

A stylized illustration of a tree where the trunk and branches are dark purple. The leaves are green. Instead of natural foliage, the branches are filled with numerous colorful icons representing various digital and technological concepts. These include: a laptop, a red bird, a lightbulb, an envelope, a megaphone, a globe, musical notes, a person icon, a house, a document, a Wi-Fi symbol, a camera, a hand holding a heart, a mobile phone, a tower, gears, a padlock, a RSS feed, a wrench, a film camera, a folder, a globe, a mail icon, another musical note, another globe, and another gear. The overall theme is the integration of technology and communication into everyday life.

01. Comparative Analysis of European upper secondary schools and alternating training systems



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List of Contents

1. Introduction	10
2. Executive summary	11
3. Overview of the alternating training at European Countries	15
3.1 Identification and Definition of the 4 typologies of alternating training.....	14
3.2 Overview of alternating training at European level.....	24
3.3 Participation in alternating training programmes across Europe.....	35
3.4 Identification and Comparative Analysis of the alternating training system in the European countries.....	42
4. Analysis of national upper secondary schools and alternating training systems.....	63
4.1. Analysis of national educational systems	63
4.1.1 Greece.....	63
4.1.2 Italy.....	74
4.1.3. Spain.....	87
4.2. Overview of national evaluation model	93
4.2.1 Greece.....	93
4.2.2. Italy.....	94
4.2.3 Spain.....	95
4.3. Practices adopted by the school system	97
4.3.1 Greece	97
4.3.2. Italy.....	97
4.3.3. Spain.....	99
4.4. Spread of ECVET in the upper secondary technical and vocational education system ..	100
4.4.1. Greece	100
4.4.2. Italy.....	102

4.4.3. Spain.....	107
4.5. Relation among upper secondary schools system and relevant stakeholders	109
4.5.1. Greece	109
4.5.2. Italy.....	113
4.5.3. Spain.....	118
5. Data Analysis.....	119
5.1 Applied Methodology for Data Analysis.....	119
5.2 Analysis of the key indicators.....	120
5.3. Results.....	130
6. Summary and Conclusions	138
6.1 Overview of the state-of-art of upper secondary vocational education and alternating training systems in Greece, Italy and Spain.....	138
6.2 Recommendations.....	145
7. References.....	150
Web pages	155
Relevant national legislation.....	156
ANNEX -GLOSSARY	161

LIST OF ABBREVIATIONS

AT Austria	ILO International Labour Organisation
BE Belgium	ISCED International Standard Classification of Education
BG Bulgaria	IT Italy
CEDEFOP European Centre for the Development of Vocational Training	LT Lithuania
CY Cyprus	LU Luxembourg
CZ Czech Republic	LV Latvia
DE Germany	MT Malta
DK Denmark	NL Netherlands
EE Estonia	OECD Organisation for Economic Cooperation and Development
EL Greece	PL Poland
ES Spain	PT Portugal
EU European Union	RO Romania
FI Finland	SE Sweden
FR France	SI Slovenia
HU Hungary	SK Slovakia
IE Ireland	UK United Kingdom



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List of figures and tables

Figures

1. Organization of initial education and training system in Greece
2. The 4 typologies of alternating training
3. Basic differences between Work-based VET and School-based VET
4. Organization of initial education and training system in Greece
5. Organisation of education and training system in Spain
6. Vocational education and training in the framework of the Greek education system
7. Organization of initial education and training system in Italy
8. VET in Spanish Educational system
9. DESCI's approach and underlying objectives
10. DESCI's generic scheme of skills

Tables

1. Generic template for upper secondary schools and alternating training systems at national level
2. Enrolment of students in VET in European countries
3. Apprenticeships and Alternance schemes in EU countries
4. Identification of existing Apprenticeship-type schemes in the EU-27 Member States (European Commission, 2012)
5. IVET-students as % of all upper secondary students Entreprises providing training
6. Entreprises providing training
7. Female IVET students
8. Young VET graduates in further education and training
9. Enterprises with supportive training practices
10. Employment rate for IVET graduates
11. Workers with skills matched to their duties
12. Early leaves from education and training
13. Unemployment rate for 20-34 year-olds
14. Medium/high-qualified employment in 2020
15. IVET work-based students
16. Older adults in lifelong learning
17. Low-educated adults in lifelong learning
18. Unemployed adults in lifelong learning
19. Employees participating in on-the-job training
20. Average number of foreign languages learned in IVET
21. Employment rate for IVET graduates (20-34 year old)

- 22. Employment premium for IVET graduates
- 23. 30-34 year old with tertiary VET attainment
- 24. Innovative enterprises with supportive training practices
- 25. NEET rate for 18-24 year-old
- 26. Unemployment rate for 20-34 year-old

1. Introduction

DESCI project aims to improve the capacity of secondary school to prepare students, intercepting the needs of the labor market, and encourage the development of **a European working methodology in secondary schools** to ensure equal quality standards, at European level, in the management of the alternating training. DESCi is focused on the improvement of **European methodological standards of alternating training** in secondary technical and professional School system, through the development, at European level, of a kit of methodological tools for teachers, students and tutors, focused in TIC sector, which will be modular, simple and easy to use.

The alternating training approach and its implementation at a European level is considered of particular importance since it could be one of the most effective instruments to combat early school leaving and to promote the employment of young people, as it aims to:

- help to **decrease the mismatch** between education and labor market
- **promote a structural link** between educational institutions, labor market and civil society
- **correlate the educational offer** to the cultural, social and economic development of the territory
- **widen the range of learning contexts**, transforming businesses in places of training and investment in human capital

Towards this aim it is important to define first the national upper secondary schools and alternating training systems of the partner countries and through their comparative analysis to highlight their similarities and differences. The exploitation of the comparative analysis will facilitate the **exchange of valuable information** among the participants and enable us to **work on a common ground** and **design improvements that will fit into the national system of each country** in order to design a European working methodology in secondary schools that will ensure equal quality standards, at European level, in the management of the alternating training. The findings from the comparative analysis will then provide the necessary information for the delivery of the intellectual outputs 02. 03. 04 (Tool kit and guidelines for alternating training systems) and pave the way for the construction of appropriate and applicable at a national and European level toolkits.

2. Executive summary

The national education systems of the EE member countries have incorporated legal acts and guidelines, addressing alternating training in upper secondary technical and vocational education system, in the reforms of the education system that have occurred over the years. However, at European level, the situation appears to be inhomogeneous for the state of implementation of the directives and for the methodologies applied. Therefore, focusing on alternating training, **DESCI will act in terms of methodological implementation and tool development at European level** to guarantee adequate and similar standards in all member countries (equality of opportunity for all European citizens).

The aim of this intellectual output is to systematize a common working framework on alternating training in upper secondary technical and vocational education system of partner countries and in the European area (reference: ISCED 3 systems). The comparative study will be realized through the analysis of (a) the national regulations, (b) the specific characteristics of the different national school systems, (c) the specific characteristics of the different national evaluation models and (d) the analysis of the differences, similarities, strengths and weaknesses of the different national systems. The provided methodological guidelines will be the base to create a common model for the management of curricular experiences of alternating training and will ensure an effective internal communication among the partnership by sharing common terminology and building on common ground to inform and support the delivery of intellectual outputs (02, 03, 04) (Tool kit and guidelines for alternating training systems).

2.1 Objectives of the Comparative analysis

This Intellectual Output aims to systematize a common working framework on alternating training in upper secondary technical and vocational education system of partner countries in order to create a common model for the management of curricular experiences of alternating training. The goal is to create **a systematized knowledge of the contexts** in which we will work and develop concrete outputs that represent a synthesis of what our community needs, in order to carry out **a state-of-the-art ‘common space’ (tools and teaching methods)** that will address the needs of students in terms of skill development that will fit to the requirements of the labor market.

The analysis of national upper secondary schools and alternating training systems involves analysis of national systems (with a special focus on Italian, Greek and Spanish systems) with reference to:

- a. **national regulatory framework**, ongoing reforms and policy developments at national level, ministerial/national guidelines, comparative analysis with European guidelines;
- b. **overview on evaluation model** adopted at national level;
- c. **practices** adopted by the school system, best practices implemented, territorial experimentations;
- d. **spread of the European Credit system for Vocational Education & Training (ECVET)** in the upper secondary technical and vocational education system; and
- e. **relation among upper secondary schools system and relevant stakeholders** (business system, labor market, research organizations).

The Comparative analysis of the national systems will focus on the **identification of strengths and weaknesses, similarities and differences** among the national systems, enabling us to provide methodological guidelines that will be the base to **create a common model** for the management of curricular experiences of alternating training (02, 03, 04 –‘Tool kit and guidelines for alternating training systems’). In addition there will be implemented a glossary of terms related to European alternating training systems (see Annex). This way an effective internal communication among the partnership will be ensured by sharing common terminology and building on common ground through the identification of common elements through the findings of the Comparative analysis of the national systems.

2.2 Applied Methodology

The comparative analysis of national upper secondary schools and alternating training systems will act as a hub to enable the development of methodological guidelines that will inform and feed the design and development of operational tools that will be relevant to DESCI’S main objectives with reference to the development of both basic and professional skills. Towards this aim, partners (CONSIGLIO NAZIONALE DELLE RICERCHE, POLIBIENESTAR RESEARCH INSTITUTE - UNIVERSITAT DE VALENCIA, ASSOKNOWLEDGE SERVIZI SRL) contributed to this effort by providing essential input in a pro-forma template (see section 2.3) in order to meet the requirements of the comparative analysis among the national education

systems and to ensure a common basis for the identification of similarities and differences and strengths and weaknesses. In addition, the innovative aspects offered by DESCI focus on the adopted methodologies and tools of work, which collect the experience of projects already implemented by the project partners (Creat-it, BIOHEAD-CITIZENS (FP6), PAS-ETHICS&POLEMICS, SCICAFE 2.0, Play4Guidance) and apply to the specific domain of alternating training in secondary school.

The overall methodological approach applied in the comparative analysis was grounded on three key sources: (1) partners' inputs regarding the national regulatory framework, ongoing reforms and policy developments at national level, overview on evaluation model adopted at national level, practices adopted by the school system, spread of ECVET in the upper secondary technical and vocational education system and relation among upper secondary schools system and relevant stakeholders,(2) relative EU projects already implemented by the project partners (Creat-it, BIOHEAD-CITIZENS (FP6), PAS-ETHICS&POLEMICS, SCICAFE 2.0, Play4Guidance),and (3) drawing on existing collected data and in particular on the sources made available by Eurydice, European Commission and Etwenning portal.

2.3 Pro –forma template

A pro-forma template was designed by NKUA to request partners' contribution in the identification of (1) the national regulatory framework addressing the upper secondary technical and vocational education system and relevant ongoing reforms and policy developments at national level, (2) overview on evaluation model adopted at national level, (3) practices adopted by the school system, (4) spread of ECVET in the upper secondary technical and vocational education system, (5) relation among upper secondary schools system and relevant stakeholders and (6) relevant references. The analysis of the national educational framework includes 5 thematic sections and specific sub-topics that require elaboration in order to obtain an in-depth analysis.

Table 1. Generic template for upper secondary schools and alternating training systems at national level

Generic template for upper secondary schools and alternating training systems at national level	
1. National educational framework	Overview of the structure of the national educational system with main reference on upper secondary technical and vocational education

	system (reference: ISCED 3 systems)
National regulatory framework	
Education and training Directions (curriculum specifications)	
Ongoing reforms/policy developments/ ministerial/national guidelines/ Country-specific Recommendations (CSRs)	
Comparative analysis with European guidelines (identifying strengths and weaknesses, similarities and differences)	
2. Overview of the national evaluation model	Description of the evaluation model at national level, referring to the required criteria and process for a pupil's advancement to the next class/level.
3. Practices adopted by the school system, best practices implemented, territorial experimentations	
Skills aimed at: addressing mismatch between skills being developed and the real needs of the economy	Eg. organisational, entrepreneurial, project management technology/innovation-handling social, teamwork, foreign language and communication technical (ICT, safety and quality, sales, energy and environment), lifelong learning skills, etc
4. Spread of ECVET in the upper secondary technical and vocational education system	Description of the ECVET application in the structure of the upper secondary system at national level.
Accreditation and qualifications	

5. Relation among upper secondary schools system and relevant stakeholders (business system, labor market, research organizations).	E.g. Dual system, apprenticeships, ‘alternance’ schemes and work-based learning in VET
6. References	

3. Overview of the alternating training system in European Countries

In this section, we aim to describe the current state of application of alternating training system at European level on 25 member countries, by setting a common ground of reference with the identification and definition of the 4 typologies of alternating training, presenting an overview of the alternating training at European level and the relation among upper secondary schools system and relevant stakeholders, addressing specific DESCI key aspects such as participative methodologies, end-user involvement, and also inclusiveness of some good practices.

3.1 Identification and Definition of the 4 typologies of alternating training

The variety of definitions addressing alternating training poses a challenge for any comparative analysis at European level (CEDEFOP, 2008; European Commission, 2012,2013). Additionally, depending on the study some key terms addressing alternating training are used interchangeably. Furthermore, the relevant terminology is not used consistently across countries and there is great variation among such types of training and the way they are applied in each country. This fact creates confusion when making comparisons to the alternating training system among European countries.

In the present study the term ‘alternating training’ is used as an umbrella term, that incorporates all forms of education or training, combining periods in an educational institution or training centre and in the workplace. This broad term is further elaborated based on a 4-typology distinction: (1) **alternance scheme**, (2) **work-based learning** or **training at working place**, (3) **dual system** and (4) **apprenticeship**. The first two typologies involve students in general schools who usually hold a student rather an employee status whereas the last two typologies involve students in vocational secondary and professional schools who usually hold an employee status and remuneration. Therefore, although boundaries are usually blurred, there are some small but significant differences among these typologies, as they differ with regard to the aspect mentioned above (CEDEFOP, 2008; ICF, 2014).

- **Alternance scheme:** Education or training combining periods in an educational institution or training centre and in the workplace. The alternance scheme can take place on a weekly, monthly or yearly basis. Depending on the country and applicable status, participants may be contractually linked to the employer and/or receive a remuneration. Depending on the country and applicable status, participants may or may not be contractually linked to the employer and/or receive a remuneration. They may be considered to be students without having a specific apprentice status.

- **Work-based learning:** Acquisition of knowledge and skills through carrying out – and reflecting on – tasks in a vocational context, either at the workplace (such as alterance training) or in a VET institution. It involves programs for both secondary and post-secondary students which provide opportunities to achieve employment-related competencies in the workplace. Work-based learning is often undertaken in conjunction with classroom or related learning and may take the form of work placements, work experience, workplace mentoring, instruction in general workplace competencies and broad instruction in all aspects of industry. Generally, it may incorporate practical, hands-on training that may, however, not take place in an actual working environment, but rather in working place simulations in the premises of VET institutions/providers etc.;
- **Dual system:** It is called "dual" because it combines apprenticeships in a company and vocational education at a vocational school in one course. In the company, the apprentice receives practical training which is supplemented by theoretical instruction in the vocational school; ensuring this way a proper balance of theory and practice. The trainee is contractually linked to the employer and receives remuneration (wage or allowance).
- **Apprenticeship:** It involves systematic, long-term training alternating periods at the workplace and in an educational institution or training centre. The term ‘apprenticeship’ refers to programmes that systematically combine learning in a company with learning in a training centre but which are governed by apprenticeship (or employment) contracts with a clearly shared responsibility between the three parties (learner, school, company). The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The apprenticeship contract defines all elements of the relation between the learner and the employer (such as remuneration, duration, tasks); The employer assumes responsibility for providing the trainee with training leading to a specific occupation. After completing the programme, apprentices obtain a (nationally) recognized professional qualification.

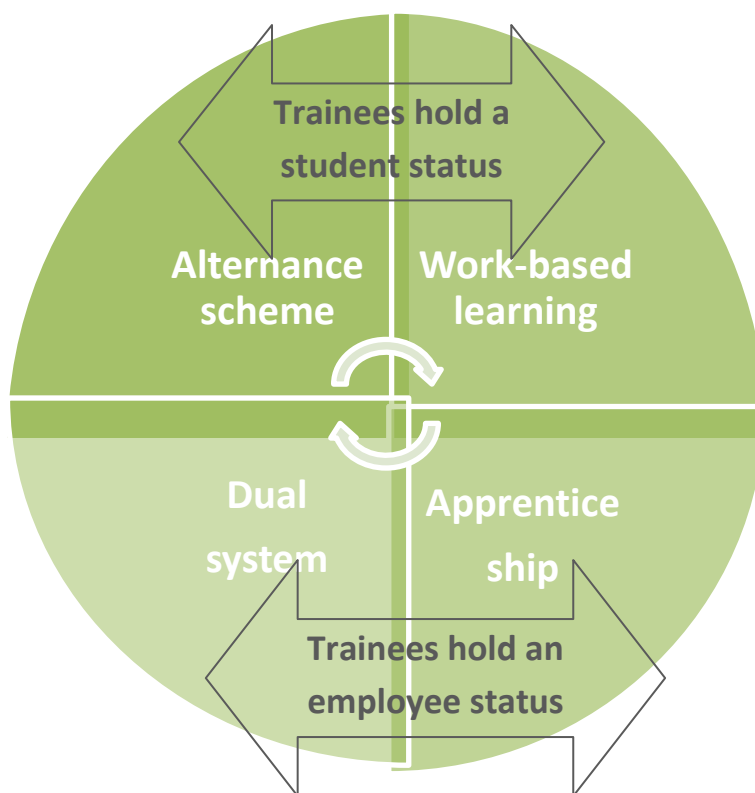


Fig. 2 The 4 typologies of alternating training

According to literature (ICF, 2014; ETUC, 2014; ETF, 2013; European Commission, 2013; CEDEFOP, 2013; European Commission, 2012) another differentiation among alternating training schemes is: a) **apprenticeships**, where learners have a clear apprentices or employment status underpinned by a contract but at the same time result in formal vocational qualifications with national recognition; b) **alternance schemes** that integrate in-company training periods into formal vocational education and training through other means than the apprenticeship; and c) **work-based learning** as a pedagogical approach promoting learning in the context of a company, based on real working tasks.

In this context, **apprenticeships** are in general consistently defined across the EU and there is a generally or formally recognized definition in most Member states. These definitions highlight some of the key distinctive features of apprenticeships such as: (1) they apply as a component of a formal education and training programme, typically at upper secondary level, (2) they provide systematic, long-term training by combining practical work-related training at the workplace (either company- or school-based) with theoretical education in an educational institution or training centre, (3) aspects of apprenticeships (e.g. occupational profile duration, skills and competences to be acquired, terms and conditions) are often explicitly defined in the apprenticeship contract, (4) apprentices typically obtain the status of an employee or a

contracted/employed apprentice, receiving remuneration, (5) apprentices who successfully complete the scheme are awarded accredited initial vocational education and training (IVET) qualifications or certificates which, in turn, qualify them to work in a specific occupation or group of occupations (6) apprenticeships are more tightly regulated and monitored than other forms of alternance-based education and (7) the involvement of social partners is extensive. However, the way apprenticeships are implemented in specific national and occupational contexts varies considerably.

In **alternance schemes** VET provision needs to be planned, as qualifications obtained through alternance schemes need to meet labour market demands and be transparent to employers. In this context, it is essential to provide clear and concrete regulations defining and standardizing the qualifications obtained through alternance schemes (through accreditation, occupational standards and profiles or training regulations) and monitoring the two learning venues (VET provider/school and the training company). The responsibilities described above fall under the remit of different organizations, depending on the degree of decentralization within a country. In those countries where several types of VET pathways and alternance schemes coexist, they are governed by different ministries and/or levels of governance. Intergovernmental agreements exist which regulate the coordination between different actors and the levels of governance.

According to literature, VET pathways leading to **work-based learning** differ across countries. The following three types of VET pathways can be distinguished:

- **School-based VET:** programmes are classified as school-based when the vast majority of training takes place in the school. Forms of ‘school-based’ VET are present in almost all countries, while the same does not apply for apprenticeships. Usually, in school-based VET programmes, practical training plays an important role and it takes place in school-based workshops. In addition, training in a real-company context is not a requirement.
- **Mixed VET:** these programmes are mostly school-based, but have a compulsory work-based element (in a company) which, however, is not equivalent to an apprenticeship (e.g. there is no contract between employer and trainee).
- **Work-based VET:** these are programmes where a significant share of takes place in the workplace, though parts of the training are also delivered in a school-based context (these programmes are also characterized as apprenticeships or as ‘dual system’).

In many countries, several of these VET pathways are offered in parallel.

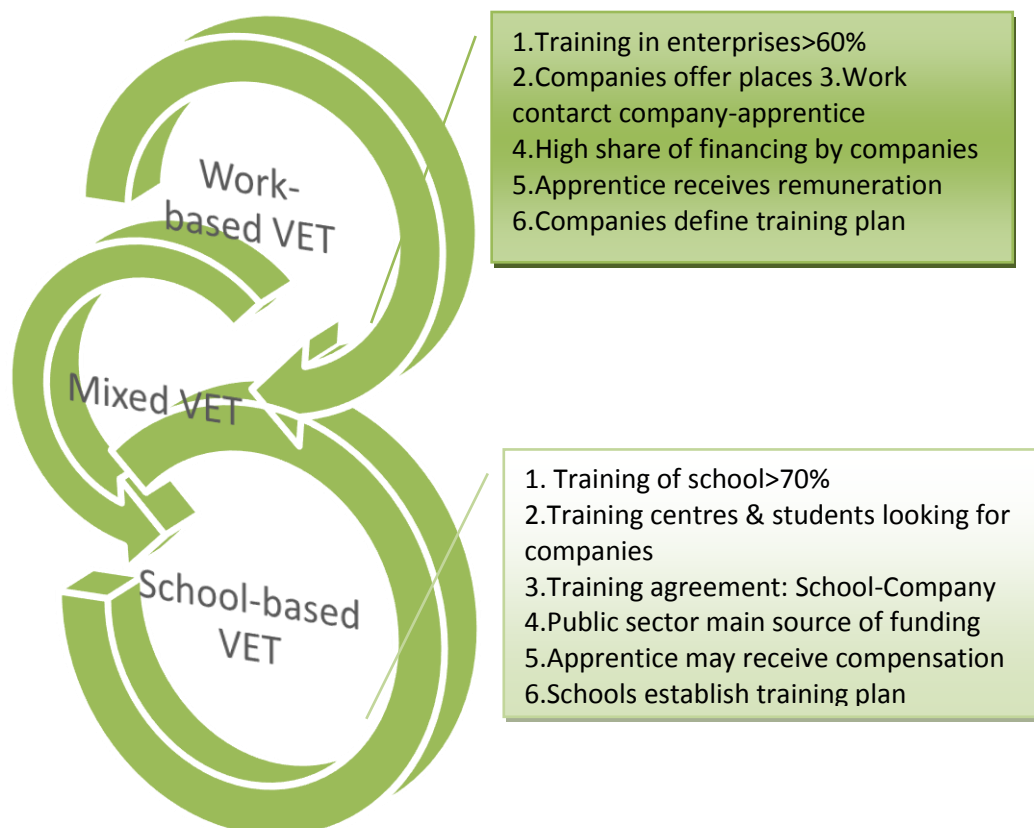


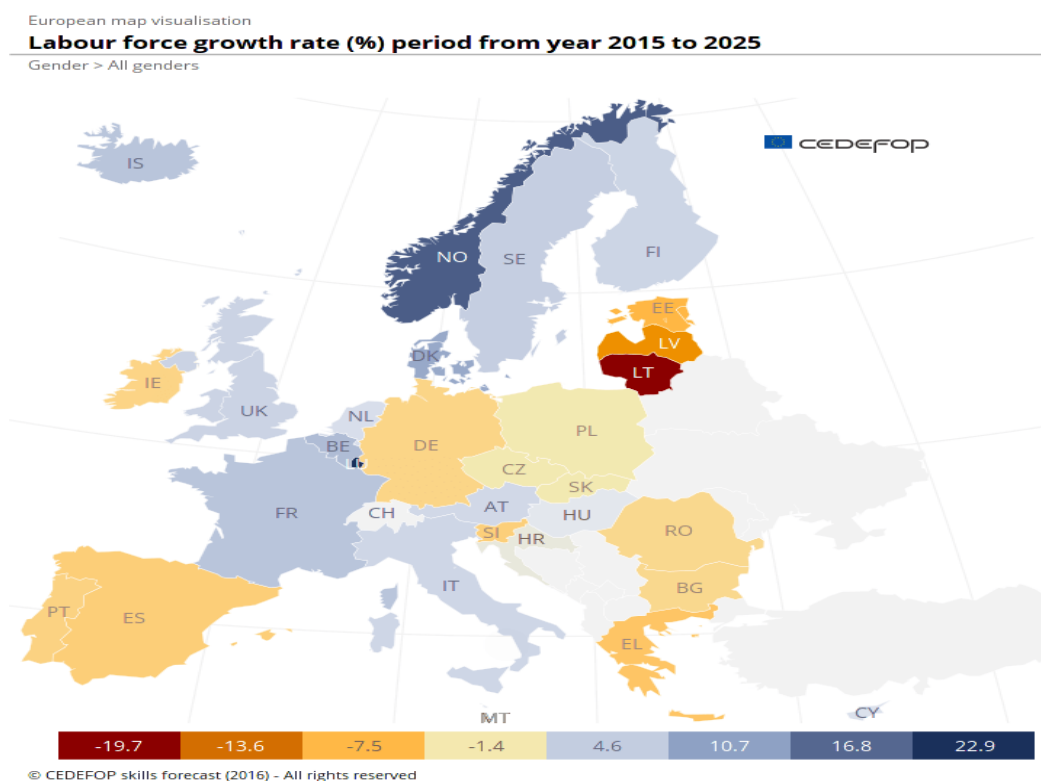
Fig.3 Basic differences between Work-based VET and School-based VET

The terminology used in this study is based on its scope and goals which is to allow for the analysis of a broad range of VET systems across Europe and make clear the distinction between fully-fledged alternating systems, based on the 4-typology (where available) and other schemes that are pertinent to some European countries.

