational system (both through formal or informal mechanisms) or to promote the employability of young people (i.e. through the introduction of compulsory practices in enterprises and the routes from vocational training education towards university studies.
- 30. Perhaps with some exceptions (i.e. Austria), in most countries there is still a social perception by which the 'best students' are directed towards a degree course not linked to vocational contents. Therefore, there is still room for public action in order to improve the existing social image of vocational training amongst the general population in general and the students in particular.
- 31. Having in mind the rapid economic and productive changes that enterprises in general and SMEs in particular are confronted with, it is important that the different vocational training systems might become as flexible as possible in order to allow for quicker responses to changed market conditions. For this purpose, most of the surveyed experts suggest that the most relevant geo-graphical environment for encouraging and fostering partnerships between initial vocational training centres, SMEs and public authorities is the local milieu. In addition to this, if qualifications stipulated by national bodies are of a more universal nature, training programmes have to be implemented at a re-

²⁹ Data referred to all enterprises.





gional/local level in order to both better match the requirements of enterprises and to anticipate changes more rapidly.

- 32. Generally speaking, there are a number of important challenges that the different vocational training systems have to respond to in the coming years. In this sense, one of the most important ones is referred to the currently existing labour shortages that are being detected in a number of manufacturing sectors. For this purpose, it is of key importance to increase the number of initial vocational training students. Several routes can be suggested in this sense. On the one hand, increase the percentage of students that decide to follow VT studies, especially in those countries where this percentage is lower than the EU average (i.e. Spain). On the other hand, it is regarded as essential to increase the number of women that opt for following VT studies, especially as far as manufacturing-related studies are concerned. Promotional activities in these two fields are therefore welcome.
- 33. Looking at the future, innovations in the initial vocational training domain will have to be based on a number of issues such as: i) flexibility and mobility of employees in the labour market; ii) changing demand of employers; iii) new competencies and skills in addition to the technical ones, and specially as far as commercial and communication skills are concerned; iv) new insights into the educational domain such as 'learning-to-learn', 'life-long-learning' or 'career-focused training instead of training for one profession only'.