Labour force – Employment growth rate/ Job opportunities EU +28

The following EU-28 overview of alternating training in upper secondary technical and vocational system (ISCED 3 systems) will be fulfill the aim of this intellectual output to systematize a common working framework. For that reason we have to introduce a quick comparative overview of EUs countries vocational and alternating education we should overview about labour force and employment growth rate in respective of job opportunities rate during the period from year 2015 to 2025.

In an updated analysis of 15+ European countries, the labour force represents people in the population, who are economically active, i.e. the labour force includes employed and disposable unemployed persons (actively seeking for jobs). In comparison with other European Countries, Greece and Spain have a negative rate of labour force growth (-13,6), while in Italy there is a positive rate of 4,6. Norway has the highest labour force growth (22,9).

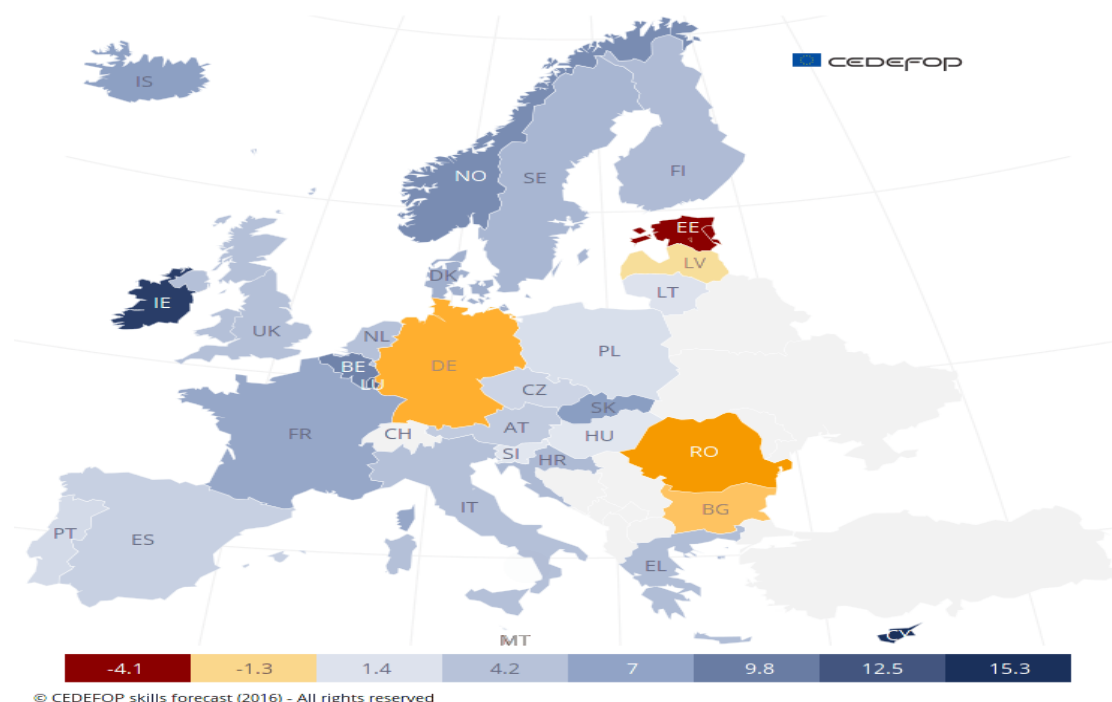


Employment refers to the number of people in work (headcount) or the number of occupied jobs in the economy. As employed is considered the one who worked at least one hour in reference period for financial or nonfinancial reward. Employment trends present the development of the employed persons in different sector, occupations and qualification. Greece, Italy and Spain a slightly positive employment growth rate from 4,2 to 7. Ireland and Cyprus have the highest employment growth rate, while in Denmark and Poland and Latvia there is negative rate at employment growth.

European map visualisation

Employment growth rate (%) period from year 2015 to 2025

Qualification > All qualifications

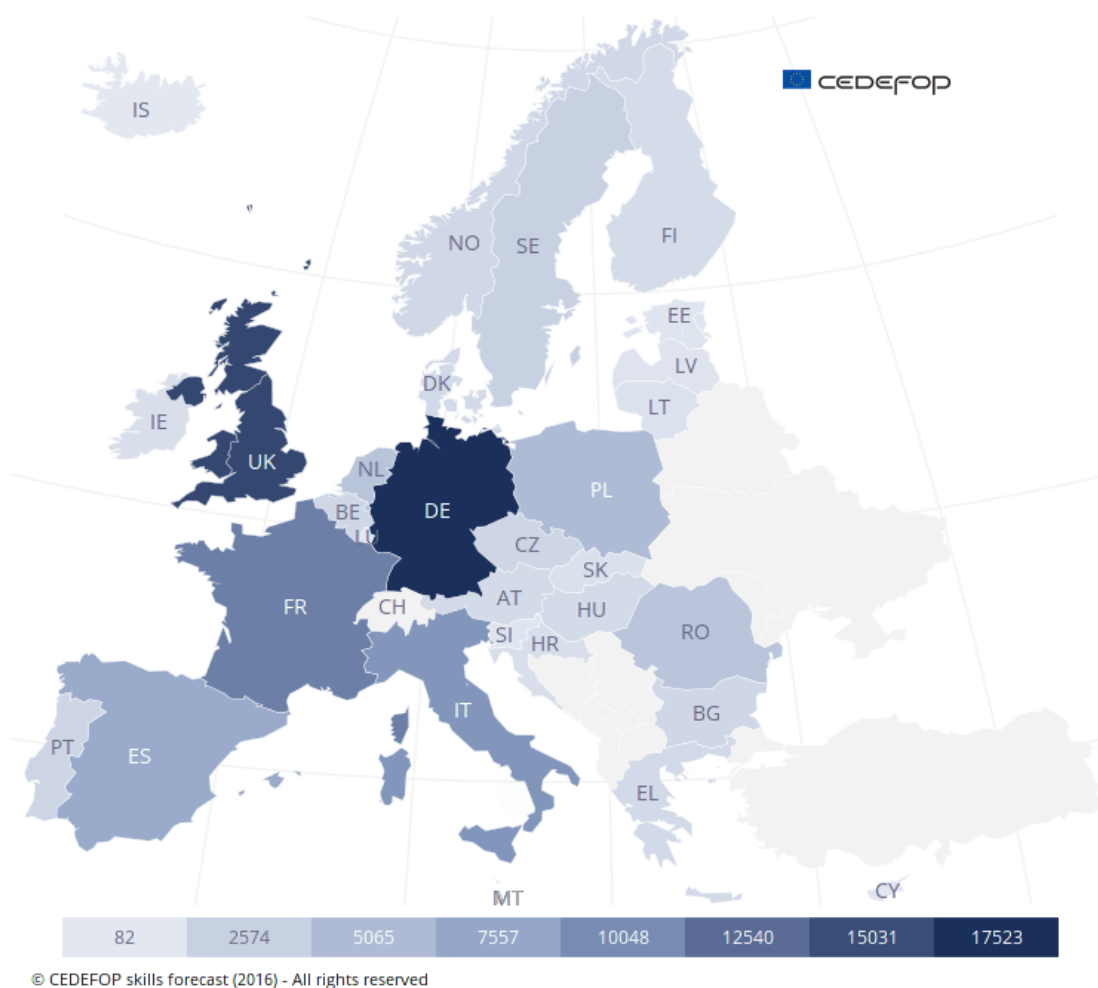


Job opportunities represent the sum of net employment change and replacement demand. The concept of replacement demand is based on the fact that some jobs become available due to people leaving work places for different reasons (retirement, migration etc.) These vacant positions need to be filled. In practice the replacement needs are much higher than the net change of employment (expansion demand). As the distribution of those leaving the labour forces is difficult to estimate on the yearly basis, the replacement needs for the period 2013 – 2025 are provided.

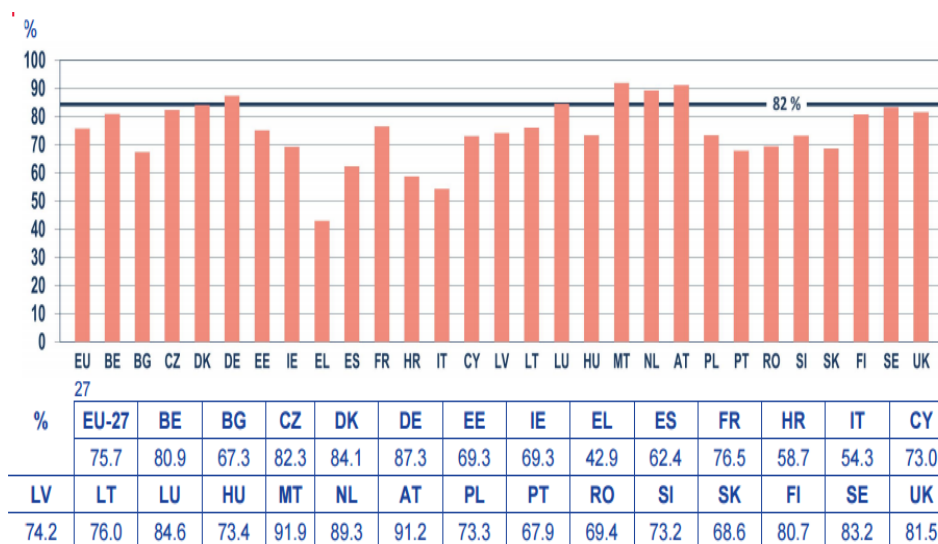
European map visualisation

Job Opportunities absolute numbers year 2015 - 2025

Qualification > All qualifications



Employment rates of graduates from upper secondary education and above, aged 20 – 34 who graduated more than three years prior to the reference year, ISCED 3-6, by country, 2012 (Table below).



Source: Eurostat – Labour Force Survey (data extracted 3 July 2013).

Note: The EU-27 average does not include Croatia.

Dual system, apprenticeships and work –based learning in VET

There are various models to provide and organize work-based learning. In the school-based programme model, training may be provided entirely in an educational institution or training centre; in this case, work-based learning is achieved through for instance "on-site labs, workshops, simulations or real business/industry project assignments which aim to create a 'real life' work environment" (European Commission 2012e, pp. 4-5). Alternatively, school-based programme can also include on-the-job training periods in companies, known as 'work placements'.

Other models are also provided in VET, combining practical training and hands-on experience at the work place and 'block-release' or 'off-the-job' period in the classroom at an education and training institution. Under these programmes, companies share the training provision with the VET school or the training centre. Such programmes are often described as 'alternance' schemes or apprenticeships.

The value of work-based learning – and notably of apprenticeships or dual training systems – in facilitating youth employment and increasing economic competitiveness is clearly recognized (European Commission 2012a, p. 5) and therefore there is still a need to enhance work experience opportunities in VET. The importance of further efforts to develop, increase and

improve the quality of work-based learning and apprenticeship schemes in VET are reflected in an increasing number of 2012 and 2013 CSRs.



Explanatory note

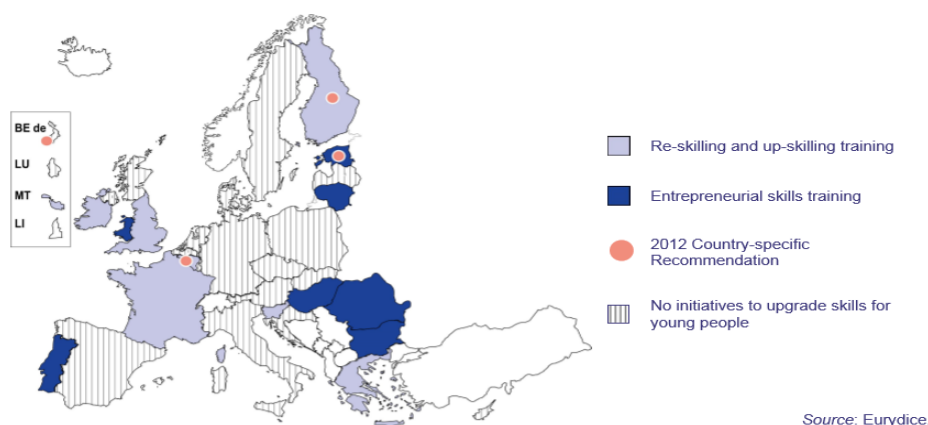
'Large-scale initiatives' refers to measures that are applied across the whole education system and which have been launched since 2011, or are in an advanced stage of development prior to implementation.

“Large-scale initiatives to support the provision of work experience opportunities in the EU-28 implemented since 2011 or in preparation”.

Labour market relevance of vocational education and training

Establishing strong links between education and workplace is crucial for employability. This is going to be achieved by improving and extending work experience for young people, in particular through work-based learning and apprenticeships.

Measures that have been taken by countries range from updating curricula to focus on learning-based outcomes, to including businesses and regional authorities in the planning and delivery of professional development for VET teachers. The industries have been also encouraged to develop a shared vision of their competence and training needs, and the creation of a database with professional competence profiles will help to take better account of the competence needs of the labour market through a reinforced automatic matching process.



“Large-scale initiatives to upgrade skills for young people in EU-28 implemented since 2011 or in preparation”.

In this framework it is important to adjust VET curricula with labour market by developing skills system by sector, reviewing VET standards and developing a system of accreditation of vocational training. Although national situations are different, enhancing young people's skills and thus raising the rate of employment has been a focus of all countries' policy initiatives since 2011. School-to-work transition is the area where most countries are recommended to take action or implement further measures. Overall, since 2011, EU countries have put in place a number of large-scale initiatives, confirming the urgent need to tackle youth unemployment through education and training (Euridice, 2015).

3.2 Overview of alternating training at European level

In this point, an overview of VET education of EU +28 countries is very useful to achieve a common framework of alternating training at European level. The following analysis is based on articles apprenticeships and work-based learning (WBL) are prepared by Cedefop's ReferNet network in 2014. The specific characteristics stressed in this overview are focused on DESCI's aim to systematize a common working framework on alternating training in Europe.

Firstly, in most of European national educational systems there is alternating training in both forms of dual system/apprenticeship and alternance scheme. All countries' reports (except Greece, where there is no report because of the recent changes on alternating training) refer to

apprenticeship-type schemes and structured work-based learning programmes that are implemented to each country (Cedefop; Apprenticeship-type schemes and structured work-based learning programmes – Country reports, 2014). In most of the countries, dual system/ apprenticeship is held in vocational and professional schools while “alternance scheme”/training at working place may appear in the general schools.

Country	Alternance Scheme/ General Information	Dual Systems/ Apprenticeship	Modulation	Level/ Qualifications
Austria	School-based training is regulated by an occupation-specific framework curriculum that is valid all over Austria. Schools themselves can autonomously adapt training courses to certain extent.	Dual apprenticeship: two places of learning: in a training company and at an occupation specific part-time vocational school (time ratio 80:20).	The apprentice is in a contractually regulated training relationship with his/her training company and is a student at a part-time vocational school at the same time.	Nationwide regulated, formal training pathway at the upper secondary level (ISCED 3B) which imparts a full qualification for a specific occupation.
Belgium	Work-based learning in education As part of compulsory schooling, part-time training has been available as of the third year of secondary education (age 15)	Apprenticeship in small and medium-size enterprises: 80% of training takes place within companies as part of an apprentice-employer agreement: the apprenticeship contract.	An apprenticeship requires a formal contract with an employer to be signed. A minimum of 50% of the training time takes place in the company.	All work-based learning allows the participant to obtain a diploma or a certificate awarded by the public authorities and all professional and training standards.

Bulgaria	Vocational Education and Training Act (VETA): Production practice in a real work environment.	There is no dual/apprenticeship system: Neither trainees, nor mentors, who are provided by the employers, receive remuneration for their work.	The VETA stipulates that the number of vocational training classes in the field of vocational training should be at least 40% of the total number of compulsory vocational preparation classes.	Net educational institutions for the preparation in professions from first to third vocational qualification levels (EQF levels 2 to 4).
Croatia	In Croatian Vocational Education and Training system there is an apprenticeship scheme and only in three-year vocational education and training program for crafts. Students have practical training in companies, but they do not have a status of an 'apprentice'.	Apprenticeship consists of a professional-theoretical part and practical training and exercises. The apprenticeship contract prescribes the obligation to pay monthly prizes (awards) to the student.	The student for the practical part must realize in the first year at least 560 hours, in the second year at least 630 hours, in the third year at least 640 hours of practical training and exercises in a craft workshop or legal entities.	Education for attainment of VET qualifications in crafts is implemented according to a vocational curriculum that consists of two parts - general education part and apprenticeship.

Cyprus	NMA (New Modern Apprenticeship) provides an alternative pathway for education, training and development for young people who withdraw from the formal education system and is geared towards meeting the needs of the labour market	Preparatory apprenticeship does not involve employment but constitutes an alternative form of education.	Participation to the NMA is not part of compulsory education and it is free of charge. Core apprenticeship is of three years duration and involves both training at school and practical training in enterprises	Apprenticeship qualifications will be included at EQF level 3 and ISCED 2C. The apprenticeship certificate allows access to several regulated occupations provided that all other requirements of the relevant legislation.
Czech Republic	Schools are exclusively responsible for education and training and curriculum shows a high proportion of theory in comparison with practical training. However, practical, work-based training and work placements are integrated into IVET curricula as a mandatory part.	There is no formal apprenticeship programme along the lines of the dual system in the Czech Republic, i.e. there is no programme that includes contract between the apprentice and the employer and there is no shared responsibility between employer and the school related to the training.	Practical training takes place in school workshops or other model environments and ideally also in real companies. Work placement is a part of practical education in the programmes with maturita examination (ISCED 3A).	The secondary education with vocational certificate (ISCED 3C), that prepares graduates primarily for the labour market, has been traditionally recognized as “apprenticeship” in the Czech Republic.

Denmark	<p>Basic Vocational Education and Training (egu), used by students with a practical approach to learning.</p> <p>Combined Vocational and General Upper Secondary Education, EUX-Programme (New Academic Preparation Programme) – a relatively new pathway, used by highly motivated students aiming at obtaining a double qualification.</p>	<p>In the ‘New Apprenticeship’ the student enters a training agreement with a company and during the first year must acquire the same as the students who have followed the basic programme at a college.</p>	<p>EGU is an alternating or sandwich-type training programme where practical training is combined with a subject-relevant school-based part in an overall 1½-3-year programme in which the school-based part lasts between 20 to 40 weeks.</p>	<p>In Denmark, apprenticeship curriculum leads to a formally recognized qualification and it is included in the national qualifications framework. The vast majority of the Danish VET schemes are placed at EQF-level 3 and 4 and few are placed at EQF-level 5.</p>
Estonia	<p>In school based study form the share of work practice is up to one half of the volume of curriculum. Half of the practical training takes place in enterprise.</p>	<p>Workplace based learning (WBL) is implemented in cooperation of the vocational institution, the student and the enterprise who conducts the work practice.</p>	<p>WBL takes place in VET institution and in enterprise whereas both contact-study and independent work by a pupil are in use to achieve the learning outcomes described in curricula.</p>	<p>There are no separate curricula for WBL. According to the legislation WBL as study form can be implemented at all levels (equal to EQF levels 2-5) of VET.</p>

Finland	Vocational upper secondary qualifications can be attained in an institutional setting, where work-based learning accounts for at least one sixth of the studies.	Traditional apprenticeship training, where on-the-job training normally accounts for approximately four fifths of the studies	Approximately 70-80% apprenticeship training takes place at the workplace. Training at the workplace is supplemented by theoretical studies.	All apprentices obtain their qualifications in the form of competence based qualifications.
France	Contrat d'apprentissage – Apprenticeship contract: Its objective is to enable young people aged 16 to 25 to follow a general education curriculum, both theoretical and practical.	Professionalization Contract: provide access to employment through the acquisition of a professional qualification (certificate, diploma, degree...) recognized by the State and/or a professional sector	Apprenticeship-type schemes: the contrat d'apprentissage and the contrat de professionnalisation, both contracts signed between an employer and an employee.	Apprenticeship gives access to qualifications and diplomas. The professional qualification certificates are created by joint national employment committees.
Germany	Vocational schools provide the theoretical knowledge and technical skills to support the training provided in the company.	The dual system forms the core element of vocational training and is usually of three years' duration	Enterprises enter into a contract with trainees, they bear the costs of the in-company training and pay the trainee remuneration.	Balance between school- and work-based training Average duration: 4 days a week in company, 1 day in VET school.

Hungary	Pursuant to the VET Act, the practical training component of any IVET programme provided within the formal school system can be organised either exclusively in a school workshop or at an enterprise or at both venues.	Apprenticeship training is not a separate pathway in Hungary. Rather, it is an optional way of organising the practical training part of an IVET programme at a company.	New 3-year-long so-called dual-type programmes were introduced in all SZI, combining VET and general education (in 2:1 ratio) and increasing the share of practical training, ideally provided at an enterprise.	Upper and post-secondary VET is offered in vocational schools and secondary vocational schools, which award ISCED 3 and ISCED 4 level vocational qualifications, respectively.
Iceland	Workplace learning (vinnustaðanám).	Workplace training (starfsþjálfun á vinnustað).	stating that generally more demands are made on purposeful, organised instruction and supervision.	VET takes place in upper secondary schools, at ISCED 3 level or at ISQF level 3 (EQF level 4).
Ireland	Apprenticeship training provides alternating on-the-job training in conjunction with off-the-job training in Education and Training Board (ETB) training centres and selected higher education institutions known as Institutes of Technology.	Traineeships involve employers and ETBs working together in a dual system of occupational training leading to a qualification. The training content and occupational standards are based on employer consultation.	Apprenticeship has seven phases: three off-the-job and four on-the-job. Phases 1, 3, 5 and 7 take place with the employer. Phases 2, 4 and 6 take place off-the-job. An apprenticeship normally lasts four years.	Certificate from Quality and Qualifications Ireland (QQI) (2); Advanced Certificates have been placed at level 6 on the NFQ (equivalent to level 5 on the EQF).

Italy	Traineeships are considered as ‘alternance training period’ allowing pupils and young people to experience work-place training.	Apprenticeship represents a specific form of alternance training leading directly to the labour market.	Apprenticeships are open-ended permanent labour contracts with a specific training purpose, and include both on-the-job and classroom training.	It enables complete compulsory education and to acquire a diploma after three or four years of training (ISCED level 3).
Latvia	‘Work-Based learning’ (WBL): student acquires practical skills and knowledge primarily in a real working environment of the company, and only a relatively small part of the time (in most cases less than half) is accompanied by mastering theoretical knowledge in an educational institution.	Apprenticeship in crafts is implemented through the apprenticeship programmes include both school- and work-based learning for apprentice. It also allows other interested persons to become a crafts apprentice	Latvian Chamber of Crafts has signed cooperation agreements with a number of vocational schools. Between the apprentice and master craftsmen/crafts company a bilateral contract is signed.	Apprenticeship in crafts is implemented separately from other education sectors, and is not included in formal education programme classification. It has no relevant ISCED level, not relevant NQF/EQF level.
Lithuania	The Law on VET which entered into force 1 January 2008 introduced Apprenticeship as a form for VET organization where training is implemented at the workplace.	Work-based structured programmes are rather irrelevant, because the minimum conditions for deeming a programme to be an apprenticeship.	Apprenticeships provide systematic, long-term and mainly company-based training by combining practical, work-related training at the workplace (more than 50%) .	Several individual apprenticeship-type schemes can be found on VET provider level.

Luxembourg	Guidance towards vocational training takes place at the end of 9th grade, upon recommendation of the class council and depending on the academic results and the interests of the learner.	Apprenticeship is an educational and training link between a trainer company, recognized as qualified for this purpose and an apprentice, who is taught a particular trade by the company.	Concomitant track, where practical knowledge is acquired in combination in an enterprise and in compulsory school attendance (one to three days a week); the mixed track offers, for some professions, theoretical and practical training.	After the successful completion of the training in the educational institution, the practical training is continued in an enterprise.
Malta	In Malta there exist, both within VET as well as Tertiary Education, other forms of work-based learning than apprenticeship where students are required to spend a period of learning time at work.	Apprenticeship consists of on-the-job and off-the-job training for a specific period of time: the Technical Apprenticeship Scheme (TAS) and the Extended Skills Training Scheme (ESTS)	Apprentices receive remuneration during their apprenticeship which is paid by the employer and supported by the government, and varies with increased years of study.	In the Apprentice Scheme, the apprentice obtains an occupational competence at technician level (level 4 according to the Malta Qualifications).
Netherlands	School-based track In the school-based pathway practical periods in companies make up at least 20% of study time up to a maximum of 59%.	School Based Pathway In the dual or apprenticeship pathway training takes place in companies at least 60% of study time	A contract with a firm is mandatory to enroll in the dual/apprenticeship track. There is no such obligation for the school-based track.	4 years: first two years consist of general subjects. In years three and four, pupils choose a learning pathway.

Norway	Upper secondary VET normally includes two years at school, followed by two years of formalised apprenticeship training and productive work in an enterprise or public institution (2+2 model).	Several ongoing initiatives on how to organise apprenticeship training. In the dual model .the pupils alternate between school-based learning and work-based learning as an apprentice in a company.	The first year (upper secondary level 1) consists of general education and introductory knowledge of the vocational area. During the second year (upper secondary level 2).	Norwegian apprenticeship scheme leads to a formally recognised qualification which is included in the national qualifications framework.
Poland	Alternance training in which VET takes place both at school and at employers. The head of school signs a contract with an employer for practical training at employers' premises. Students themselves do not receive remuneration.	Apprenticeship in which learners spend majority of time acquiring skills at employers' premises, (mainly craftsmen) after a contract is signed between an employer and an apprentice (juvenile worker 16-18 year olds)	Practical training must take not less than 50%) and 60% of time dedicated to vocational education. Learning at school takes place two days a week (theoretical knowledge: general and vocational)	Apprenticeship as an occupational training (ISCED 3). Apprenticeship as a training to perform a specific job (ISCED 2).
Portugal	Apprenticeship courses: alternance training schemes, privileging the insertion in the labour market but also enabling the pursuing of studies.	An apprenticeship contract is established between the training organization and the trainee.	The workplace training component cannot be lower than 360 hours and no higher than 720 hours.	Apprenticeship courses are a double certification training alternative, as they simultaneously confer an ISCED level 3.

Slovakia	No regular apprenticeship programmes in Slovakia. There are eight different contexts within which the term ‘apprentice’ is sometimes used.	‘Sort of apprenticeship’ cases : Students will be given some remuneration for their productive work, but not the wage	Details of practical training will be agreed between the school and the company, and details of the status of individual students by an apprenticeship contract.	Although the term ‘apprentice’ has no backing in legislation and all individuals in IVET are called students (žiaci), according to legislation.
Spain	Dual VET is considered as the group of actions and training initiatives which, are aimed at the professional qualification of individuals.	A new VET learning modality started, at the end of 2012, with the establishment of the bases for the implementation of a dual system through the apprenticeship and training contracts.	VET programme has a specific on-the-job training module, compulsory for the accreditation of a qualification. The length of this on-the-job training varies. It represents at least 20% of the total training hours.	Qualifications are all based on the occupational standards defined in the National Catalogue of Professional Qualifications (CNCP).
Sweden	Apprenticeship-type schemes and other structured work-based learning programmes are provided within the formal education system as well as within non-formal education	Apprenticeship education: ‘apprenticeship classes’ or ‘the apprenticeship pathway’.	There are two pathways to study a vocational programme at upper secondary school; either as school-based education or as apprenticeship education.	After completing an upper secondary vocational education, either as school based education or as an apprenticeship education.

UK	Apprenticeships in England, Wales and Northern Ireland are offered in the shape of Apprenticeship Frameworks which include a work contract.	Apprenticeship training in the UK includes formal learning at a training provider leading to a technical and occupational qualification.	Apprenticeship training generally lasts between one and four years in the UK depending on the Apprenticeship Framework, the starting level and prior learning.	Apprentices successfully completing their training may also apply online for a certificate from the (ACE),
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3.3 Participation in alternating training programmes across Europe

Work-based learning (WBL) is a fundamental aspect of vocational training as it is directly linked to VET's main objectives to help learners acquire knowledge, skills and competences which are essential for their working life. Following section 3.1, three main models of WBL were identified:

The **work-based model** is characterized by a high intensity or frequency of work integration or real-life work situations. It typically includes a long-term training period and higher amount of training in the workplace in comparison to other forms of alternating training. In the **mixed model**, schools or training centres have the main responsibility for creating close to real life or real life working environments. Teachers design learning activities in cooperation with companies. The third model of WBL is **school-based VET** which includes on-the-job training periods in companies. These training periods typically cover internships, work placements or traineeships that are incorporated as a compulsory or optional element of VET programmes, leading to formal qualifications. They can be of varying duration but typically represent less than 50% of the training programme duration. They are primarily intended as effective school-to-work transition mechanisms. This way, young people are enabled to familiarize themselves with the world of work and thus facilitate their transition from education to employment. This model permits practical or professional experience to be gained in laboratories, workshops at the educational institutions. Teachers at the education and training establishments develop ideas and concepts for cooperation with companies.

Apprenticeship programmes often coexist with school-based systems and they are based on the integration of companies as training providers together with VET schools or other education/training institutes. Apprenticeships are understood to be forms of initial vocational education and training that formally combine company-based training (practical work experience at a workplace) with school based education. Students acquire general and occupation-related knowledge and practical skills and competences in VET schools or other education/training institutes. The successful completion of such education and training eventually leads to nationally recognized certification. In these programmes, learners spend a significant time on training in companies. Apprenticeships, as forms of alternating training, are defined as ‘systematic, long-term training alternating periods at the workplace and in an educational institution or training centre’ (European Commission 2013b).

The following two tables illustrate participation in the above mentioned alternating training programmes in European countries.

Table 2: Enrolment of students in VET in European countries

	Mostly work-based	Mostly mixed	Mostly school-based
High participation in VET*	AT	FI, LU, NL	BE, CZ, SK, SI
Medium participation in VET*	DK, DE	FR, PT, MT, SE	IT, PL, ES, UK, BG, RO
Low participation in VET*		IE	EE, EL, HU, LT, LV

Source: ICF International (2014)

*OECD (2012a), Table C1.3. Upper secondary and post-secondary non-tertiary enrolment patterns (2010 data). High= >60% of students enrolled in VET; Medium = 40-60% of students enrolled in VET, Low = <40% enrolled in VET. No available data for the UK.

Table 3: Apprenticeships and Alternance schemes in EU countries



Country	Name of programme	Type of contract	Remuneration	Signing parties
AT	Dual Apprenticeship in companies and schools			
BE	<ul style="list-style-type: none"> - Apprenticeship Contract for lifelong learning in SMEs - Part-time Employment Contract for Alternating Training - Industrial Apprenticeship Contract (Federal Programme) 			
BG	Craftsmanship training			
CY	<ul style="list-style-type: none"> - Apprenticeship System (Systima Mathiteias) - New Modern Apprenticeship (NMA) 			
CZ	Schoolbased VET	Agreement	Yes: according to legislation, students are entitled to financial remuneration	VET school and employer
HR	The dual system was introduced in 1995. Qualifications for 55 occupations can be achieved through dual training/apprenticeships.			
DK	- Vocational Upper Secondary Education and Training, IVET traineeship (EUD)			



<ul style="list-style-type: none">- Combined Vocational and General Upper Secondary Education, EUX Programme- New Apprenticeship			
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EE	ISCED 2c, 3c, 3b, 4b qualifications can be achieved through apprenticeship			
FI	<p>-Apprenticeship Training at Vocational Upper Secondary Level (IVET and CVET, ISCED Levels 3 and 4).</p> <p>-Mixed scheme (so-called school-based)</p>	<p>Employment /apprenticeship contract</p> <p>Learners may get a salary for the on-the-job periods. Employers bear no obligation</p>	yes	<p>Apprentice and employer</p> <p>VET school and employer</p>
FR	<p>- Apprenticeship contract (Contrat d'apprentissage)</p> <p>- Professionalisation Contract (Contrat de professionnalisation)</p>	Apprenticeship contract	yes	Apprentice and training company
DE	Apprenticeship within the dual system of vocational education according to the Law on Vocational Education and Training (BBiG)	Apprenticeship contract	yes	Apprentice and training company
EL	<p>-Apprenticeship Programmes in Vocational Schools of the national PES (OAED EPAS)</p> <p>-Mixed VET (Institutions of Vocational Education-IEKs)</p>	<p>Employment contract</p> <p>To be defined</p>	<p>yes</p> <p>To be defined</p>	<p>Apprentice and employer</p> <p>OAED (national PES) and employer</p>
HU	- Contract-based Training of Vocational school-students			

¹ Should apprentices and trainees be under age, contracts are signed by their legal guardians in all selected countries.

	(mainstream programmes until 2013/14) - Training Contract- Based Training of Vocational School students (so-called 'early VET2 programmes' (since 2010) and 'dual model' (since 2012 to be mainstreamed 2013/2014) - Contract- Based training of Secondary Vocational School Students (post-secondary VET)			
IE	FAS Apprenticeship			
IT²	-Apprenticeship for gaining a vocational qualification or diploma - Professionalising Apprenticeship	Employment contract	yes	Apprentice and training company
LV	Apprenticeship			
LT	Apprenticeship (Pameistrystės profesinio mokymo forma)			
LU	Initial Apprenticeship			
MT	-Technician Apprenticeship Scheme -Extended Skills Training Scheme			

² In Italy, three types of apprenticeship contracts can be found to distinguish between apprenticeships with different target groups and/or targets: i) The Apprenticeship leading to a qualification and professional diploma (Apprendistato per la qualifica e il diploma professionale) that targets 15-25 year-olds and enables apprentices to fulfil the right-duty to study and training, as well as to acquire a professional qualification or diploma; ii) The Professional apprenticeship (Apprendistato professionalizzante o contratto di mestiere) that targets 18-29 year-olds (or 17 for those holding a professional qualification) and enables apprentices to acquire a professional qualification and iii) The Higher education and research apprenticeship (Apprendistato per l'alta formazione e la ricerca): targets 18-29 years-old (or 17 for those holding a professional qualification) and enables trainees to complete a secondary and / or tertiary diploma or a doctorate. Sources: Refernet Country report (2012) and Isfol (2012a).

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NL	<p>-Work-Based Secondary Vocational Education (BBL: beroepsbegeleidende leerweg) Levels 1; 2; 3; and 4</p> <p>-Mixed scheme (bol)</p>	<p>1) Employment contract</p> <p>2) Learning Agreement</p> <p>Learning Agreement</p>	yes	<p>1) Training company and apprentice</p> <p>2) Tripartite agreement – School, apprentice and VET provider</p> <p>Tripartite agreement – School, student and VET provider</p>
PL	<p>-Apprenticeship (vocational training for juveniles)</p> <p>-School based VET</p>	<p>Employment contract</p> <p>Learning contract</p>	yes	<p>Apprentice and training company</p> <p>School and employer</p>
PR	Mixed schemes	Learning contract		Trainee and VET provider
RO	Apprenticeship Contracts in Firms			
SI	Practical Training in Programmes of Vocational and Technical Education			
ES	Apprenticeship during IVET (under development, available in some Autonomous Communities)			
SE	Upper Secondary School			



	Apprenticeship			
UK	Government Apprenticeship Programme (ISCED 3)	Employment contract		Apprentice and training company

Source:ICF (2014); European Commission (2013d);ETF (2001) Vocational Education and Training in Croatia.

3.4 Identification and Comparative Analysis of the alternating training system in the European countries

There is no single model of alternating training programmes in the EU. There is a continuum of types of programmes that integrate work-based learning to varying degrees. The number of apprenticeship programmes on offer within countries also varies, but where these pathways exist, they are almost always part of formal IVET with some exceptions. Overall, alternating programmes are usually part of IVET system, though in a few cases (BG, LV, IT)³, they fall outside the formal educational system which means mainly that they do not lead to a qualification that is equivalent to that of the formal education and training system. They are mostly offered to students as a form of upper secondary education (ISCED level 3), leading to a vocational qualification that has labour market relevance, but does not imply the same rights as qualifications from the formal system (European Commission, 2012).

Several countries also offer alternance programmes or apprenticeships at post-secondary non-tertiary vocational programmes (ISCED 4: EE, EL, FI, HU, IE, LT, NL), or at the tertiary level (ISCED 5: FR, DE, IE, UK) (European Commission, 2012).

³ ReferNet report Latvia 2012, and European Commission (2012c); for Italy: Art.1 D.Lgs n. 167/2011.

The following table illustrates the main representative alternating training systems in each Member State based on the EU-wide study on apprenticeship supply⁴ which was published by the European Commission in 2012 and covers schemes which have been in operation in a particular Member State in the period 2007-2012, including where possible those which started in early 2013. The table presents information identified per Member State on existing Alternating Training Schemes and provides specific data on:

- Identification of general IVET and Apprenticeship-type schemes in the individual Member States.
- Typology of Alternating training (where available)
- School vs practical training
- Duration of programmes
- General Characteristics of national schemes

⁴ European Commission, (2012). Apprenticeship Supply in the Member States of the European Union, Report prepared by IKEI Research & Consultancy for DG EMPL, <http://ec.europa.eu/social/BlobServlet?docId=7717&langId=en>

Table 4. Identification of existing Apprenticeship-type schemes in the EU-27 Member States (European Commission, 2012)

Country	Identification of alternating training scheme	Typology of Alternating training (where available)	School vs practical training	Duration	National norms
AT	<p>Upper secondary level- mainly school based</p> <p>-VET schools (berufsbildende mittlere Schulen, BMS), ISCED 3B.</p> <p>-VET colleges (berufsbildende höhere Schulen, BHS), ISCED 3A/4A</p> <p>-Training guarantee for young people up to the age of 18. ISCED 3</p> <p>Upper secondary level- mainly work based</p> <p>-Dual VET (apprenticeship, Lehre, Lehrlingsausbildung), ISCED 3B</p> <p>Tertiary level</p> <p>-Fachhochschulen (ISCED 5B)</p>	<p>Dual VET</p> <p>Also termed 'apprenticeship training' (Lehre, Lehrlingsausbildung), Dual VET constitutes a particularly practice-oriented variant of VET: training takes place at two places of learning: at the training company (80% of the tuition hours) and at part-time vocational school (20%).</p>	<p>Tuition hours:</p> <p>–90% school</p> <p>–10% practice</p> <p>Tuition hours</p> <p>–80% company</p> <p>–20% school</p>	<p>3-4</p> <p>5</p> <p>2-4</p>	<p>At the end of the apprenticeship period, every apprentice can sit for an apprenticeship leave examination (ALE). The ALE consists of a practical and a theory examination.</p>

BE	Apprenticeship-type training schemes -Alternance Education (Upper Secondary-ISCED 3) - Apprenticeship (ISCED 2 & 3) - Industrial Apprenticeship Contract (16-21 aged with poor school record)	Apprenticeship-type training schemes	-School:2 days/week Enterprise:3 days/week	2	When the pupil successfully completes his apprenticeship he will receive a recognised certificate (Apprenticeship certificate), which gives him access to entrepreneurial training. Once he has obtained this certificate, he immediately meets the licensing conditions regarding professional knowledge (equivalence of this certificate might be ISCED 2 or ISCED 3)
			-School:1 day/week Enterprise :4 days/week	1-3	
			-School and enterprise training	1-3	
BG	IVET at Upper Secondary Level (ISCED 3) -Framework Program B - Framework Program C	Program B is offered by both vocational schools and vocational gymnasia, and final certificates equate to ISCED 3 Level. Program C is mainly offered by vocational gymnasia (but also by vocational schools), and final certificates equate to ISCED 3 Level.	-Theoretical/practical ratio: 5/1 -School/enterprise ratio: 15/1	2 (lower second.) +2	VET courses are organised according to different framework programs, which in some cases are also open to adults. Main Upper Secondary Level courses for students and with apprenticeship-type schemes are included within B and C framework programmes, which were approved by the Minister of Education and Science in 2003.
			-Theoretical/practical ratio: 1.5/1 -School/enterprise ratio: 13-14/1	4-6	

CY	<p>IVET at Upper Secondary Level</p> <p>-Practical Direction programmes in Techniques Scholes (ISCED 3A)</p> <p>IVET at Tertiary Level</p> <p>-Institutions of Tertiary IVET (ISCED 5B)</p>	<p>In addition to the apprenticeship-type schemes within the formal education system, the Apprenticeship System (Systima Mathiteias, SM) is a 2-year initial vocational education and training programme providing practical and theoretical training to young people who have not successfully completed their lower-secondary compulsory education.</p>	<p>2 first years: 100% school-based.</p> <p>Last year: 1 d/w in company; (school: 4 d/w)</p> <p>Practical training including project work and industrial training</p>	<p>3</p> <p>2-3</p>	<p>The Ap-prenticeship System is free of charge for students. Additionally, a subsidy scheme aims to promote in company training of apprentices in the private sector, subsidising companies for part of social insurance contributions for the apprentice.</p>
CZ	<p>Upper Secondary Level IVET- Primarily school-based</p> <p>-Secondary technical schools (ISCED 3A)</p> <p>-Secondary vocational schools (ISCED 3C & 3A)</p> <p>Tertiary IVET</p> <p>-Tertiary professional schools (ISCED 5B)</p>	<p>The Czech republic does not have an apprenticeship scheme, but the education system includes work placements and practical training.</p>	<p>-Work placements of 6-8 weeks</p> <p>-Practical training 35-45% (at special premises in school or at external workplace)</p> <p>-3-month work placement</p>	<p>4</p> <p>2-3</p> <p>3-3.5</p>	<p>Secondary vocational schools (SOU) provide a vocational qualification in 2- and 3-year programmes, resulting in the acquisition of a secondary vocational qualification (ISCED 3C). Upon completion the student gets a “vocational certificate” (výuční list), also known as “apprenticeship certificate”. Graduates leave directly for the labour market.</p>
DE	<p>Upper Secondary Level IVET</p>	<p>Berufsschulen- Dual VET or Apprenticeship (ISCED 3B) (in</p>	<p>-Enterprise 3-4 d/w; school</p>	<p>3</p>	<p>After completing their training in the dual system, the majority of</p>

	<p>-Dual System- Apprenticeship (ISCED 3B) Primarily work-based</p> <p>Tertiary level IVET</p> <p>-Dual Study Programmes (ISCED 5)</p>	some cases ISCED4)	<p>2-1 day/w</p> <p>Combination of in - company training with school (high practical work relevance)</p>	2-4	<p>participants then take up employment as a skilled worker. Under certain conditions, however, they may also obtain the academic standard required for entrance to a Fachhochschule (Tertiary Level), and go on to higher education.</p>
DK	<p>Upper secondary level</p> <p>-Vocational Upper Secondary Schools (ISCED 3)</p> <p>.</p> <p>Tertiary level</p> <p>-Vocational Colleges (short-cycle higher education programmes) (ISCED 5B).</p>	In Denmark, VET only exists in a dual apprenticeship system, alternating between school-based and work-based training.	<p>2/3 of training in the company</p> <p>Compulsory 3-month apprenticeship included</p>	<p>3-3.5</p> <p>2-2.5</p>	<p>VET programmes conclude with a practical and theoretical examination, the 'journeyman's test' (Svendeprøve). IVET qualifies students for either entering the labour market as skilled workers (specific jobs in different trades), but it also offers the opportunity to access specific/limited short cycle higher education programmes at vocational colleges.</p>
EL	<p>VET at Upper Secondary Level (work-based)</p> <p>-Apprenticeship System (ISCED 3C) (Mathiteia)</p>	<p>Apprenticeship System (ISCED 3C)</p> <p>VET Upper Secondary Level schools (EPAL and EPAS) only offer exclusively school-based training (practical training is</p>	<p>4days/w in the morning: enterprise work.</p> <p>4days/w in the afternoon + 1 full day: school.</p>	2	<p>Training in school is provided by Apprenticeship vocational schools (Apprenticeship EPAS – EPAS Mathiteias), which are under the control of the Manpower Employment Organization (Organismos Apascholiseos</p>

		offered within the school premises).			Ergatikou Dynamikou, OAED) of the Ministry of Employment and Social Protection (Ypourgeo Apascholis kai Koinonikis Prostasias, YPAKP).
EE	<p>Primarily workplace based study Apprenticeship (“töökohapõhine õppevorm”).</p> <p>Primarily school based study Regular IVET educational programmes which offer school and work-based training:</p> <p>VET at Upper secondary level</p> <p>-Secondary vocational education (ISCED 3B)</p> <p>-Vocational Training Based on Basic Education (ISCED 3C)</p> <p>VET at Post-Secondary(non-tertiary) level</p> <p>-Vocational Training Based on Secondary Education (ISCED 4B)</p>	<p>Apprenticeship is integrated into regular IVET as a “workplace based study form” (“töökohapõhine õppevorm”). Thus, apprentices can study on different levels and programmes in the Estonian VET system (mainly ISCED 3B, 3C and 4B).</p>	<p>2/3 practical training in an enterprise</p> <p>1/3 theoretical instruction</p> <p>Practical work: 50% of the whole programme (practicing in enterprises: ¼).</p> <p>-Practical work: 50% of the whole programme (practicing in enterprises: ¼).</p>	<p>0.5 – 4</p> <p>3</p> <p>0.5- 2</p> <p>0.5- 2</p>	<p>The legal framework for apprenticeship training (workplace-based training) has been issued in March 2007. The new regulation establishes that Apprenticeship is integrated into regular IVET and is formalised as one of two study forms (apprentices can study on all levels in the VET system).</p>

ES	Upper Secondary Level IVET -Intermediate Level Vocational Training (ISCED 3B)	The Spanish Education System does not contemplate the figure of apprentices as such. In any case, there is a type of working contract known as 'Training Contract' (Contrato para la Formación), which provides participants with practical and theoretical learning, and which is specially aimed at people suffering from lack of qualifications.	Workplace training module during second year -400-600 hours (10-20 weeks) in company	2 yrs	The regulations governing education have produced a series of general, basic guidelines to define a common legal structure for the academic aspects of vocational education. Using the basic national legislation as their starting point, each Autonomous Community regulates the aspects related to assessing vocational training.
	Tertiary Level IVET -Advanced Vocational Training (ISCED 5B)		Workplace training module during second year -400-600 hours (10-20 weeks) in company	2 yrs	
FI	IVET at Upper Secondary Level (school-based): -Programmes at vocational education institutions (ISCED 3) IVET at Upper Secondary Level (work-based): -Apprenticeship training (ISCED 3B & 4) IVET at Tertiary Level: -Polytechnics (ammattikorkeakoulu) (ISCED 5)		6 months in the workplace 70-80% of the time in the workplace 7 months of compulsory on-the-job training	3 ISCED 3: 2-4 yrs ISCED 4: 4-12 months 3-4	The Finnish National Board of Education approves the qualification-specific core curricula and the requirements of each competence-based qualification. These are drawn up in cooperation with employers and employees, other representatives and experts of economic life as well as teachers and students.
FR	Primarily School based	Primarily School based	Compulsory training periods in professional	2	Apprentices at all qualification levels sit the same written

<p>VET at Upper Secondary (ISCED 3C level)</p> <p>-Certificat d'Aptitudes Professionnelles - CAP (Professional Skills Certificate)</p> <p>-Brevet d'Etudes Professionnelles - BEP (Professional Studies Certificate)</p> <p>VET at Upper Secondary (ISCED 3B level)</p> <p>-Brevet professionnel - BP (Vocational Certificate)</p> <p>-Brevet de technicien – BT (Technician's Certificate)</p> <p>-Baccalauréat Professionnel - BAC Pro (Vocational Baccalaureate)</p> <p>VET at Tertiary Level (ISCED 5B level)</p> <p>-Brevet de Technicien Supérieur - BTS (Higher Technician's Certificate)</p> <p>-Diplome Universitaire de technologie - DUT (University Technological Diploma)</p> <p>-Diplôme National de Technologie Spécialisé - DNST (Specialised National Technology Diploma)</p> <p>-Diplôme d'Etudes Universitaire en</p>	Work-place based study-Apprenticeship	environment of 12 to 22 weeks (duration depends on the type of diploma)		examinations in general and technical subjects and the same practical tests as students on the same course in full-time education. Approximately 30% of IVET students opt for the apprenticeship system.
		Work experience schemes from 4 to 6 weeks	2	
			1-3	
		Theoretical courses: 25% (400-600 hours)		

	<p>Sciences et Techniques - DEUST (University Scientific and Technical Studies Diploma)</p> <p>Primarily Workplace based</p> <p>-Apprenticeship (“contrat d’apprentissage”). Given at all the previous levels.</p> <p>-Professionalisation contract (“contrat de professionnalisation”)</p>				
HU	<p>IVET at Upper Secondary Level:</p> <p>-Vocational training school (ISCED 3C)</p> <p>-Secondary Vocational School (ISCED 3A&4C)</p> <p>IVET at Tertiary Level:</p> <p>-Colleges (főiskola) and Universities (egyetem) (ISCED 5B)</p>	<p>Practical training in VET programmes may be provided through 3 different systems: school-based, alternance training and apprenticeship.</p>	<p>Combination of School and enterprise based-training, differently according to different forms</p> <p>Combination of School and enterprise based-training, differently according to different forms</p>	<p>2-2.5</p> <p>ISCED3</p> <p>1-2</p> <p>ISCED4</p>	<p>A new form of VET was started from the school year 2010/11. The so-called early VET (előrehozott szakképzés) allows students to start vocational training right at the age of 14. Early VET programmes take 3 years to complete, therefore students may obtain a vocational qualification as early as the age of 17 (although, in general, in Hungary the compulsory school attendance age is 18).</p>
IE	<p>Apprenticeship</p> <p>Work-based Apprenticeship Training (ISCED 4 oriented to level 5B)</p>	<p>An important feature of the Irish VET system in general is that there is not a sharp distinction between initial and</p>	<p>20% school based</p> <p>80% work based</p>	<p>4</p>	<p>The apprenticeship system is managed by FÁS (Irish Training and Employment Authority) and its regional and local offices, in</p>

	<p>Post Leaving Certificate courses (PLC)</p> <p>Vocational education programmes and courses in non-tertiary colleges and centres of further education (ISCED 4A/B oriented to level 5A/B)</p> <p>Entry-level VET for specific sectors</p> <p>Entry-level VET for various industry sectors provided by publicly-funded agencies (ISCED 4A/B oriented to level 5A/B)</p>	<p>further and continuing VET for the unemployed and new entrants into the workforce, whether they are young or older people. Moreover, there is not one system of IVET for young people who have completed compulsory schooling, but rather IVET policies and pro-grammes which are implemented through different government departments and intermediary organisations. Thus, the traditional type of alternance training combining a school-based environment and a real workplace is not a feature of Irish IVET.</p>	<p>10% work based</p> <p>90% school based</p> <p>Mainly school based, comple-mented with practical training in enterprises</p>	<p>1-3</p> <p>1-4 (depends on sector)</p>	<p>co-operation with the Department of Education and Science (DES), the employers and the trade unions, under the aegis of the National Apprenticeship Advisory Committee.</p>
IT	<p>Primarily Workplace based (Apprenticeship)</p> <p>-Apprendistato per la Qualifica e per il Diploma Professionale (Training Apprenticeships)</p> <p>-Apprendistato Professionalizzante o Contratto di Mestiere (Professional</p>	<p>The balance between school-based and work-based training depends on the pathway and on the agreements signed between schools and enterprises (schools are responsible for designing path-ways, keeping contacts with enterprises, etc).</p>	<p>Mainly job experience, com-bined with school periods</p>	<p>Max 3</p> <p>Max 3</p>	<p>Law 53/2003 and D.Lgs. 226/2005 separated the general/academic system (licei) and the vocational education and training system respectively under the state and the regions responsibility. It was also established that the two systems have equal dignity and that 'it is granted the possibility</p>

Apprenticeships)			2-4	to pass from the licei system to the vocational education and training system'. Meanwhile, the Law 30/2003 has introduced some reforms in the
-Apprendistato di Alta Formazione e Ricerca (Advanced Training and Research Apprenticeships)				
Primarily School based (Traineeship)		Mainly school based, depend-ant on the degree	5	apprenticeships system, basically distinguishing the three different types of apprenticeships. The
Vocational Upper Secondary Level (ISCED 3)			3-5	"Consolidated Act on
-Technical Institutes			2	Apprenticeships", passed in 2011
-Vocational/Professional Institutes		30% work based training	1	has been launched with the aim to better clarify the legal and
Post Secondary Education (Non Tertiary) (ISCED 4)			3	institutional position of
-Higher Technical Institutes			2	apprenticeships in Italy. Interestingly, this Act establishes three main types of
-IFTS courses		30% work based training		Apprenticeship contracts for all sectors:
Initial Vocational Training (FPI)				-Apprendistato per la Qualifica e per il Diploma Professionale (Training Apprenticeships)
-First Level of Initial Vocational Training (ISCED 3)				-Apprendistato
-Second Level of Initial Vocational Training (ISCED 4)				Professionalizzante o Contratto di Mestiere (Professional Apprenticeships)
				-Apprendistato di Alta

					Formazione e Ricerca (Advanced Training and Research Apprenticeships)
LT	Apprenticeship-type schemes (mainly school-based)	Apprenticeship (Pameistrystės Profesinio Mokymo Organizavimo Forma) combines training organ-ised at the work place (i.e. enterprise, institution, organisation, farm or a freelance teacher) with theoretical training, which may be provided in a VET institution or other school.	20-25% work based training (both cases)	2	Currently only a few schools provide a work-based apprenticeship route aimed at obtaining a vocational qualification in a limited number of professions. For example, Vilnius Vocational Education and Training Centre of Technology and Business (Vilniaus technologijų ir verslo profesinio mokymo centras) offers the industrial mechanic and energy systems electronic work-based training programmes. (There is no information available on possible ISCED equivalences)
	IVET at Upper Secondary Level (ISCED 3)		20% work based training	3	
	-ISCED 3C programmes		Practical training at least a third of total training time	1-2	
	-ISCED 3A&3B programmes		60-70% practical training	3-4	
	IVET at post-Secondary Non-Tertiary Level (ISCED 4)				
	-Vocational training programmes				
	IVET at Higher Education Level (ISCED 5)				
LU	-Non-university higher education Programmes (ISCED 5B)	Apprenticeship in Luxembourg is an 'alternance' training system and it is the traditional vocational training pathway.	Dual system (apprenticeship) 2 yrs school-based, 1 year in-company training (mixed)	3	Concerning the vocational system, enterprises are responsible for the apprenticeship allowances of young people in CATP, CCM and CIP training. These apprenticeship allowances vary
	Apprenticeship (work-based)			3	
	VET at Upper Secondary Level (ISCED 3)			2	
	-Vocational system (régime professionnel): Apprenticeship and Mixed systems				
	IVET at Post-Secondary Non-Tertiary Level				

	-Advanced technician's certificate (BTS) IVET at Upper Secondary Level (ISCED 3)		16 weeks of practical training		greatly from one trade to another and from one year of apprenticeship to another. The State, through the Employment Fund (Fonds pour l'emploi), is nevertheless responsible for apprenticeship subsidies and awards.
LV	IVET at Upper Secondary Level -Vocational education programmes (ISCED 3C) -Vocational secondary educational programmes (ISCED 3A&3B) IVET at Higher Education Level -College programmes (ISCED 5B)	An apprenticeship system exists on a small scale mainly in the crafts sector in traditional professions, and it is regulated by the Law on Crafts. The main organisation involved is the Chamber of Crafts, and the curricula of apprenticeships are not approved by the Vocational Education Administration, as these programmes are not part of formal IVET (there is no ISCED equivalence).	35% theory/64% practice 50% theory/ 50% practice 640 hours of practical training	2-3 4 2-3	Through the apprenticeship system it is possible to obtain the journeyman (Amata zellja diploms) and, thereafter, master craft qualification (Amata meistara diploms).
MT	Apprenticeship Training (ISCED 3) -Technician Apprenticeship Scheme (TAS) -Extended Skills Training Scheme (ESTS)	In Malta, IVET may or may not involve apprenticeship: it depends on the course/sector, as well as on the training model chosen by the student. Most of	Mainly on the job training	3	The last decade has seen a great investment in IVET in Malta with the setting up of MCAST- the Malta College of Arts, Science and Technology, the umbrella

		the VET courses in Malta are only school-based, but a great majority of them are also offered through an apprenticeship or alternance system (combining school and on-the-job training).			institution providing vocational education and training.
NL	<p>Senior Secondary Level IVET (ISCED 2, 3A,3C & 4)</p> <p>MBO (middelbaar beroepsonderwijs) at 4 different levels. 2 learning pathways:</p> <ul style="list-style-type: none"> -School- based (full-time or part-time) -Dual pathway (apprenticeship training) <p>Higher Education IVET (ISCED 5)</p> <ul style="list-style-type: none"> -Associate degrees (ISCED 5B) 	Upper Secondary Vocational Education is provided through the vocational programmes known as MBO (middelbaar beroepsonderwijs). In all MBO programmes, 2 learning pathways are offered: school-based and dual system.	<p>20-60% of practical periods in enterprises (BOL)</p> <p>More than 60% of practical periods in enterprises (BBL)</p> <p>Work experience placement</p>	<p>2-4</p> <p>2</p>	The qualification structure in Senior Secondary Level IVET (MBO Programmes) has been redesigned, and it is working towards a new competence-based qualification structure, based on 'occupation competency profiles' (as of August 2011 all VET courses should be based on the new competence based qualification).
PL	<p>Upper Secondary Level IVET- Primarily school-based</p> <ul style="list-style-type: none"> -Profiled (specialised)general secondary school (ISCED3A) -Technical Secondary Schools (ISCED 3A) -Basic Vocational Schools (ISCED 3C) 	Current rules governing the VET (Regulation of the Minister of National Education of 15 December 2010) normalize the principles of vocational education of pupils/students and young workers. Before this legal framework, there was a special type of VET referred to	Vocational placements in enterprises (4-6 weeks in summer)	<p>3</p> <p>4</p> <p>2-3</p> <p>3</p> <p>3-4</p>	The period of 'practical vocational training' in formal VET schools was recently normalized through the Regulation of the Minister of National Education of 15 December 2010 on vocational training. Amongst other aspects, this Regulation has abolished previously existing apprenticeship

	<p>-Supplementary Technical Secondary Schools (ISCED 3A)</p> <p>IVET at Tertiary Level (ISCED 5B)</p> <p>-Tertiary Level Vocational Institutions (Technical Universities and Higher Vocational Schools).</p>	<p>young workers and structured as an apprenticeship scheme (młodociani pracownicy). According to this scheme trainee juvenile workers attended craft basic vocational schools founded by craftsmen organizations. At the present time, these schemes do not exist any more.</p>	<p>Practical training: up to 12 weeks</p>		<p>scheme (młodociani pracownicy), basically attended by trainee juvenile workers in craft basic vocational schools founded by craftsmen organizations.</p>
PT	<p>IVET at Upper Secondary Level (ISCED 3)</p> <p>-Vocational Courses</p> <p>-Technological Courses</p> <p>-Apprenticeship Courses</p> <p>-Education and Training Courses</p> <p>IVET at Upper Secondary non-Tertiary Level (ISCED 4)</p> <p>-Technological Specialisation Courses (CETs)</p>	<p>Apprenticeship courses (“Cursos de aprendizagem”). Apprenticeship training is an IVET pathway and not a separate sub-system.</p>	<p>Technical training: 52%</p> <p>Work environment 13%</p> <p>Workplace training: 240 hrs.</p> <p>Workplace training: 40%</p> <p>Individual plan of workplace training.</p> <p>Workplace training 360-720 hours</p>	<p>3</p> <p>3</p> <p>3</p> <p>1-2</p> <p>1</p>	<p>Apprenticeship courses are provided by the vocational training centres of the Institute for Employment and Vocational Training (in Portuguese, Instituto do Emprego e Formação Profissional – IEFP), under the Ministry of Labour and Social Solidarity.</p>
RO	<p>Apprenticeship system</p>	<p>Apprenticeship system</p>	<p>Practical and theoretical training provided by</p>	<p>6 months-3</p>	<p>The Apprenticeship system has been introduced since 2005, derived from the approval of the</p>

			employer	years	so-called Apprenticeship Law (Law no.279/2005).
SE	IVET at Upper Secondary Level (school-based): -VET programmes in vocational schools (ISCED 3A)	Most IVET in Sweden is school-based. Sweden does not have broad apprenticeship training as part of the upper secondary school system. Apprenticeship or Gymnasial lärlingsutbildning exists today as a pilot	85% school based. 15 weeks workplace training	3 yrs	From academic year 2011/2012, a new apprenticeship programme, known as Gymnasial lärling-sutbildning, was introduced as an alternative in all upper secondary VET programs, as a parallel path to the traditional school-based one. Thus, training will be offered both as school-based education and as secondary apprenticeship with the same terms of objectives.
SI	IVET at Upper Secondary Level -Vocational Secondary Education (ISCED 3C) -Technical Secondary Education (ISCED 3B) -Vocational-technical secondary Education (ISCED 3B) IVET at Tertiary Level -Higher vocational colleges (ISCED 5B)	There are 3 VET programmes at upper secondary level offering apprenticeship-type schemes.	24 weeks of practical training at employer 4 weeks of practical training 24 weeks of practical training at employer 40% practical training in firms	3yrs 4 yrs 2 yrs 2 yrs	With the 2006 VET Law, the apprenticeship system was extended to the overall system of vocational and technical education, and the dual system and school education were united into a single form.
SK	IVET at Upper Secondary Level: -Secondary specialised schools (ISECD	Apprenticeship-type schemes are very limited: programmes	-General/Vocational ratio:	4-5	The New Education Act 2008 has developed a single stream of

	3A&3C)	are school based and training in workplace can be organised only after agreement between the school and the organisation offer-ing workplace training.	43-48% / 57-52%.	years	secondary VET (since September 2008, the VET stream is only provided by secondary specialised schools, SOŠ).
	IVET at Tertiary Level: -Secondary specialised schools (ISECD 5B)		Summertime working practice -Workplace training is exceptional	2 -3 yrs	

After the European Countries' overview about alternating training, there is an in depth analysis on educational systems in Greece, Italy and Spain, with special focus on vocational education, alternating training and apprenticeship/dual education.

4. Analysis of national upper secondary schools and alternating training systems

This section involves an analysis of the national educational systems with a special focus on alternating training in upper secondary technical and vocational education system of partner countries. The inputs provided by the partners followed the structure and context guidelines presented in the previous section. The section is divided in 5 subsections and relevant subtopics: (1) Analysis of national educational systems, (2) Overview of national evaluation model, (3) Practices adopted by the school system, (4) Spread of ECVET in the upper secondary technical and vocational education system and (5) Relation among upper secondary schools system and relevant stakeholders; addressing a specific thematic key aspect that includes inputs from all partner countries involved (Greece, Italy, Spain).

4.1. Analysis of national educational systems

4.1.1 Greece

Overview of national educational system in Greece

Children in Greece begin Pre-primary education at the age of 6 months old in Child and Infant Centers run by the Municipal Authorities (Organismoi Topikis Autodioikisis). Having reached the age of 4 children are allowed to enroll in Nipiagogeia (pre-primary schools), while attending them is compulsory for all 5 year old children. The authority of the Ministry of Education, Lifelong Learning and Religious Affairs is in charge of the operation of Nipiagogeia. The next stage of education includes the compulsory attendance of primary school which falls under the category of primary education and lasts for 6 years. The last period of compulsory education consists of the 3 year attendance in Gymnasio (lower secondary school) and it includes pre-vocational education. Evening Schools (Esperino Gymnasio) operate in parallel with day Gymnasio, whose attendance starts at the age of 14 years old. The second level of secondary education lasts for 3 years as well, and it constitutes the non-compulsory upper secondary education and comprises of general secondary education (including Geniko Lykeio/ General Lyceum) and vocational secondary education (including Epaggelmatiko Lykeio/ Vocational Lykeio and Epaggelmatiki Scholi/ Vocational School). Pupils can enroll at the age of 15 years old in General and Vocational Lykeio, whereas in Vocational School they can begin at the age of 16. Evening schools operate in parallel to day General and Vocational Lykeia, having the

same conditions concerning pupils' age for admission. Their timetable allows pupils to be in regular full time attendance acquiring simultaneously work experience.

Post-secondary non-tertiary education operates between secondary and higher education. It is provided by Vocational Training Institutes (IEK) which offer formal initial and further vocational education and training, and private Colleges which are classified as belonging in the informal post-secondary education and training. Certificates of study or other certificates provided by Colleges are not academically equal to those granted within the framework of the Greek post-secondary system of formal education (e.g. Universities, Technological Education Institutes and the aforementioned IEKs).

Tertiary education constitutes the higher level of education and includes the University and Technological sectors. The University sector consists of Universities, Technical Universities, and the School of Fine Arts. The Technological sector involves the Technological Education Institutions (TEIs), and the School of Pedagogical and Technological Education (ASPETE).

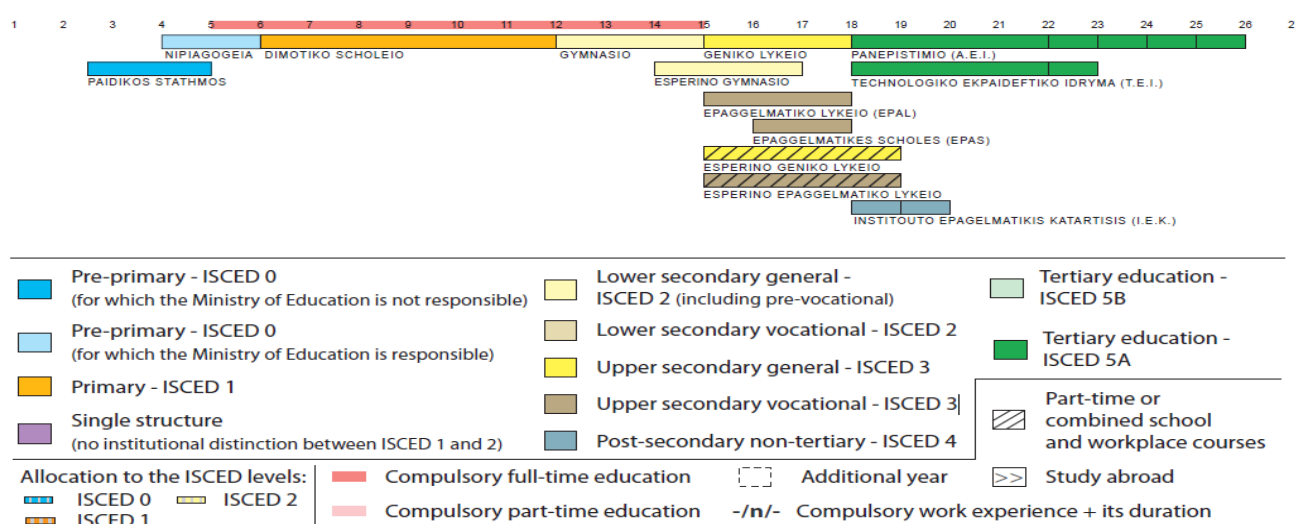


Figure 4: Organization of initial education and training system in Greece
[source: Structures of Education and Training Systems in Europe – Greece]

Main current educational facts in Greek Educational System:

1. The education system in Greece is centralized, having all levels fall under the responsibility of the Ministry of Education.
2. The Greek Educational System consists of three consecutive levels: Primary; Secondary; Tertiary.

3. Education from Grades 1-9, ages 6-15, is free and compulsory.
4. Primary education (“Dimotiko”) is sub-divided into Pre-school Education and Compulsory Primary Education. The Pre-school Education is offered at kindergarten classes and the Compulsory Primary Education is provided by Primary schools.
5. Secondary education is separated into two stages; stage 1 constitutes the Compulsory Lower Level Secondary Education which is provided in Gymnasiums and stage 2 is the Post-compulsory or Upper Secondary Education which is given by the Unified Lyceums (“Eniaio Lykeio”) and Technical Vocational Educational Schools (“Techniko Epaggelmatiko Ekpaideftirio – TEE”).
6. The duration of studies in “Eniaia Lykeia” is three years and in the Technical Vocational Educational Schools (TEE) two years (a’ level) or three years (b’ level).
7. The overall responsibility for course development and approval belongs to the Ministry of Education which also supervises most of these schools. Certain TEE are supervised by the Ministry of Health and Welfare, the Ministry of Agriculture and the Ministry of Development.
8. Tertiary education is categorized into university education which is offered by universities and non-university education which is offered by Higher Technological Educational Institutes and Higher Education Institutes.
9. Higher Education institutions in Greece are fully self-administered legal entities under public law, and are funded and supervised by the Hellenic Ministry of National Education and Religious Affairs in accordance with Provision 16 of the Constitution.
10. 22 Universities exist in Greece, including Polytechnic Schools, the School of Fine Arts and the Hellenic Open University (EAP), 14 Technological Educational Institutes (T.E.I.) and the School of Pedagogic and Technological Education (ASPETAI).
11. There are also Higher Ecclesiastical Schools, supervised by the Ministry of Education and other higher education institutions which are mainly supervised by other Ministries (for example Merchant Marine Academies are under the supervision of the Ministry of Mercantile Marine, Higher Military Education Schools that are under the supervision of the Ministry of Defense, and Higher Police Academies are under the supervision of the Ministry of Public Order).
12. When students successfully complete their studies in universities and T.E.I. they are awarded a “Ptychio” (degree) which leads to employment or further study at the post-graduate level.

13. University and T.E.I. graduates can continue their studies to attain an MSc and a PHD on condition that they meet the criteria set by each department running the courses.

14. Doctorate degrees are obtained after a minimum of three years of original research, including the preparation and writing of a thesis. In some doctoral programs, theoretical courses are compulsory and are to be attended prior to individual research.

15. Students who wish to study at the tertiary level are able to receive scholarships from the State Scholarships Foundation (IKY) which also grants scholarships to graduates of universities and technical education institutions for post-graduate or post-doctoral studies in Greece and abroad based on academic achievement of undergraduate studies. In addition, students (at any level) can receive grants to study at other European Higher Education Institutes under the Lifelong Learning Programs (LLP).

Education and training Directions (curriculum specifications)

In the 19th century, Secondary education was established as part of the general education system. Since then, secondary education has undergone successive legislative reforms, which have focused on structure (a single level or divided into two levels, one or more different types in the upper level, examinations or free entrance to the second level, etc.) or curriculum. In more detail, these legislative changes have often been conducted with regard to the system by which secondary school graduates were admitted to higher education.

Secondary education is divided into two cycles: compulsory lower secondary and non-compulsory upper secondary education. Compulsory lower secondary education is offered in Gymnasia while non-compulsory upper secondary education is divided into two types of schools: Geniko Lykeio and Epaggelmatiko Lykeio (Vocational Lykeio). Compulsory vocational education in Greece does not exist. Attendance in public schools of secondary education is free of charge. Attendance in Gymnasia lasts for 3 years and addresses students of 12 to 15 years of age. In Esperino Gymnasio (Evening Gymnasio) the age for admission is 14. The completion of compulsory education is a prerequisite for admission into the non-compulsory secondary education. Concerning the age limit there do not exist any other restraints. As a general rule, in day Lykeio the age of pupils is 15-18 while at Esperino Lykeio (Evening Lykeio) pupils should be over 15. The policies implemented into secondary education are also based on the 5 axons described in the introduction of chapter 3.

Esperina Gymnasia (Evening Gymnasia) and Esperina Genika and Epaggelmatika Lykeia (Evening Genika Lykeia and Evening Vocational Lykeia) operate in parallel with the mainstream schools of secondary education. There are also Epaggelmatikes Scholes (Vocational Schools) which operate only during the day, which together with

Vocational Lykeia make up secondary Vocational Education (Law 3475/2006). In addition, Ecclesiastic, Minority, Cross-Cultural, Peiramatika (Experimental), Music and Special Education Gymnasia and Lykeia operate. Other alternative structures in secondary education are the Arts Schools, Sports Facilities Classes, classes in Gymnasia and Lykeia for students with special education needs and Second Chance Schools.

The aim of Geniko Lykeio is:

- To provide a high level of general knowledge.
- To develop the students' abilities, initiative, creativity and critical thinking
- To offer the pupils the knowledge and abilities necessary to continue their studies on to the next level of education.
- To cultivate pupils' skills which will, after specialization or training, facilitate their access to the labour market.

The objective of secondary vocational education is to:

- Develop the pupils' abilities, initiative, creativity and critical thinking.
- Transmit the required technical and professional knowledge and development of relevant skills.
- Offer pupils the knowledge and abilities necessary to continue their studies at the next level of education.

Ongoing reforms

In the past few years an ambitious and comprehensive reform effort has been under way (see Relevant National Legislation). Particular emphasis has been laid so far in the modernization and expansion of lifelong learning platforms and the modernization of tertiary education, always in accordance with EU trends and mutually agreed priorities. Cornerstones in this on-going effort have been the coordination and enhancement of life long learning providers, the upgrading of vocational training with the establishment of special vocationally oriented secondary education units and the facilitation of inter-level mobility (easier access to post-secondary non-tertiary and tertiary education for their graduates), the substantial regulatory and institutional reform of higher education, and the expansion of mandatory education by one year (pre-school education) (Cedefop, 2014a).

The new law on the restructuring of secondary – including vocational – education (Law 4186/2013), which came into effect in September 2013, opens the VET system to the economy and the job market and aims to regulate the field from the perspective of lifelong learning. However, the major issues faced by the Greek VET system persist: closer links with the job market and economy, more vigorous

involvement of the social partners, sense of social co responsibility and consensus on vocational training matters, decentralisation and greater school autonomy, attracting more young people into vocational training, improving the quality of initial vocational training and linking it more closely to continued vocational training (Ioannidou and Stavrou, 2013).

In addition, with an act of legislative content issued on 30 December 2015, there was review of the 48th article of the applicable law 4186/2013 regarding the regulation of vocational training issues. According to this act, the 'Pilot Class of Apprenticeship' is enacted with a time span of nine months. In the 'Pilot Class of Apprenticeship' there will be applied the curriculum of the laboratory course 'Reinforcement Laboratory Training of Apprenticeship', lasting two hundred (200) hours. The program begins in the school year 2015-2016 and is realized in 2016-2017, following the teaching program of public education school units. In the 'Pilot Class of Apprenticeship' is also applied a 'Training Program in the Workplace – Alternating Training in the Workplace ', lasting twenty-eight (28) hours per week, allocated at least in four (4) days. Responsible for the policy implementation of the 'Pilot Class of Alternating Training', the students' placement in the workplace and all relevant issues, is the EPAL (Vocational Lyceum) in cooperation with OAED (Manpower Employment Organization).

Apprenticeship in Greece

Greek Manpower Organization (OAED) is successfully implementing the system of apprenticeship in Greece since 1952. The Organization is active in vocational education and training through its 51 Vocational Schools (EPAS). Each year, about 10,000-11,000 pupils are enrolling in the EPAS Schools of OAED. According to Gazette 1500/B/07 and the Operating Rule of EPAS, the implementation of Apprenticeship programs takes place in schools (for the theoretical and laboratory part) and in organizations of the Private and Public Sector (for the work practice part). Students attending the OAED Schools gain work experience in actual working conditions by being trained in enterprises of all sectors of the economy and for many technical specialties. Apprenticeship Schools traditionally launched training programs for specialties according to the local labor market needs and their capacity in respective technological equipment. The specialties that operated mostly over time were mainly related to craftsmen of various kinds (car technicians, electricians-mechanics, electronics, CNC, graphic arts, fur) as well as plumbers, silversmiths, watchmakers, carpenters, hairdressers, bakers and administrative staff. The latest reform was introduced by L.4186/2013 established 56 specialties, of which 18 are completely new and have related to specialized artisans in various sectors, such as beekeeping, poultry farming, paving, mosaics, jewelry, beverages/drinks, grooming etc.).

From 2013 onwards, and due to the particular emphasis being put on the issue again this in European Union (EU) policies, apprenticeship is priority in policy developments VET in Greece. Activities for the reform of VET and apprenticeship in Greece have been particularly strengthened during the period 2013-16 and included the introduction of a series secondary legislation, decisions and circulars that specifically concerned the structure

and the governance of the apprenticeship system, as well as the functional aspects of the system. The National Strategic Framework of 2016 for upgrading of VET, including apprenticeship (referred to as the "Strategy" VET 2016), includes the introduction of new apprenticeships alongside an existing program offered by OAED. As a result of these developments, the apprenticeship system in Greece includes the following schemes, that will be coexist until 2020-21:

- (a) the EPAS program, which is offered at the level of superior secondary education and leads to acquire Level 4 qualifications in accordance with the national and European qualifications frameworks (NOC and SPP respectively), after two years of alternate learning at school and in the workplace;
- (b) the EPAL program (professional lyceum) offered at its level post-secondary education and leads to acquire Level 5 qualifications according to the NAP / EQF frameworks, then from one year of alternate learning to school and at work;
- (c) the apprenticeship program of the institutes Vocational Training (IEK), the which is offered at its level post-secondary education and leads to acquire Level 5 qualifications according to the NAP / EQF frameworks, then from four semesters of learning to IEK and one semester at the workplace (for those VET selecting apprenticeships other forms of internship which were the usual practice until today).

Researches for evaluation apprenticeship system in Greece

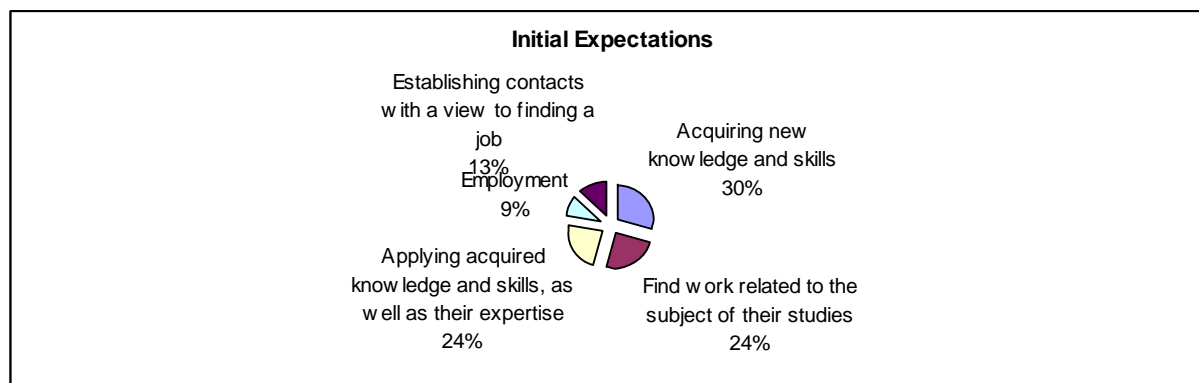
The Institute of Education Policy (IEP) evaluates the first phase of Post-graduate year apprenticeship in empirical research to apprentices, teachers and trainers employment agencies. A summary of the evaluation report, which was published in March 2018,⁶ is:

ASSESSMENT IN LEARNING

A sample of 197 apprentices completed the fully exploitable questionnaires. In particular, the rates of the participants in the apprenticeship are as follows:

- (a) Administration and Finance Officer at 28.9%,
- (b) Technician of Electrical Systems, Installations and Networks at 14.2%,
- (c) Vehicle Technician of 24%,
- (d) Information Technology Engineer at 7.6%,
- (e) Plant Production Technician at 5.1% and
- (f) Nurse Assistant at 20.3%.

The initial (before apprenticeship start) expectations of apprentices were the main ones the following:



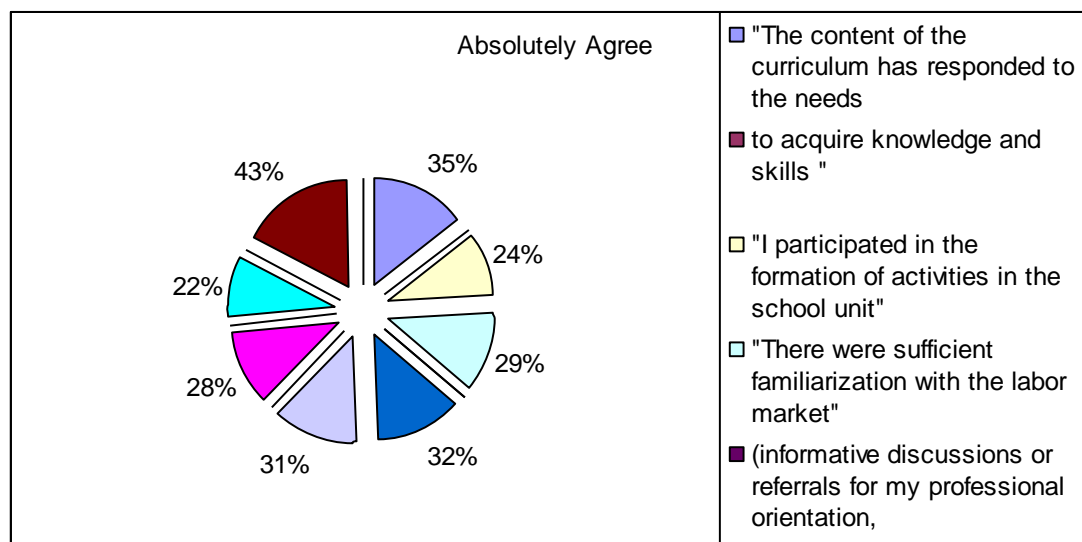
During the first phase of the apprenticeship, the apprentice (s) supported that he first offered professional experience (33%) and increased knowledge

⁵ **Cedefop (2018).** *Apprenticeship review: Greece. Modernising and expanding apprenticeships in Greece* Luxembourg: Publications Office. Thematic country reviews.

⁶ Available http://www.iep.edu.gr/images/IEP/EPISTIMONIKI_YPIRESIA/Epist_Monades/B_Kyklos/Tee/2018/2018-03-15_iep_final_report.pdf

and skills (20%). At a rate that did not exceed 15%, he thought he would manage to be introduced into the labor market or will present him / her with more opportunities in the labor market.

	Absolutely Agree	Agree
"The content of the curriculum has responded to the needs to acquire knowledge and skills "	35%	46%
"I participated in the formation of activities in the school unit"	24%	55%
"There were sufficient familiarization with the labor market" (informative discussions or referrals for my professional orientation, market trends in this area, opportunities, etc.)	29%	45%
"There was sufficient encouragement for workplace initiatives"	32%	42%
"Each module of the curriculum was understandable in terms of its content "	31%	48%
"The time given to each module was sufficient to gain knowledge and skills "	28%	43%
"Appraisal methods in apprenticeship were linked to Content of the Study Program "	22%	49%
"The knowledge you gain from the apprenticeship will be applicable to you future jobs"	43%	39%



Absolutely agreed (48%) with the design and implementation of Program apprenticeship. There was a great deal of cooperation between them apprentices and teachers (55%), 50% replied that there was help from the teacher supervisor in any difficulties faced by the apprentices at the time during the apprenticeship.

According to their answers, the apprentice (s) stated that have acquired or strengthened skills such as:

- "hard work" (59% declared "too much" and 28% "very")

- "co-operation" (56% declared "too much" and 31% "very much")
- "interest in new knowledge" (54% said "too much" and 32% "very much")
- "organizational" (53% declared "too much" and 28% "very much")
- "job consistency" (48% said "too much" and 35% "very much")
- "communication skills" (47% said "too much" and 34% "very much")
- "development of innovative ideas" (32%)
- "parallel performance of multiple tasks" (38%)

Overall,

- 78% of apprentices described the experience as positive apprenticeship and just 18.8% negative, while 3% held a neutral position.
- With regard to their expectations, over 30% said they were satisfied "too much" to "much". Only 11% responded that they had expectations that were finally unsatisfied about its implementation of the institution as they met it.
- Apprenticeship was rated by 33% of apprentices as a useful learning experience, creating the conditions for obtaining a work permit or an exercise permit profession (29%).
- 19% felt that the apprenticeship institution was the same as employment.
- 61% of apprentices believe that the knowledge they received in the duration of study at the EPAL, either "very" or "too much" at the time duration of the apprenticeship, while 9% replied that it did not apply all the thematic units of the Study Program in the workplace. Specifically, by specialty were absent as thematic in the workplace.

Teachers, who teach in EPAL (70% to 81%) agree that content of the curriculum:

- enhances cooperative skills
- encourages the use of ICT tools
- promotes professional consciousness
- promotes safety and health at work
- cultivates communication skills
- involves the apprentice / learner in alternative ways of approaching it knowledge
- upgrades the knowledge / skills / competences acquired during the course of the three classes of EPA. And cultivates problem-solving skills.

Statements in which teachers disagreed more strongly, at rates of 15% up to 22% were as follows:



- adequately covers the professional needs of the specialty
- strengthens environmental consciousness
- promotes innovation / entrepreneurship
- provides opportunities for innovative action in the teacher

Finally, statements in which teachers did not receive a positive or negative position in a higher percentage (from 23% to 30%) were the following:

- promotes innovation / entrepreneurship
- adequately covers the professional needs of the specialty
- provides opportunities for innovative action in the teacher
- strengthens environmental consciousness
- has a clear module structure

As regards the procedures and the duration of the "post-graduate year - apprenticeship class" applied to the school the teachers stated the following:

- *The question about whether the teachers had been informed about the the procedures for implementing the "post-graduate year of apprenticeship" were about half of the teachers (52%) said they disagreed, while at less (24%) teachers said they were in agreement with above statement.*
- *The question as to whether the program's time span apprenticeship (9 months) was sufficient to achieve learning results of the apprenticeship rates of agreement and disagreement teachers are almost equally distributed (42% and 38%).*
- *In the majority of them, teachers (64%) agree that the allocation of hours of the apprenticeship program at the school unit (or EC) / business (7/28 hours) was rational for achieving learning outcomes while in less (19%) teachers responded that they did not agree with it above statement.*
- *The question as to whether the duration of the flexible zone was sufficient for to meet their particular educational needs and interests pupils / students almost half of the teachers (49%) said they agreed while a lower percentage of teachers (30%) said they disagreed.*
- *The question about whether the available laboratory equipment was sufficient to carry out the activities the teachers replied (42%) and 32% of teachers said in this question they disagree.*

Conclusion

As priorities of IEP for school year 2018-19 is the training and professional development of teachers for VET education :

- In the content of the institutional framework and the procedures for the implementation of the post-graduate year of apprenticeship

- In postgraduate studies - apprenticeship year
- The basic principles of adult education
- Innovative teaching methods in vocational education
- Safety and health issues of work, counseling, career guidance and entrepreneurship.

According to Cedefop (2018) the Key functions at local level for apprenticeship system in Greece ⁷

- Support relevance and quality of the school-based component
- Improve guidance coordination and attract learners
- Introduce coordinated practices to attract and support companies
- Support quality in workplace learning
- Setting an intervention plan

Comparative analysis with European guidelines

Recent European study has shown that Apprenticeship based Vocational Education and Training seems to be the most effective tool in combatting youth unemployment, which is currently one of the most serious problems in most southern EU countries. Apart from its overall role in implementing the government policy on employment, OAED is the only national agency that offers vocational education within the framework of formal secondary education by means of the Apprenticeship Dual System. It has implemented the institution of Apprenticeship in 51 Vocational Education Schools (Apprenticeship Schools – EPAS) through Greece, since 1952.

EPAS students attend theoretical and laboratory classes at the EPAS School and do their work practice at the employer's premises, while in the afternoon they attend theoretical and laboratory classes at the EPAS. On the 5th day, they only attend classes at the EPAS.

3.1.2 Italy

Overview of the structure of the national educational system with main reference on upper secondary technical and vocational education system (reference: ISCED 3 systems)

⁷ Cedefop (2018) Apprenticeship review: Greece – Modernising and expanding apprenticeships in Greece
Thematic country reviews
www.cedefop.europa.eu/files/4160_en.pdf



The Italian system of education and training is organized as follows:

- Kindergarten (3 to 6 years), not mandatory, it provides for a term of three years;
- First cycle of education, divided into **primary school** (five years) and **secondary school** level (three years);
- Second cycle, which is composed by **upper secondary education system** (five years), and **education and vocational training**, (three-year and four-year courses);
- Higher education: university, high art and music education (AFAM), and schools of hightechnological specialization(ITS);

Education is compulsory and free for 10 years, including the first cycle and the first two years of the second cycle.

The legislation provides for the fulfillment of the right-duty to education and training for at least 12 years or until the achievement of a vocational qualification within 18 years of age. Completed their compulsory education, therefore, young people should continue in the second cycle of the education system.

The training framework also offers the following opportunities:

- the Higher technical education and training (IFTS);
- vocational training post-qualification, post diploma and post-graduate;
- apprenticeship;
- adult education (EDA);
- continuous training; and
- the private provision of training.

In addition to education and training pathways, the Regions and Autonomous Provinces have competence in the field of vocational training and the organization of additional activities for young people and adults.

The basic vocational training

After the end of the first cycle of education, students who do not wish to continue their studies within the school system can achieve a professional qualification in the field of basic vocational training, also known as Level I, managed at Regional level, aimed at acquiring specific professional, theoretical and technical skills (including work-experience in enterprise).

Under the old system, students could attend vocational courses after the age of fifteen. It lasted at least two years and were structured as certifiable cycles characterized by a initial guidance and support for the student, work-experience in enterprise and the possibility of a third year of specialization at the end of which was issued with a certificate in the specialty.

Instead, under the new system, these courses within the vocational education and training channel may begin after completion of secondary school and will last at least three years. Courses cover almost all sectors of the economy.

VET at upper secondary level

The post-secondary education (6-12 months) also called level II, managed at regional level, is aimed at acquiring vocational (theoretical, technical, technological and management) skills, including practical work and experience in enterprise. It generally enters upper secondary school diploma. At the end it is awarded a certificate of competency.

Technical education is provided by State technical colleges (5 years) and leads to the award, after a State exam, a technical baccalaureate for holding mid-level tasks in a plurality of sectors (agriculture, commerce, tourism, surveying, industry, water); the certificate also allows university admission or post-secondary studies. The courses are organized in two years and three years. The curriculum includes the teaching of both subjects: Italian language, foreign language, mathematics, history, science, etc, and subjects specific to each specialization.

Vocational education is delivered by professional state institutions (sectors: agriculture, industry and crafts, services sectors) and leads to the award of a diploma of professional qualification (three years) that allows: entering the world of work; the post-qualification courses (two years) organized by professional institutions; attendance of vocational training courses Level II managed at regional level. The post-qualification courses are aimed to obtain a vocational diploma for university entrance or to attend regional and other post-secondary courses of specialization.

Three- and four-year leFP programmes

The leFP programmes (*percorsi triennali e quadriennali di istruzione e formazione professionale*) offer young people the opportunity to fulfill their right/duty to education and training. The training is designed and organised by Regions.

Over the past few years, increased cooperation between State, regions and provinces has made these programs more flexible. In 2011, regulations issued by the State-Regions conference, have introduced several important systemic elements:

- (a) a set of training standards for basic skills to be developed in the three- and four-year programs;
- (b) a set of minimum standards (valid at national level) for technical and vocational skills in relation to the occupation profiles included in the national qualifications register (*Repertorio nazionale delle qualifiche*);
- (c) intermediate and final certifications that are valid at national level. The national qualifications register created in 2011 (10) contains the national occupation profiles and the corresponding qualifications and programs or learning pathways, as well as minimum education and training standards (valid at national level). Qualifications leading to a certain national occupation profile need to be described in terms of learning outcomes and to be allocated the corresponding EQF level.

The leFP programs are organised in training modules and aim to develop basic, transversal and technical-professional skills. This modularisation allows learners to change areas of study through recognition of credits. On-the-job training activities (especially internships) play a key role and are carried out under the supervision of two tutors, one from the training centre and one from the enterprise. Methods include traditional classroom teaching, simulations, role play, and cooperative learning. Active teaching methods are highly recommended to meet learner needs. Statistics (ISFOL, 2013a) show that over 300,000 people enrolled in three year leFP programs in 2012/13. Of these, almost 163,000 were enrolled in programs at upper secondary vocational schools and almost 128,000 in training centers. This represents an increase of 18% in enrolments compared to the previous year, a positive trend due to increase in enrolments in three-year leFP programs at upper secondary vocational schools. Learners in these leFP programs train for occupations in Food services (58,424), while those enrolled in training **centers prefer training for occupations in the wellness sector (32,240 students).** During 2012/13, an increase in enrolments was also registered in the four year leFP: 9 471 more students enrolled in 2012/13 compared to previous year.

Data from ISFOL show that in 2013, 50% of those who have acquired a leFP qualification in the past three years are employed (ISFOL, 2014a).

Post-leFP programs and others

People who have completed the three- or four-year vocational training leFP and those who have obtained an upper secondary diploma can access specific training organised by Regions or Autonomous Provinces. These training courses (13) are generally targeted at young unemployed people, adults, migrants and disabled people. They generally last 400 to 600 hours and are jointly financed by the European Social Fund (ESF). Upon completion, a regional vocational certificate /a 'second level qualification' is awarded. These courses aim at acquiring theoretical, technical and management skills. Practical work experiences and traineeship are generally required. Admission is often subject to selective procedures that may include admission tests or interviews.

A minimum number of learners are usually required to start a course. Classes are organised according to conditions specified by the course announcement (such as being unemployed, holding a specific qualification or diploma) and not according to learner age.

Courses are job-oriented and should meet the requests coming from the local labor market. They lead to a regional qualification, corresponding to specific professional areas, although these are not listed in the national register of qualifications.

Courses are organised in modules or units corresponding to specific themes or to the acquisition of specified competences. Timetables are organised at regional and local level and subsequently defined by the training centre providing the course: lessons may be grouped in a few weeks or distributed throughout the year. The organisation of courses is decentralised and general information on the content of the curriculum is not available at the national level. Methods may include traditional classroom teaching, simulations, role play, and collaborative learning. Active teaching methods are recommended, helping learners to acquire cultural and technical/occupational competences through practice. Job placements are mandatory, due to the job-oriented characteristic of these courses, and are organised in collaboration with enterprises. Distance learning is widespread. Learners generally undergo intermediate assessments through tests or submission of individual works. They sit a final exam that can be either written or oral/practical. A minimum attendance of two thirds of the total timetable is required to be admitted to the final exam. These courses are organised by training centres (14) accredited by the regions and are not homogeneously offered in the country. They lead to a qualification certificate awarded by the regions according to their own specific register, not recognised nationally. There is no national register of qualifications for regional courses.

In Italy the training partnership between school and the working world has experienced in recent years changes:

- Strengthening the training offer in alternating training, provided by the Law of 13 July 2015, n. 107;

- The enhancement of apprenticeship for the acquisition of a secondary school diploma, according to the changes introduced by Legislative Decree 15 June 2015, n. 81 implementation of the JOBS ACT 1.

The training offer enhancement in alternating training is readily observed in the Law of 13 July 2015, 107, entitled "Reform of the national education and training system and powers in the reorganization of the existing legislative provisions", which entered this teaching strategy organically in all branches of study of secondary school degree as an integral part of education paths. The role of alternating training in the education system comes out decisively strengthened. The 107/2015 law establishes, for each branches of study, the minimum number of hours required to activate the experiences of alternating training that will involve students from the third class. In this new model, the characteristics of school- work experiences outlined by previous laws change radically: teaching methodology activated by schools become a structural component of school curricula "in order to increase job opportunities and abilities of student orientation".



In Italy, the definition “vocational education and training” tends to be ‘reserved’ for specific programs primarily organized by Regions and Autonomous Provinces (such as leFP).

From a European perspective the term ‘education and training’ comprises all types and levels of education and vocational education and training (VET).

Regardless to the governance scheme, VET can take place at secondary, post-secondary or tertiary level in formal education and training or non-formal settings including active labor market measures. VET addresses young people and adults and can be school-based, company-based or combine school- and company-based learning (apprenticeships). Therefore, the term VET also covers the technical and

vocational schools.

VET in Italy's education and training system

Post-higher education VET

Those who have completed a university degree can access to post-higher education courses offering a *specialisation* in a specific field. These are organized by regions or the autonomous provinces and last between 400 and 600 hours (rarely two years), leading to a regional qualification that corresponds to specific occupation areas not listed in the national register of qualifications. These courses may be exclusively addressed to disadvantaged groups (such as migrants, Roma population, disabled people, certain age groups) with the aim of increasing their labor market integration.

National regulatory framework

In Italy a state school system or Education System was established by the 1859, when the Legge Casati (Casati Act) mandated educational responsibilities for the forthcoming Italian state (Italian unification took place in 1861). The Casati Act made primary education compulsory, and had the goal of increasing literacy. This law gave control of primary education to the single towns, of secondary education to the provinces, and the universities were managed by the State. Even with the Casati Act, in rural (and southern) areas children often were not sent to school (the rate of children enrolled in primary education would reach 90% only after 70's years) and the illiteracy rate (which was nearly 80% in 1861) took more than 50 years to halve.

The next important law concerning the Italian education system was the *Legge Gentile*, issued in 1923, thus when Benito Mussolini and his National Fascist Party were in power. In fact, Giovanni Gentile was appointed the task of creating an education system deemed fit for the fascist system. The compulsory age of education was raised to 14 years, and was somewhat based on a ladder system: after the first five years of primary education, student could choose 'Scuola media', which would give further access to the "liceo" and other secondary education, or the 'avviamento al lavoro' (work training), which was intended to give a quick entry into the lower level of the workforce. The reform enhanced the role of the *Liceo Classico*, created by the Casati Act in 1859 (and intended during the Fascist era as the peak of secondary education, with the goal of forming the future upper classes), and created the Technical, Commercial and

Industrial institutes and the *Liceo Scientifico*. The *Liceo Classico* was the only secondary school that gave access to all types of higher education until 1968. The influence of Gentile's Idealism was great,^[4] and he considered the Catholic religion to be the "fundament and crowning" of education. In 1962 the 'avviamento al lavoro' was abolished, and all children until 14 years had to follow a single program, encompassing primary education (*scuola elementare*) and middle school (*scuola media*).

From 1962 to the present day, the main structure of Italian primary (and secondary) education remained largely unchanged, even if some modifications were made: a narrowing of the gap between males and females (through the merging of the two distinct programmes for *technical education*, and the optional introduction of mixed-gender gym classes), a change in the structure of secondary school (*legge Berlinguer*) and the creation of new *licei*, 'istituti tecnici' and 'istituti professionali', giving the student more choices in their paths.

In 1999, in accordance with the guidelines laid down by the Bologna Process, the Italian university system switched from the old system (*vecchio ordinamento*, which led to the traditional 5-year *Laurea* degree), to the new system (*nuovo ordinamento*). The *nuovo ordinamento* split the former *Laurea* into two tracks: the *Laurea triennale* (a three-year degree akin to the Bachelor's Degree), followed by the 2-year *Laurea specialistica* (Master's Degree), the latter renamed *Laurea Magistrale* in 2007. A credit system was established to quantify the amount of work needed by each course and exam (25 work hours = 1 credit), as well as enhance the possibility to change course of studies and facilitate the transfer of credits for further studies or go on exchange (e.g. Erasmus Programme) in another country. However, it is now established that there is just a five-year degree "Laurea Magistrale a Ciclo Unico" for programmes such as Law and a six-year degree for Medicine.

Law 236/1993 finances in-company training, teacher training, system actions, sectoral and territorial plans promoted by the social partners, and individual training (through vouchers). It also allocates a yearly budget of around EUR 100 million which is managed by Regions.

Law 53/2000 finances training leave in accordance with the regulation on working hours, using training vouchers. It recognises workers' right to lifelong learning by granting leave for training activities and establishes that EUR 15 million are allocated annually by the MLPS to support employee training.

Almost EUR 400 million come from the ESF to support continuing training financed by the EUR 500 million from the joint Inter-professional Funds.

The competent authorities for the ESF and Laws 236/1993 and 53/2000 are the MLPS, the regions, the autonomous provinces and the provinces that may delegate other bodies.

The government, regions and social partners agreed to allocate financial resources to promote training programs for low-qualified workers and for worker most affected by the economic crisis. The following measures have been adopted:

- ✓ establishment of a specific government unit responsible for collecting data on skills needs and occupation profiles required in specific sectors at local level;
- ✓ the labor market reform law (Law 92/2012) provided for the creation of an integrated information system on training and welfare policies for employment at local level;
- ✓ broader adoption of outcome-oriented learning methods;
- ✓ incentives to adults, also through:
 - agreements aimed at providing new employment opportunities for laid - off workers;
 - use of joint interprofessional funds to provide training opportunities for the unemployed;
 - launch of a quality assurance system at regional level

Lex 107/2015

The strengthening of alternating training, in Law 13 July 2015, 107, follows three main lines:

- orientation activities, aimed at students enrolled in the last year to facilitate conscious choice of study program and encourage awareness of opportunities and employment opportunities (including the measures provided by the European program "Youth Guarantee").
- definition of rights and duties of secondary school students engaged in alternating training or in internships/ apprenticeship experiences.
- introduction of measures for teacher training, aimed at increasing skills to support the alternating training courses through training periods at public or business entities.

The Article 8-bis introduces also periods of in-company training for students attending last two years of secondary school, through "apprendistato" experiences.

Finally, Article 1- paragraphs 33/ 43 systematizes the combined school -work experiences in the second cycle of education, through:

- the mandatory introduction of alternating training in the second, third and last year, with a defined minimum hour amount total (at least 400 hours in technical and vocational institutes and at least 200 hours in high schools), that will be included in the three-year plan of educational offer;

- the promotion of specific agreements with professional associations and entities carrying out activities related to artistic, cultural and environmental field or sports promotion bodies recognized by CONI;
- the possibility to realize the alternating training during the suspension of teaching activities and abroad, as well as with the simulated enterprise model;
- the enactment of a regulation called "Charter of rights and duties of students in alternating training ", that provides the possibility for the student to express an evaluation of effectiveness and coherence with their field of study;
- the allocation of 100 million euro per year from the 2016 to develop the alternating training. These resources fund the management of alternating activities, technical assistance and monitoring;
- the award to the school manager of the task of identifying companies and public bodies and private available for the activation of alternating training. Such agreements may be signed with museums and other cultural venues, as well as with the central and local offices the Ministry of National Heritage and Culture;
- the constitution of the national registry for alternating training by Chambers of Commerce, Industry, Handicraft and Agriculture, where find companies and public and private agencies available to accept students for alternate routes (How many young people, and for what periods).

The main points of the reform are:

- **Introduction of yearly meritocratic components in teachers' salaries:** teachers with the best results of each school will receive a one-time bonus. The head teacher will identify teachers with the best results by applying the criteria established by the evaluation committee of the school teachers. The committee will consist of:
 - i. the head teacher;
 - ii. three teachers;
 - iii. an external evaluator (a teacher or director of another school or even an inspector);
 - iv. two representatives of the parents (in kindergartens, primary and secondary schools) or a representative of the parents and a student representative (in the second-level secondary schools).

In 2018, based on an evaluation of the first three years of implementation, the Ministry of Education, University and Research will establish national guidelines for the evaluation of teachers. For this measure has been allocated EUR 200 million a year. This is a positive

initiative since it is expected that the work of teachers is evaluated and the good results are rewarded.

- **Recruitment of teachers:** between 2015 and 2016 more than 100,000 teachers, who have so far exercised its work on temporary contracts, will be hired on permanent contracts. While about half of these teachers is needed to cover existing chairs, the other half will occupy new places. Their role will enhance the educational program offered by each school, both in terms of both teaching materials regarding other aspects, including the reduction of early school leaving and improving the knowledge of the Italian language by foreign students. The recruitment plan aims to solve the old problem of lists of qualified teachers. As a whole is a positive measure, provided that the government meets its commitment to allow access to the profession only through public competitions from 2016 onwards. One potential problem is that it is unclear to what extent the skills of additional teachers really correspond to the needs of individual schools.
- **School autonomy:** school leaders will have greater autonomy in the management of human resources, technological and financial resources and will be subject to external evaluation every three years. Also from 2016/2017 onwards will be free to select new teachers within specific classes of competition, depending on the needs of their school. It is potentially far-reaching measures, as attenuate a number of constraints that have so far limited the real school autonomy.
- **Curriculum:** Will be established or strengthened some subjects: music, art, economics, law and sports. In particular, the introduction / strengthening of teaching economy can help raise Financial literacy levels of Italian students, which, nowadays, are very low by the International standards (OECD 2014b). The second-level secondary schools enjoy flexibility in setting their own curriculum through the introduction of optional school-subjects.

Article 1, paragraph 60, of the 107/2015 law, introduces the Territorial laboratories for employability, whose state schools and educational institutions of the second degree can also. They can be structured in technical and professional poles.

It is a new generation of workshops:

- also open during non-class time, to combat early school leaving and to recover Neet, young people not enrolled in courses of study or in the workplace;
- open to the territory to stimulate professional growth, skills and self-employment, joining together innovation, education, inclusion, including through the participation of public and local authorities, chambers of commerce, universities, associations, foundations, the training institutions, Higher Technical Institutes and private companies.

School and educational institutions have the following objectives:

- a) opening schools to the territory and allow the possibility of using spaces, even outside school hours;
- b) orientation of teaching and training in strategic sectors of Made in Italy, based on the productive vocation, cultural and social characteristics of each territory

**Ongoing reforms/policy developments/ ministerial/national guidelines/
Country-specific Recommendations
(CSRs)**

The Youth Guarantee

In the past years, guidance and counseling received new impetus by the launch of the Youth Guarantee Program. Following the 2013 European Council Recommendations, Italy launched its Youth Guarantee Program which became operational in May 2014. According to the National Youth Guarantee Plan, every young aged 15 to 29 years has the right to receive a good quality offer of employment, a place in training or apprenticeship or an offer to return to education, within four months of leaving formal education or becoming unemployed.

The program assigns a strengthened role to guidance and counseling services. Each young person's individual needs are assessed to provide a personally tailored offer. Young people interested in receiving information or participating in the program can register through the web portal *Cliclavoro*, regional web portals or the youth guarantee website and choose the best employment services (first information, guidance, training agreement, job coaching and job provision).

Various institutions and associations, including chambers of commerce, trade unions and employer associations, youth and third sector organisations are involved in communication and providing information. Regional authorities will be entrusted with implementing the plan through memoranda of understanding and government will launch a reform of the employment services through partnerships between businesses, public institutions and non-profit organisations.

After registration and a preliminary interview, young people will be supported through individual guidance to help them define tailor-made training and/or suitable career choices.

Those who meet the formal requirements will be offered direct financing (such as bonus or vouchers) to access a range of potential programs, including job placements via an employment contract, apprenticeships or traineeships, specific training and coaching to start a business or become self-employed. By July 2014, 119 092 young people had registered in the youth guaranteeweb portals. The majority live in Sicily (17%), followed byCampania (16.5%) and Lazio (8%). The public employment services (PES) hadcontacted 13 770 young people; 5 860 had had their first guidance/profilinginterview. Under an agreement with employer associations the youth guaranteewebsite also serves as a matching tool between labor demand and supplyas employers can advertise their vacancies there. By July 2014, 3 658employment opportunities, accounting for 5 312 vacancies, had been published.

Other recent initiatives

‘Education starts again’ was launched in 2013 and has a budget of EUR 6.6 million. It involves all types and levels of schools that will appoint a guidance counselor who liaises with other teachers and with the local guidance network. Specific training courses for teachers are available. Activities to increase awareness and parent involvement are also included in this initiative. The web portal ‘I choose, I study’ was launched in early 2014 by the MIUR and targets parents and young people. The portal gathers all basic information on the different education programs and options. Through this website experts can be asked for advice; it also includes short videos with personalities from business, science and industry explaining how they achieved their goals.

VET governance

Responsibilities are shared among the different actors involved in planning and organising VET as follows:

- ❖ the Ministry of Education, University and Research (MIUR) sets the framework for VET in national school programs (technical and vocational schools) for ITS and IFTS;
- ❖ the Ministry of Labor and Social Policies (MLPS) sets the framework for leFP, while the regions and autonomous provinces are in charge of planning, organisation and provision;
- ❖ regions and autonomous provinces are also in charge of planning, organisation and provision of ITS, IFTS, post leFP, post-higher education, and most of the apprenticeship-type schemes;
- ❖ goals of CVT under the public system are set by the Ministry of Labor, while CVT activities are managed by either regions and autonomous provinces or social partners;
- ❖ social partners play an important role in promoting company-level training plans (single or group of companies) to be financed by the regions or by the joint Inter-Professional Funds;
- ❖ the social partners have a general advisory role in VET policy, from which VET provision is then defined;
- ❖ the social partners contribute to designing and organising active labor market policies

Comparative analysis with European guidelines (identifying strengths and weaknesses, similarities and differences)

In recent years Italy has made progress in improving its education system: basic skills – according to international studies – have improved, drop-out rate is decreasing and early childhood education is almost universal among children between four and six years.

Furthermore, the new reform of the national education and training system could further improve educational outcomes.

However, the Italian system of education and training still suffers from some major problems:

- the rate of school dropout is still above the EU average;
- there are considerable regional differences in basic skills;
- the tertiary level of education of young people is the most lowest in the EU and many students still leave tertiary education.
- work – learning based is not sufficiently developed and the access to the labor market is still difficult for young people, including those highly qualified.
- public spending on education, is among the lowest in the EU, in particular for education at tertiary level.
- while the participation of students in upper secondary schools of vocational or technical education or vocational training remains above the EU average (59.4% compared to 48.9% in 2013), the employment rate of young people who have recently achieved upper secondary school diploma is the lowest in the EU (38.3% in 2014). This is because of the inadequate development of work-based learning (in 2013/2014 only 10.7% of students in upper secondary school participated in the alternating training, although this percentage registers an upward trend in recent years (INDIRE 2014). Furthermore Italy has the second highest percentage in the EU (26.2% of people aged between 15 and 29 years in 2014), after Greece (26.7%) of NEET (young people who do not work and are not inserted in education or training).
- the adults participation in lifelong learning has increased by 1.8 percentage points in 2014, but it remains below the EU average (8.0% compared to 10.7% in 2014). This is due to extremely low participation of people with a low level of education (2.2% than the EU average of 4.4%). Participation rates of adults with educational levels medium or high are in line with the corresponding EU averages. In the field of work-based learning, in addition to measures included in the reform of school, the recent labor market reform aims to a major overhaul of the apprenticeship system. In particular, it allows students to use apprenticeship to acquire upper secondary education qualifications and simplifies the requirements training for apprenticeships.

3.1.3. Spain

The education system in Spain is decentralized, with different levels falling under the responsibility of the Ministry of Education, Culture and Sports (hereinafter MEC) and the Regional Ministries of Education. The MEC is responsible for developing and implementing



the basic legislation on education. The autonomous communities have responsibilities for VET, consisting of developing and applying the basic regulations enforced by the MECD.

The common framework established by the MECD foresees an educational system structured in general education and special education as shown in figure 2. All those categories of education are regulated by the same legislative corpus (see next section) unless the higher education (university studies).

Organization of education and training system in Spain	
General education	Special education
1.- Child education (<i>Educación infantil</i>)	1.- Artistic education
2.- Primary education (<i>Educación primaria</i>)	2.- Language education
3.- Secondary education (<i>Educación secundaria obligatoria</i>)	3.- Sport education
4.- High school (<i>Bachillerato</i>)	
5.- Professional training (<i>Formación profesional</i>)	
6.- Higher education (<i>Educación universitaria</i>)	
7.- Adaptation of learning to students with special educational needs (<i>Adecuación de las enseñanzas anteriores al alumnado con necesidades educativas especiales</i>).	
8.- Education in distance for students who cannot attend in a regular basis to the school.	
9.- Education of adults.	

Figure 5 Organization of education and training system in Spain

In the following subsections we will briefly present the general education pathways to access to the Vocational Education and Training in Spain with include the earliest stages of the general education to the last ones with the exception of the University Studies.

Child education
 Co-funded by the Erasmus+ Programme of the European Union


The child or pre-primary education in Spain includes education of children up to 6 years old. At age of 6 children are enrolled in the compulsory education. Pre-primary education is optional and its finality is to contribute to the physical, affective, social and intellectual development of the child. It is organized in two stages, the first one for children from 0 to 3 years old, and the second one for children from 3 to 6 years old; this second stage is free of charge.

Primary education

The primary education in Spain is both compulsory and public. This stage includes six scholar courses to be completed from 6 to 12 years old. The aim of the primary education is to provide a common education that facilitates the acquisition of basic cultural knowledge, learning about oral expression, reading, writing and mathematical skills as well as a progressive autonomy.

Primary teachers have competences to teach all the subjects of this level with the exception of music, physical education and foreign languages which are given by specialized teachers.

In primary education pupils move forward from one course to the next one if it is considered that they have reached the corresponding competences. If this were not the case, they could repeat one course during this stage with a specific plan to reinforce and support the learning.

Secondary Education

The aims of the secondary education are to provide all the basic elements of culture, to train students to accomplish their duties and exercise their right, to develop and consolidate their study and work habits and to train them for their integration in higher levels of education and in the labour market.

The secondary education complements the primary education and includes four academic courses from 12 to 16 years old.

Students who complete this educational level satisfactorily will receive the title of Graduate in Secondary Compulsory Education that allows enrolling in High School and in Medium Vocational Training. In all cases, after finalizing the Secondary School the students are given an accreditation of the educational centre which states the years undertaken and the qualifications obtained in the different areas or subjects.

The teachers in this level are university graduates or professionals with equivalent education.

High School

The objective of High Schools is to provide students with the intellectual and human maturity and with knowledge and skills to carry out social functions with responsibility and competence.

As well, High School degree is not compulsory and it allows enrolling in High Vocational Training and university studies.

High School is composed by two academic years usually perform between the 16 and 18 years old and of three different categories:

- Arts (Modality including two paths: Plastic arts, design and image; and Scenic arts, music and dance).
- Science and technology.
- Humanities and social sciences.

To enrol in High School it is compulsory to hold the Graduate in Secondary Compulsory Education. Students who pass High School receive the certificate of High School Graduate, that enables to access to the High Vocational Education and university studies. In the last case, it is necessary also to pass an access exam.

To teach in High School it is compulsory to hold the same accreditation that teachers in Secondary School.

Basic Vocational Training

The Basic Vocational Training is free and to access to it is compulsory to accomplish with the following requirements:

1. To be 15 years old and not older than 17 years old at the end of the first course.
2. To have finished the first two years of the Secondary Education.
3. To have been proposed by the team of teachers of the Secondary Education to continue the compulsory education by this pathway.

This training has a modular structure including professional modules to guarantee the acquisition of competences for lifelong learning, the necessary skills for labour inclusion and another one for Training in Labour Centres to be performed within a company with the fundamental objective of complete the acquisition of the professional skills developed in the educational centre.

Basic Vocational Training includes 2.000 hours of training, corresponding to two academic full time courses. The duration of the Basic Vocational Training can be increased to three academic years if it is integrated in programmes of dual vocational training.

Students who pass this educational stage obtain the degree on Basic Vocational Training and they can also obtain the title on Graduate in Secondary Compulsory Education after passing a final evaluation.

Intermediate Vocational Training

The access to Intermediate Vocational Training is generally gained by holding the Graduate in Secondary Compulsory Education but it can also be gained by passing a test regulated by the corresponding educational administration.

This stage of learning has a modular structure, including a module for Training in Labour Centres to be undertaken in companies with the fundamental objective of completing the acquisition of professional skills.

The students who pass this educational path will receive an intermediate-level VET diploma that is the accreditation as Technicians in the respective area of knowledge.

High Vocational Training

The access to High Vocational Training requires holding the High School Degree and it is a post-compulsory education. As in the case of Intermediate Vocational Training, the intermediate-level VET diploma gives access to higher VET level. It can also be gained by passing a test regulated by the corresponding educational administration.

Again, this stage of learning has a modular structure, including a module for Training in Labour Centres to be undertaken in companies with the fundamental objective of completing the acquisition of professional skills.

The students finishing this educational pathway will receive the high-level VET diploma and students hold the title of Higher Technician in the respective area of knowledge.

Education and training Directions (curriculum specifications)

The Ministry of Education, Culture and Sports (MECD)

The Vocational Education and Training (VET) in Spain depend on the Autonomous Communities (*Comunidades Autónomas*) and since the implementation of the Bolonia Plan in 2009, it is structured in ECTS. The VET is organized in three cycles (Basic, Intermediate and High) of two years each and with 120 ECTS per cycle.

The main requirements for accessing to the VET in Spain have been already described in the previous section.

Legislation

The Spanish Educational Systems is characterized by a continuous change of the educational law. The basic legislation regulating education is based on the article 27 of the Spanish Constitution and the development of the common legislation within all the territory by “organic” laws.

The article 27 of the Spanish Constitution promulgates the following rights:

1. *Everyone has the right to education. Freedom of instruction is recognized.*
2. *The objective of education shall be the full development of the human personality in respect for the democratic principles of coexistence and the basic rights and liberties.*
3. *The public authorities guarantee the right which will be assist parents to have their children receive the religious and moral formation which is in keeping with their own convictions.*
4. *Basis education is obligatory and free.*
5. *The public authorities guarantee the right of all to education through a general educational program, with the effective participation of all the sectors affected, and the creation of educational centres.*
6. *The freedom of physical and legal persons to create educational centres which respect constitutional principles is recognized.*
7. *Teachers, parents, and in some cases, the students, shall participate in the control and management of all centres maintained by the Administration with public funds, under the terms established by law.*
8. *The public authorities shall inspect and standardize the educational system so as to guarantee compliance with the laws.*
9. *The public authorities shall help the teaching centres with meet the requirements established by law.*
10. *The autonomy of universities is recognized under the terms established by law.*

During the democratic period in Spain the following legislation have been promulgated⁸:

- Organic Law regulating the Right to Education of 3rd of July 1985.
- Royal Decree developing the previous Organic Law (Right to Education)
- Organic Law regulating the General Organization of the Spanish Educational System of 1990 (LOGSE)
- Organic Law of Quality of the Education of 2002 (LOCE)
- Organic Law of Education of 2006 (LOE)

⁸ This list just includes the more relevant legislation affecting all the Spanish territory.

- Organic Law of Improvement for the Educational Quality of 2013 (LOMCE)

4.2. Overview of national evaluation model

3.2.1 Greece

Assessment, progression and certification in Greek Educational System

Based on the Presidential Decree 409/1994 student assessment is regarded as an on-going pedagogical process which creates the possibility of following the student's learning progress, of determining its final results and of evaluating the different aspects of the pupil's personality as related to the school's task. The goal is to continue improving the teaching process and more generally the operation of the school, and also to inform teachers and pupils about the results of their efforts, in such a manner as to achieve the best possible learning results. Assessment does not refer only to the students' performance in the various subjects but also to other features, such as: effort, interest, initiative, creativity, cooperation with other people and respect towards the rules of the school.

Student assessment is based on:

- Day to day oral examination and the student's total participation in the teaching-learning process.
- Short written tests.
- Hour-long compulsory written tests which are given without notice in each of the first two three-month terms, and cover the material of a broader teaching unit under the condition that relative revision has preceded the test.
- The assignments fulfilled by the pupils at school or at home, as part of their daily obligations that contribute to the learning process.
- The composite creative projects undertaken by the pupil either alone or in cooperation with classmates, on a subject of his/her choice and under the guidance of the teacher.
- Written review examinations at the end of the year are held right after classes finish, for all subjects except for Physical Education, Music, Household Economics, Technology, Art and School Vocational Guidance and also Information Technology in the first two Gymnasio grades.

On the finals the pupils are examined on the material for each subject which is specified as 3/5 of the material taught, providing that it is not less than half of the total curriculum material. The

mark assigned to the pupil's performance in each review examination is calculated as $\frac{1}{4}$ of the sum total of the three (3) term marks plus the mark that was received in the written final examination in June. In subjects that have no written final review examination, the annual mark is calculated as $\frac{1}{3}$ of the sum total of the three (3) term marks. In subjects taught for half the school year, the annual performance mark is based on $\frac{1}{3}$ of the sum total of the two three-month term marks plus the mark on the written examinations. The yearly mark for subjects that have branches constitutes the average of the final marks per branch.

3.2.2. Italy

The evaluation of learning, is carried out through a variety of assessment tools, ranging from the more traditional queries and class assignments, designed especially to detect the contents, to the evaluation of learning-teaching process, such as practical tests (for example the production of technical drawings). The final valuation models, ie the qualifying examination, while being quite varied at regional level, provide for a number of common elements presented below:

- formal requirements: frequency of 70% and 50% of the Stage.
- the exams are generally of three types:
 - theoretical or written test;
 - Practice Test which takes place in the laboratory or with machines or simulating the resolution of a problem through a case study;
 - oral interview or test.

In the definition of tests, some Regions / provinces leave autonomy to training centres, while others define a final test equal for all training institutions/professional centres.

The overall assessment that leads to the acquisition of the qualification certificate contributes to the assessment of the educational process training itself, with different weights depending on the different regions.

Finally, if on one hand the tools, the evidence and the access requirements of qualification examination are generally shared nationwide, on the other hand, the same does not happen in relation to the measurement scales used in the final vote. The methodology is different at regional level, and can range from matrix scale (in hundredths, tenths and thirty) to synthetic judgments.

Students evaluate one or more times a year, through satisfaction questionnaires, the teaching the teachers, the course organization and structure. In some organizations, this is part of standardized procedures related to internal quality control.

3.2.3 Spain

The national evaluation model established by the LOE has the following objectives (article 140.1):

- a. Contribute to the quality and equity of the education system.
- b. Guide education policies.
- c. Increase the transparency and efficacy of the education system.
- d. Offer information on the extent to which the targets for improvement as set by the Education Administrations have been met.
- e. Provide information on the extent to which the Spanish and European goals in education have been achieved, as well as on the fulfilment of the commitments regarding education made in relation to both the demands of Spanish society and the goals defined in the context of the European Union.

The institution responsible to carry out the evaluation of the educational system is the National Institute for Evaluation and Quality of the Education System –renamed Institute of Evaluation– and by the equivalent bodies designated by the Education Administrations, who will assess the education system in their area of competence (article 142 of the LOE).

The LOE regulates two types of evaluation of the Spanish Educational system: 1) the general evaluation of diagnosis, organized by the Evaluation institute of the Ministry of Education and the corresponding organism in the different autonomous communities; and 2) the diagnosis evaluation which are competence of the autonomous communities. While the general of evaluation of diagnosis are based on a representative sample of all the Spanish students, the second one are performed in all the students and for all the schools at the end of the primary and secondary education.

Since 2008-2009 the educational authorities of the Autonomous Communities perform the diagnostic evaluations in a standardize way (i.e. the same for all the students and applied in the same conditions), with tests developed by external agents to the center. Concretely in the Basque Country these evaluations have been conducted measuring the linguistic communication skills in Basque, Castilian and English, Math Competition, social and civic competence and scientific knowledge.

The national evaluation system will be modified with the implementation of the LOMCE that regulates the following assessments during the primary and secondary education:

Academic year Assessments

- 3rd Primary
 - Diagnostic evaluation to detect difficulties and implement improvement measures.
 - Each Autonomous Community carries these out and there are no academic repercussions.

- 6th Primary
 - External exam, the same for all students across the country. The Government will develop and design the evaluation criteria and characteristics for these tests.
 - Competencies are measured: what the student knows and what the student knows how to do.
 - The results will be informative and orientative for Secondary.

- 4th Secondary
 - External exam, the same for all students across the country. The Government will develop and design the evaluation criteria and characteristics for these tests.
 - There will be two final exams:
 - 4th Secondary: Academic. Successful students are awarded a Secondary Education Certificate (ESO Diploma) in Academic Education, which is necessary to enter Bachillerato – the post-compulsory stage of Schooling.
 - 4th Secondary: Applied. Successful students are awarded a Secondary Education Certificate (ESO Diploma) in Applied Education, which is necessary to enter Vocational studies at the Middle Grade Training Cycle level (Ciclos Formativos de Grado Medio)
 - Independently of the course studied at 4th Secondary, pupils can sit whichever one of the two exams, and if they should so wish, both of them.
 - This assessment has academic repercussions because students who pass are awarded the Secondary Education Certificate (ESO Diploma)

- 2nd High School
 - External exam, the same for pupils across the country. The Government will develop and design the evaluation criteria and characteristics for these tests.
 - This assessment has academic repercussions because students who pass are awarded the Bachillerato Diploma (comparable to A-

Levels).

4.3. Practices adopted by the school system

3.3.1 Greece

In Greece, Apprenticeship Dual System combines theoretical and laboratory education at the Apprenticeship Schools (EPAS) with work practice (“on-the-job training”) in the workplace (Dual System – Central European system of education). This system offers effective involvement of students in their chosen specialty, assimilation of theoretical knowledge and development of skills in the students’ area of specialty and development of personal skills, since the students implement what they have learned in the classroom or laboratory in actual work conditions.

Young people aged 16-23 years who have at least completed the first grade of the Upper Secondary School (Lykeio) can apply for enrollment in an Apprenticeship School. At the end of each school year, OAED issues an official admission circular for new students, which specifies how those interested can submit their application. When the number of applications is higher than that of the positions offered, then a point – system is used, taking the following criteria into account: a) school performance certificate (grade), b) social criteria (large family members, orphans, low income etc.) and c) work practice position ensured before enrollment (combined with existence of a family business related to the student’s specialty).

Apart from education and training OAED offers the following advantages: a) Comprehensive institutional framework for a work – practice contact between the employer and the apprentice, b) a salary amounting to 75% of the unskilled worker’s minimum wage and c) full insurance (healthcare and pension) coverage for the apprentice.

3.3.2. Italy

Emilia Romagna case study

The certification system of Emilia Romagna region is founded on the principle that ‘each person has the right to obtain the formal recognition of competences acquired’. This is a well-articulated system to certify individual professional background, while allowing individuals, young people and workers, to evaluate and plan their professional and training future. Certified competences (independent of the way they were acquired) are considered to be certain, reliable, credible and usable in education and training, since they refer or can be referred to the essential vocational standards indicated in the regional qualifications system.

The process of evaluation is based on an individual orientation phase, and on the preparation and verification of evidence: formal documents (declarations, collaborations contracts, self-declarations, certificates); output evidence (product sample-report letters, report, software, etc.); and action-based evidence (testimonies, audio-video recordings, log book, direct observation). Where there is insufficient or incomplete evidence, the candidate may choose to sit an examination to demonstrate he/she has the competences that were not proven. At the end of the verification and validation process, the candidate can obtain a certificate of vocational qualification (including all competence units comprising the qualification) or a certificate of competences (concerning one or more competence units of the qualification but not all of them) or even a knowledge and skills sheet (concerning only part of a competence unit). The first two certificates can be acquired only after passing a formal examination, while the knowledge and skills sheet can be obtained after the evidence has been verified.

This certification system is currently in its implementation phase. A first pilot of the validation and certification system of non-formal and informal learning for the award of the healthcare operator qualification yielded excellent results.

Lombardy case study

Regional legislation of 2007 requires VET centres to validate credits based on evidence and documents submitted by the applicants: qualifications, diplomas, final marks and any other informal documentation of school results, intermediate certifications of competences awarded by schools and training agencies, concerning practical applications, training experiences or traineeships in Italy and abroad, positive evaluation of extracurricular activities, foreign languages certificates, cultural or work activities, experience gained in various civil society fields concerning personal development, community work and cultural development (work, environment, voluntary work, solidarity, cooperation, sport), certificates acquired in apprenticeship, as a result of work activities or self-training.

Where documents are considered insufficient or incomplete, the applicant may take evaluation tests. VET centers assign a value to the credits: validated credits can account for a maximum of 50% of the training program.

The validation is a personalised process in which the applicant plays an active role in identifying and reconstructing his/her professional identity, through the use of specific instruments such as drafting a curriculum vitae, orientation activities, personalized advisory services and customised access to other services. At the end of the verification and validation, which lasts a maximum six months, the applicant will receive a certification of competence at the relevant EQF level, which will be registered in his/her training log book.

3.3.3. Spain

In this section some notable practices implemented at Spanish level are described:

SEAT:

SEAT implemented the dual vocational training in Spain, based on the German model, in the course 2012-2013 in order to promote the training as one of the strategic focus of the company. The programme is organised following the Resolution ENS/1204/2012 of basic vocational training approved by the Catalonia Region.

The programme aims to improve and increase the students learning before their incorporation to SEAT company, at the same time strengthening their relation with the labour market. The students sign a training contract at the beginning of the course in order to be trained in the SEAT school for 3 courses. The courses combine the theory and practice making possible real working experiences.

Once the students have completed the third course with success, they can be incorporated to the SEAT staff with an unlimited contract and will obtain the certificate accredited by the Catalonia Region. In addition, students can certificate their profession in the German system. In this sense, SEAT is accredited to carry out the official exams from the German Chamber of Commerce. This programme has received the Excellence Award by the German Chamber of Commerce in 2014.

IES Isla Verde:

The Isla Verde centre, located in Algeciras (Spain) has implemented the dual system with all the students. In order to perform an appropriate monitoring of the students, they use a moodle platform to establish daily communication between students and teachers.

REPSOL SA:

The aim of Repsol is actively participate in the training of VET students in order to contribute to an effective integration of future professionals in the labour market. In this sense, Repsol has long been collaborating in VET projects through agreements to host trainees in their industrial plants, similar to the dual system that now promotes.

Until now, they receive students from the dual VET systems from higher level of chemistry in their Industrial Plants in Cartagena, Puertollano, Coruña and Tarragona; higher level of laboratory analysis and quality in the Technological Centre in Móstoles, and DYNA-SOL Chemical and Pavements (Cantabria), Mechanic Production in Puertollano; higher level of administration and finances in the High Center of Training and in the Campus (central offices) and administration of informative systems on net in the Information System in Tres Cantos.

The tutors are volunteers with experience and pedagogical vocation that establish a learning contract with the students. In this contract, the activities that the students will develop, the

complementary training that the students will receive and the results that they will achieve are described. Moreover, the students write a learning journal.

4.4. Spread of ECVET in the upper secondary technical and vocational education system

3.4.1. Greece

There has always been a characteristic of a strong demand for general education and university studies in the Greek society. VET appealed little to young people and has connoted with 'laborious' and 'inferior' manual labour; on the contrary, general education is linked with expectations of improved social standing. Nowadays, young people continue to see vocational education as a last option, despite unceasing efforts by the authorities to present it as an alternative of equal value with general education.

According to the statistics it is shown that people with technical and vocational qualifications have less difficulty finding jobs than those with general education. Most young persons (about 75%) still opt for the general upper secondary school giving access to university studies. Vocational education remains the second choice for most parents and children. It attracts low performers, who for the most part come from lower economic brackets. This tends to reinforce negative stereotypes and creates a vicious circle at the expense of vocational education (Ioannidou and Stavrou, 2013). Low participation in VET seems to be directly associated with its inability to attract young people.

Accreditation and qualifications

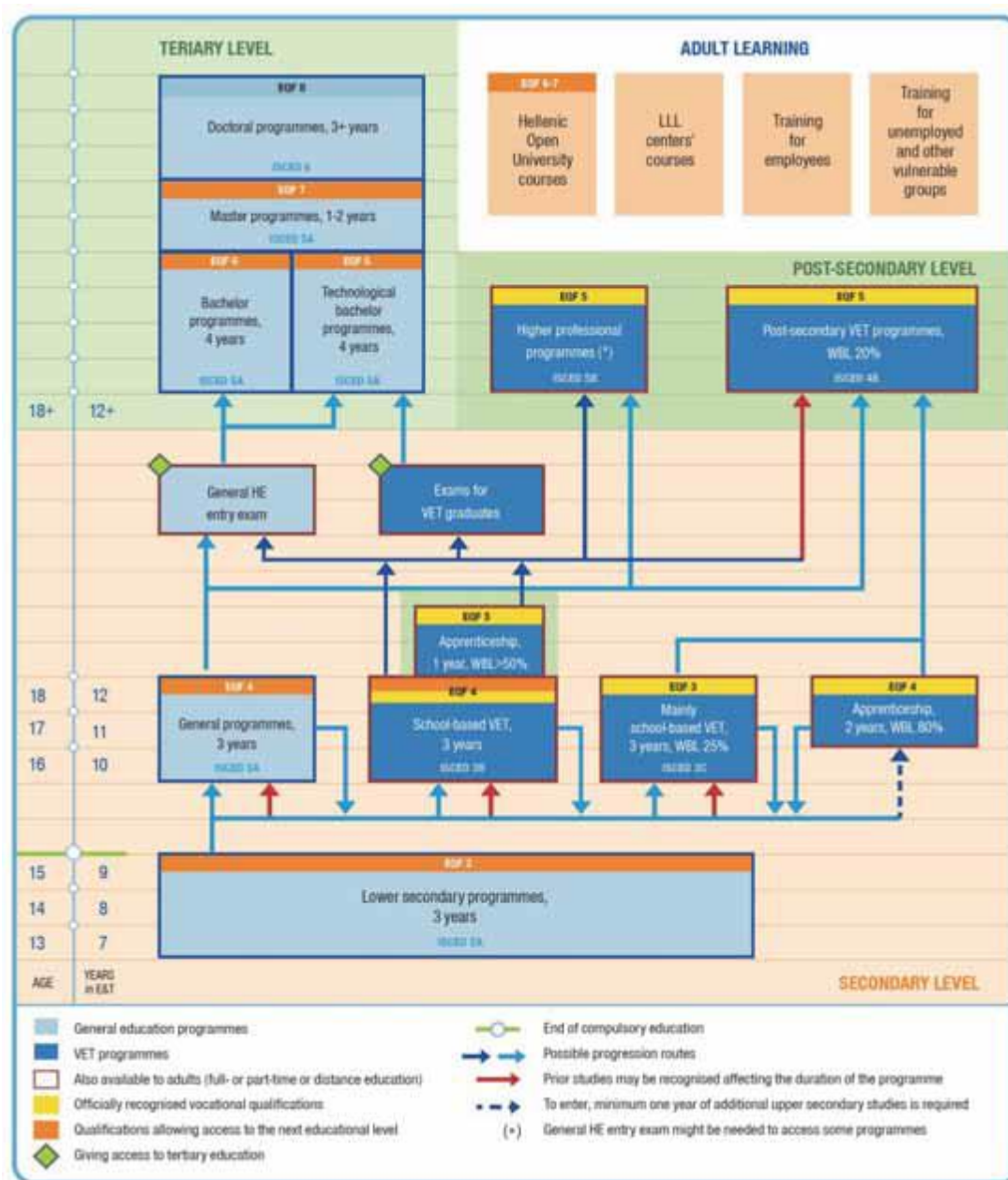


Figure 6 Vocational education and training in the framework of the Greek education system (Cedefop, 2014)

An issue of crucial importance for the attractiveness of vocational education, both generally and in relation to specific specialties, concerns occupational rights. While the construction sector, to provide one example, has grown considerably, related specialties in vocational upper secondary

schools have seen low participation. This happens because there are no established occupational rights for technicians with low or intermediate level qualifications, even though these trades demand enhanced knowledge and skills (such as ironworkers, builders, aluminium technicians, metal structure technicians, carpenters, cabinet makers, etc.). In several other occupations rights have not been secured, such as bakers, confectioners, butchers, cooks and tourism workers; needs are met chiefly by workers trained on the job. On the contrary, the establishment of occupational rights in sectors such as plumbing and hairdressing has led to strong demand for related educational services (Pedagogical Institute, 2006, p. 150). Since 2000, four laws – on the national system linking VET with employment (Law 3191/2003), systematizing lifelong learning (Law 3369/2005), developing lifelong learning (Law 3879/2010), and restructuring secondary education (Law 4186/2013) – and numerous amendments have been enacted in an attempt to regulate the domain of VET and lifelong learning. The reason behind this legislative activity is mainly the EU's post-2000 emphasis on creating a competitive Europe that is capable of meeting the new challenges of the knowledge-based society. But the Greek state also recognizes that developing lifelong learning would have a positive impact on the country's economic life and on social cohesion. International surveys show that close links between vocational education and the requirements of the job market and economy are an essential precondition for an efficient, high quality system that would make it easier to move from school to active life (McCoschan et al., 2008; Wolf, 2011; Cedefop, 2012b).

3.4.2. Italy

Italy is one of the most active states in disseminating information on ECVET. The new ECVET expert team organized a conference in order to provide stakeholders, social partners, employers and other actors of the labor market, managers of professional training institutions, specific information on ECVET and specific training. The aim was to increase knowledge on the ECVET system, its technical support and its application in each country. (The development of ECVET in Europe - Cedefop, 2013.) The European Commission has proposed to create and support a community of practice for the ECVET (Lave and Wenger, 1991; Wenger, 1998). This idea was presented at the Annual Forum ECVET organized by Cedefop and the European Commission in May 2012. In Italy were created communities of practice, but must to be further developed (The development of ECVET in Europe - Cedefop, 2013).

At the moment, in Italy there is a shared system for the recognition of skills obtained in non-formal and informal settings. The most recent reforms, both at the national and regional levels, as mentioned, have suggested planning curricula based on learning outcomes. Law 92/2012 "Reform of the labor market" and the introduction of the EQF (European Qualification Framework) created important links between the strategy of the Italiana Lifelong Learning program and the ECVET system for the recognition of credits in the training and education professional. Law 92/2012 "Reform of the labor market" adopted in July 2012 refersexplicitly to

the principles of lifelong learning, considered as an important prerequisite for the implementation of ECVET. Formally, in Italy does not exist a coordination center for the ECVET, but activities related to ECVET are currently managed by ISFOL (Institute for Professional Training of Workers). The same organization acts as contact point for ECVET for EQF (The development of ECVET in Europe - Cedefop, 2013).

The approach based on learning outcomes has been implemented in different areas of the Italian qualifications system, but still different subsystems exhibit differences above all in terminology field. The learning outcomes based approach will be extended on the basis of the second phase application process. (The development of ECVET in Europe - Cedefop, 2013).

A system based on modular qualifications (ECVET model) has been partially adopted. Citizens will have the opportunity to obtain partial qualifications adopting systems which provide for the evaluation of learning outcome occurred previously or accumulation of credits relating to the learning unit. With the implementation of the last national training standards and vocational education, the approach based on learning outcomes will be further developed (The development of ECVET in Europe - Cedefop, 2013).

Conclusions

The national team of experts is ECVET is composed of 13 experts from various fields:

- National Agency Leonardo da Vinci
- Researchers in the field of vocational training and labor market
 - ❖ Group members "ECVET Users"
 - ❖ Experts involved in ECVET projects;
 - ❖ Members of the national coordination point for the EQF, the National Reference

The team is working on the systematization of ECVET processes at national level.

The team and the institute are trying to raise awareness on the ECVET among stakeholders and citizens highlighting the potential of this tool for mobility between different training systems and European countries in the context of vocational training.

In Italy, the bodies responsible for ECVET policies are the Ministry of Social Affairs, the Ministry of Education, University and Research and some local authorities. These organisms are involved in the management of policies related to education and vocational training, as well as those relating to higher education. The Ministry of Education, University and Research is responsible, at national level, for determination of rules, the curricula and policies related to education and higher education. The Regions are responsible for the vocational training system and the Ministry of Labor and Social Policy is responsible for policy coordination and for funding vocational training at European level. The social partners and representatives are involved in the vocational training improvement processes and, usually, were partners in the Leonardo da Vinci projects ECVET (European Credit System for Vocational Education and Training), (The development of ECVET in Europe - Cedefop, 2013).

Although there is not, at the time, in Italy, a specific and explicit adoption of systems for the ECVET, there are some experiences that are contributing to the achievement of this objective (The development of ECVET in Europe - Cedefop, 2013).

In Italy there is substantial agreement between all institutions and social actors on the importance to be able to validate learning acquired in non-formal and informal contexts.

However it has not yet led to the adoption of the necessary provisions for the development and the institutionalization of a national system of validation and certification of skills. The delay in making a formal decision is related to the difficulties of consolidation of the reforms

of vocational education and training system as well as delays related to the development of necessary procedures for its implementation (The development of ECVET in Europe - Cedefop, 2011).

The Italian system of certification of skills is defined in art. 4 (sec. 58) of Law 92 of 2012, which empowers the government to define general standards and essential levels of services for the identification and validation of prior learning in non-formal and informal contexts, with reference to the national system of certification of powers and lays down the criteria and guiding principles. The subsequent co. 64-68 of the same 35 Article draw the national skills certification public system, while the Legislative Decree n. 13 of 16/01/2013 governing its implementation.

The Legislative Decree no. 13/2013 thus constitutes the fundamental building block to enhance the right of people in lifelong learning, in a personal perspective, social and employment. The decree is divided into two priority lines of action:

a) the formation of the national repertoire of educational qualifications and training and qualifications;

b) the definition of minimum standards of the national skills certification system service (the process of accreditation by the system). As part of the construction of the national certification system, Isfol carries out research and technical assistance for the identification of procedures and tools for the validation of competences and within the National Qualifications Repertoire. There are also investigations conducted on the educational and employment outcomes of VET courses, IFTS, but also of traineeships and apprenticeships, as well as more generally offer guidance. This line of research also includes numerous insights on subjects that benefit from the training: young people NEET above, adult workers, young people coming out of the secondary school of first and second grade and their families (including investigations orientation), immigrants, those receiving forms of income support. To these are added the sample surveys on quality of work, those on training activities promoted by businesses also through joint interprofessional funds and the participation of adults in various continuing education activities including training in entrepreneurship and managerial skills.

Eight strategies have been identified for the implementation of ECVET (based on ReferNet reports and information provided by national stakeholders). Most countries, like Italy, are

developing ECVET through a combination of strategies. Italy has followed three of these eight strategies:

Strategy 1: the creation of testing initiatives

The test is performed in national initiatives for a specific qualification process. In most cases these initiatives followed by the most important political decisions actors (ministries or authorities for qualifications). The initiatives have a specific budget line and are co-financed by national and European budgets.

Strategy 3: implementation of legislation and regulations on training

Legislation and regulations are updated by integrating the technical characteristics of the ECVET system.

Strategy 7: learning by working with European projects ECVET. This strategy involves regional or national sectorial European ECVET projects.

Accreditation and qualifications

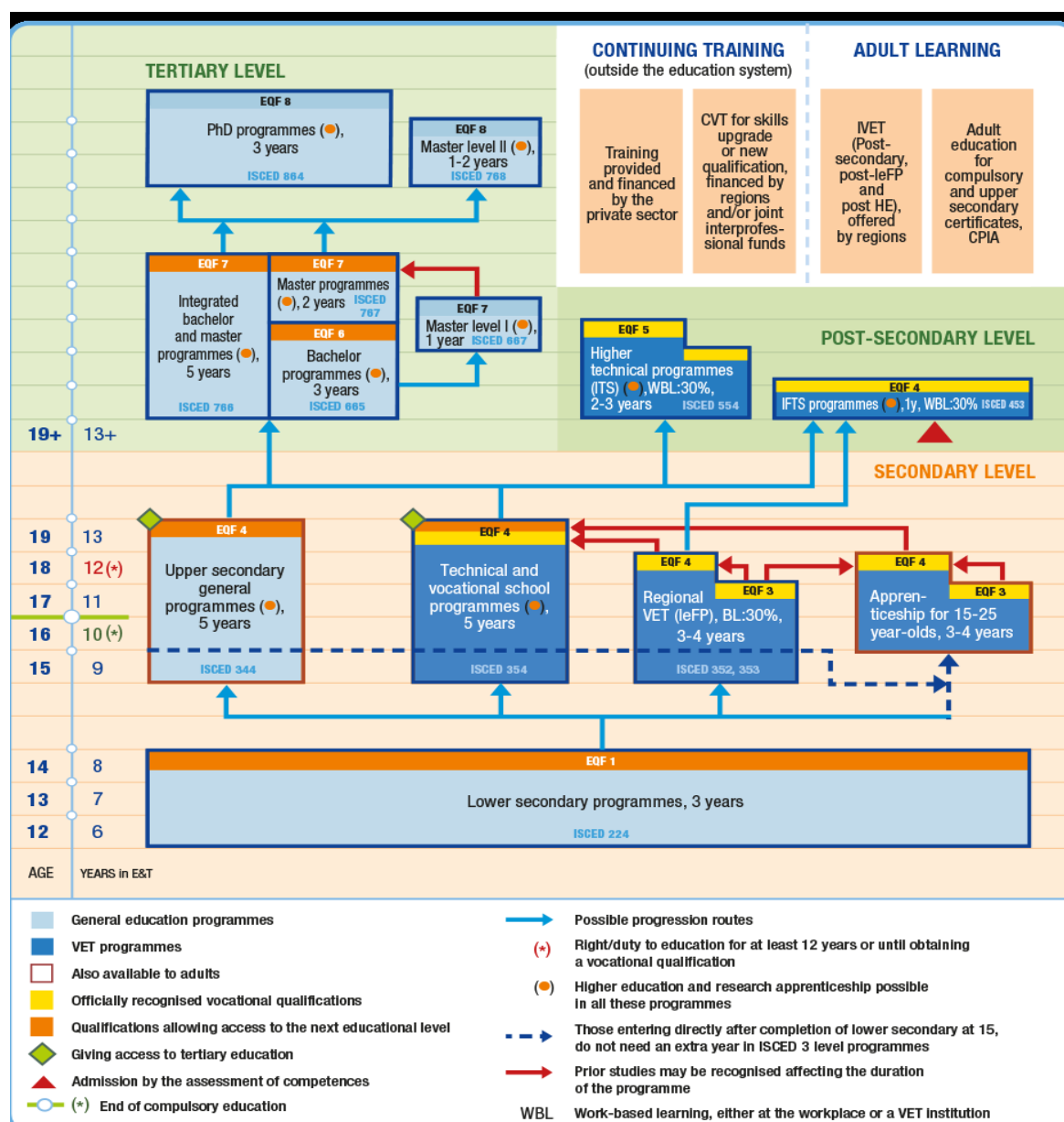


Figure 7: Organization of initial education and training system in Italy

In Italy, formal qualifications (ie. Diploma, degree, professional qualification) have a strong legal and social value. In recent years a debate was held on the development of certification systems to recognize learning outcome acquired outside the formal system. The agreement between the State, Regions and Local Authorities (February 2000) and the Ministerial Decree n. 174 defined some key components of the new certification system: (A) stress on competences in order to give transparency to training, enhancing individual and educational credits experiences; (B) definition of minimum standards of competence; (C) devising instruments such as

certificates, procedures to validate work and recognize prior knowledge, citizen's training booklet.

As part of HTE "the higher technical specialization certificate" is a first national attempt to certify competences linking competences to training units or modules of the course, as well as those identified in the working world by referring to a profession. The entry accreditation system, based on similar experiences in other European countries [eg. VAE in France or APL in the UK], carries out functions of: support / guidance so conscious identification of individual training needs; rating with the production of a personal dossier; certification / recognition through a formal entry into or the recognition of credits within a training path.

3.4.3. Spain

In recent years in Spain, the social image of VET and its popularity after completing the compulsory secondary education has improved (ReferNet Spain team, 2014). Indeed, the variation to the course 2013-2014 from the previous one is 5.2% (4% for in person intermediate level, 4.8% for in person higher level and 16.6% for online courses) (Spanish Ministry of Education, Culture and Sport, 2013) and the overall increment from the course 2007/2008 to the course 2014/2015 (prevision) is 22,44% (Gomendio, 2015).

Although the number of students registered at every level of VET has increased, the *Bachillerato* (High School) continues to be the preferred option among young people. In the 2010/2011 academic year, about 70% of all the students that had completed compulsory secondary education chose to study the *Bachillerato* and over 30% chose intermediate VET levels (Spanish Ministry of Employment and Social Security, 2012).

Accreditation and qualifications

Modernising VET and making it more flexible as supporting to lifelong learning are aspects at the heart of Spanish education and employment policies (Cedefop, 2014b). Indeed, education and employment authorities in Spain are responsibility of the VET programmes. The national system for qualifications and vocational training is the umbrella for VET programmes leading and awarding formal qualifications.

In 2014, almost all VET Diploma programmes have been updated and adapted to the requirements of the productive sectors and also some new Diploma programmes have been created. As consequence, the current Catalogue of VET Diploma programmes within the Education System includes 175 Diplomas: 21 Basic, 64 Intermediate, and 90 Higher VET Diploma programmes (ReferNet Spain team, 2014); belonging to 26 professional families (Todofp.com, 2016). Considering these families, the main registrations in intermediate and

higher levels are recorded in Administration (near the 25%) and Health (15% for intermediate level and 13 for higher level) (Spanish Ministry of Education, 2011).

In the Figure 8 the Spanish VET system is described (Cedefop, 2014b).

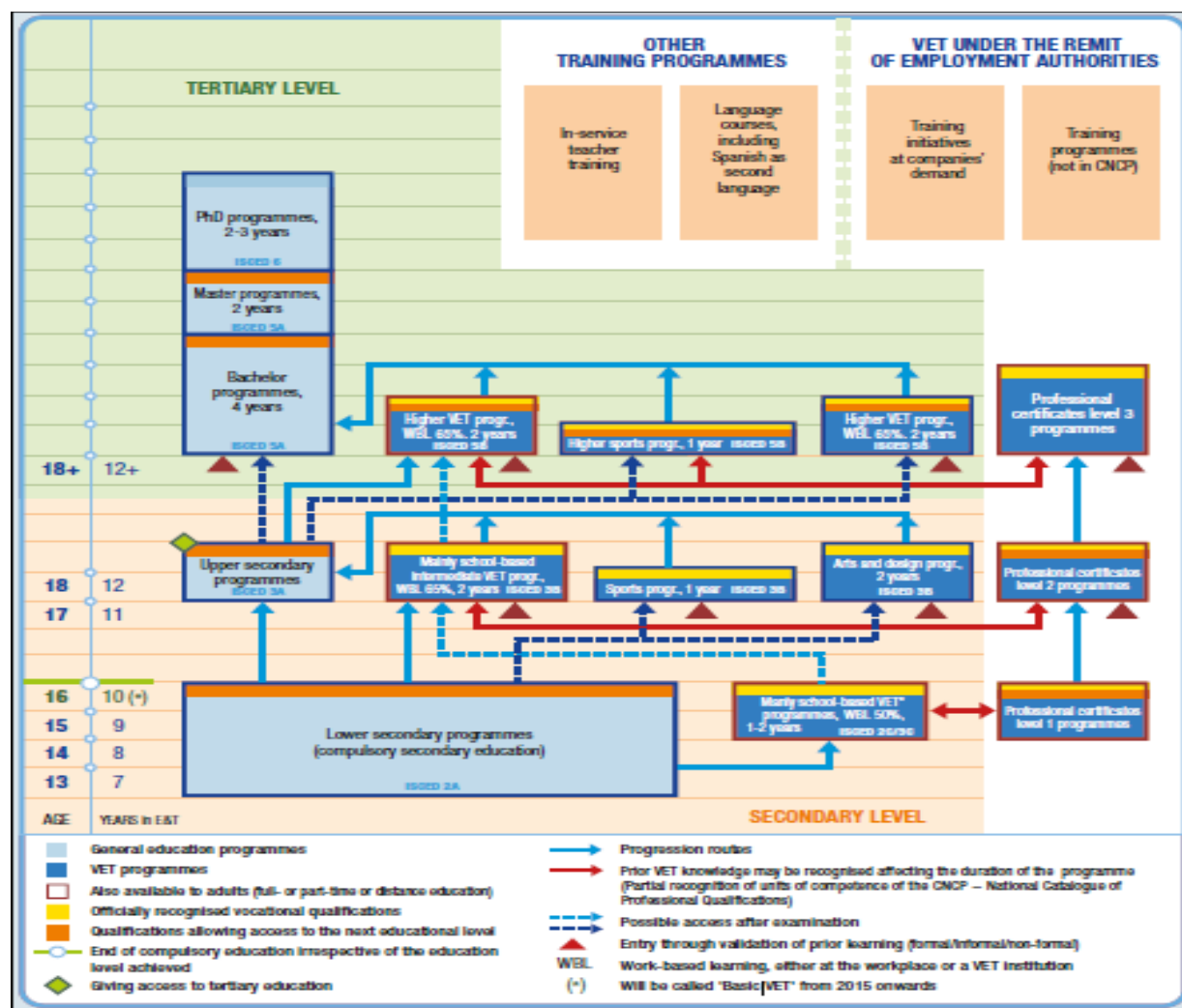


Figure 8: VET in Spanish Educational system (Cedefop, 2014b)

VET system was reformed in 2013. From 2014/15, it offers three different qualification levels: basic, intermediate and higher VET diplomas. In this new scheme, programmes last two years with a minimum of 20% spent in a firm and a maximum of 80% at a training centre; overall, 70% of the time is devoted to work-based learning and 30% applied theoretical training. The reform also opens up the opportunity to acquire IVET diplomas through dual track schemes (with or without a working contract) with duration up to three years (Cedefop, 2014b). The

quality and efficiency of publicly funded Continue VET is guaranteed through accreditation system of VET providers and formal qualifications development

4.5. Relation among upper secondary schools system and relevant stakeholders

Entrepreneurship in Education is about inspiring entrepreneurial potential. People need the mind-set, skills and knowledge to generate creative ideas, and the entrepreneurial initiative to turn those ideas into action. Entrepreneurship in education concerns the development of key competencies, the support of economic and social well-being and the increase of employability. So far, at European level there are a range of activities that individuals, educators, education institutions and policy makers can tap into. Individually, people can put together projects to build their own entrepreneurial skills through youth project funding, or be interested in exchanging experiences and ideas with other entrepreneurs through the Erasmus for Young Entrepreneurs Program. They could also seek advice at their school, college, and university or youth organization to apply for funding to design entrepreneurial education projects. Entrepreneurship education is about enabling young people to develop the skills they need for life and work. These crucial skills are teachable and must be integrated into educational subjects at all levels. This is a priority throughout Erasmus+, both for people who study or train abroad or in strategic partnerships projects. There are guidelines at EU level which can support Educators and Education Institutions in the process of embedding this in the teaching and learning, or tools to guide how to develop this across the wider education institution.

As part of the Education and Training 2020 (ET 2020), the Member States cooperate in the form of Working Groups which are designed to help Member States address the key challenges of their education and training systems, as well as common priorities agreed at European Level. Their role is to benefit the Member States in the effort to further policy development through mutual learning and to identify good practices, as well as understand what works in education (ET 2020 Working Groups).

Quality assurance in vocational education and training (EQAVET)

The education systems of the Member States have relied on the key role of the EU in improving and modernizing their education systems. The workforce needs to be well-skilled in order to compete in terms of productivity, quality, and innovation in a globalised and knowledge-based economy. Among the priorities is to align skills with the labor market in line with the goals of Europe 2020 Strategy, to bring down the number of early school-leavers to below 10%, and increase the share of graduates from tertiary education to at least 40% by 2020. Country analyses are carried out to support Member States in the development of their education and training policies, assessing the progress at national level and identify reforms, as well as investment

needs by issuing country-specific which help Member States tackle the most urgent challenges. The next steps include monitoring the role of education and training, its progress and challenges for the forthcoming revision of the Europe 2020 strategy for growth and jobs.

To help EU countries promote and monitor the continuous improvement of their vocational education and training systems on the basis of commonly agreed references there has been designed a European Quality Assurance Reference Framework (EQAVET) as a reference instrument. This framework is expected to improve the quality in VET and facilitate countries in accepting and recognizing the skills and competencies acquired by learners in different countries and learning environments, by building mutual trust between the VET systems. The use of the framework improves quality assurance systems in a way that involves all relevant **stakeholders**, by setting up national reference points, participating in the relevant European-level network, developing a national approach aimed at improving quality assurance systems and making the best possible use of the framework. EQAVET constitutes a voluntary system which can be used by public authorities and other bodies involved in quality assurance (Report from the European Commission to the European Parliament and Council, 2014).

Social inclusion and citizenship through formal and non-formal learning

In June 2016, the European Commission adopted actions of cooperation at EU level which can bring added value in areas of education, training and youth in order to promote inclusion and fundamental values in the sector of education as a follow-up of the Paris Declaration. The objectives pursued include promoting democratic values and fundamental rights, social **inclusion** and non-discrimination, as well as active citizenship in order to help young people acquire social, civic and intercultural competences. Furthermore, the enhancement of critical thinking and media literacy is crucial, so as to develop resistance to discrimination and indoctrination. Another goal is to address the education and training needs of disadvantaged children and young people. Finally, the promotion of intercultural dialogue through all forms of learning in cooperation with other relevant policies and **stakeholders** is considered of importance (Declaration on promoting citizenship and the common values of freedom, tolerance and non-discrimination through education, 2015).

In order to achieve these goals, peer learning and the exchange of **good practices** are key activities under ET 2020 and cooperation with the youth sector. It is also an important activity in implementing the Paris Declaration. Two dedicated Working Groups have been established for this purpose, comprising the main **stakeholders**:

- The Working Group on promoting citizenship and the common values of freedom, tolerance and non-discrimination through education, is composed of experts from

Member States, civil society organizations and social partners as well as international organizations such as UNESCO and the Council of Europe;”

- “The Working Group on the role of youth work for promotion of active citizenship and prevention of marginalization and violent radicalization is composed of experts from Member States and youth organizations, including the European Youth Forum.”

To support the implementation of the Paris Declaration, the Erasmus+ program provides funding for transnational cooperation projects. Furthermore, actions such as the annual Education and Training Monitor, reports by the Network of Experts on Social Aspects of Education and Training, and the leaflet (Promoting Citizenship and the Common Values of Freedom, Tolerance and Non-discrimination through Education, 2015), published in March 2016, by the Commission’s Eurydice network, constitute policies that support the follow-up to the Paris Declaration.

The focus on **social inclusion** and citizenship through formal and non-formal learning also entails that special attention is paid to learners from vulnerable groups, including with a migrant background, from a disadvantaged socio-economic background, Roma (European Committee, 2011), LGBTI (List of actions by the Commission to advance LGBTI equality, 2015), and learners with special needs.

Good Practices

The European Alliance for Apprenticeships (EAfA) constitutes a unique platform which unites the governments with other key **stakeholders**, such as businesses, social partners, chambers, vocational education and training (VET) providers, regions, youth representatives and think tanks. The shared goal is to enhance the quality, supply and image of apprenticeships in Europe. Additionally, the first on-line survey among **stakeholders** revealed the increasing significance of mobility in apprenticeships. The Alliance was initiated in July 2013 with a joint declaration (Council of European Union, 2013) by the European Social Partners (ETUC, BusinessEurope, UEAPME and CEEP), the European Commission and the Presidency of the Council of the EU. It was followed by a council declaration by EU countries. The success of EAfA is due to the implementation of commitments both nationwide and of partners, notably through pledges by stakeholders.

The EAfA aims at promoting employment for the young and at supporting the objectives of the Youth Guarantee (2013), while reducing the disparity between skills supply and demand on the labor market. Apprenticeships constitute one successful form of work-based learning that facilitates the transition from education and training to work, and it has been suggested that countries with a strong VET and apprenticeship system have lower levels of unemployment among the young. Apprenticeships combine and company-based training with school-based

education, leading to nationally recognized qualifications when completed successfully. In most cases there is a contract between the employer and the apprentice, securing the apprentice being paid. Companies providing apprenticeships are probable to benefit as well.

So far the Alliance has been effective in mobilizing EU Member States, but also EFTA and EU candidate countries and a large number of stakeholders in engaging in quality apprenticeships. It has eased networking, cooperating and sharing of good practices. What is more, Cedefop and the European Training Foundation (ETF) have provided strategic expert support. The Alliance has equally contributed to raising awareness of the benefits of apprenticeships.

A strong emphasis has been placed on the necessity to test ECVET, the European Credit System for Vocational Education and Training, in practice, by the Council and the European Parliament. This action was conducted with the aim of creating a pool of information and experience with the practical application of the tool on national level, which would eventually feed back into future policy strategies both on national and EU-level. A series of transnational European pilot projects was established among other initiatives.

The European Commission in 2008 issued a call for proposal to finance international partnerships under the Lifelong Learning Program, which aimed at testing the implementation of the ECVET process in the context of learners' geographical mobility in the time period of 2009-2012, resulting in eleven pilot projects with lead partners from five countries (Belgium, France, Germany, Italy, and Luxembourg). Most of these projects faced issues with relevance to the context of formal initial vocational education and training and tested ECVET in the context of transnational mobility of learners. However, some other projects raised the issues of the mobility of workers and lifelong learning.

Later in 2010, a new call for proposals to finance a new generation of pilot projects was issued by the European Commission. A feature of this call for proposals was that it focused on the support of national implementation. Differentiating from most calls for proposals under the Lifelong Learning Program, this one targeted actions which would mostly benefit one country or sub-systems. Eight projects with lead partners from five countries (Belgium, France, Germany, Italy, and Malta) were funded between the years 2011-2014. A requirement for the projects was to include the support of system-level implementation of ECVET in their objectives. Furthermore, the projects were considered to be an important part of Member States' efforts to create the necessary conditions for development and testing measures for the gradual implementation of ECVET

4.5.1. Greece

Labor market in Greece

Chronic structural problems in the labor market have been aggravated by the recession. In Eurostat figures it is shown that Greece has the fastest rising rate of unemployment in the EU, with unemployed numbers having more than doubled (+209%) since 2008. The rise in the number of long-term unemployed is particularly worrying, since the longer people remain unemployed the less opportunities they have of entering the labor market.

In the third quarter of 2013 the unemployment rate in Greece reached 27%, up from 24.8% in the corresponding quarter of 2012 and 7.6% in 2008. Nevertheless, real unemployment in Greece seems to be much higher than what appears in the official figures and according to the General Confederation of Greek Workers (GSEE) it has topped 30%. The discrepancy is caused among other things by the high percentage of people who work in family businesses without receiving a regular wage ('concealed unemployment').

4.5.2. Italy

Apprenticeship-type schemes

Apprenticeship in Italy defines a work contract with a specific training purpose; it includes both on-the-job and classroom training. The apprenticeship contract, which is distinct from other work-based learning, must be drafted in a written form. It defines roles and responsibilities of all parties as well as terms and conditions of the apprenticeship, the probationary period, the occupation tasks, wage increases, both the entry and final grade levels and the qualification to be obtained. The training program is an integral part of the contract. Both the contract and the training program must be signed by the employer and the apprentice. Since apprentices are considered employees, they are entitled to insurance benefits for job injuries and accidents, occupational diseases, health reasons, ageing and disability, maternity, household allowance, and, since 1 January 2013, labor social security insurance. Apprenticeship-type schemes were reformed in 2011 (15) aiming to promote the integration of young people into the labor market. Workers registered in so called 'mobility lists' (16) can participate in this scheme to qualify or requalify (usually they are offered a place in the 'professional' apprenticeship scheme, see paragraph (b) below). Employers offering apprenticeships can benefit from several incentives. They can hire an apprentice at an entry grade level up to two levels lower than the final qualification to be obtained and/or pay a salary equal to a percentage of the salary of a qualified

worker, according to the provisions of the collective agreement applied. They can take advantage of a reduction in social security contributions, according to the enterprise size. Companies with up to nine employees (micro enterprises) are exempt from paying social security contributions (100%) for the first three years of the contract (17); in the fourth year they will pay 10% of taxable social security contributions. Companies with more than nine employees pay a contribution, for the entire duration of the apprenticeship, equal to 10% of the taxable social security contribution.

Companies recruiting apprentices registered in the mobility lists, can benefit from a subsidised contributory scheme, corresponding to 10% of the salary for 18 months of the contract and, in addition, receive an incentive equal to 50% of the mobility allowance, if received by the employee, for a period of 12 months (24 months if the employee is older than 50 years).

The Jobs Act (Law 78/2014) introduced a new feature only for those employed under the apprenticeship leading to a professional operator certificate and a professional technician diploma contract (point (a) below). These apprentices receive a salary on the basis of the number of hours spent in training, calculated at 35% of the total number of training hours, unless differently decided via collective bargaining. The social security contribution paid by the apprentice is also reduced at 5.84%. The Jobs Act established that only enterprises with up to 50 employees, can hire apprentices if, in the previous 36 months, they have retained 20% of the previous apprentices. Social partners, beyond their advisory task at national and local levels, perform a crucial role in professional apprenticeship regulation. They define, through collective bargaining, contents, provisions related to specific occupations, and tools to carry out training. They also establish the professional qualification to be acquired and the certification procedures, as well as setting out the necessary requirements for tutors/trainers at the enterprise.

The apprenticeship system includes three types of contract:

(a) apprenticeships leading to a professional operator certificate and a professional technician diploma (*apprendistato per la qualifica ed il diplomaprofessionale*):

These schemes allow young people aged 15 to 25 to fulfil their right/duty to education and training. There are no specific entry requirements but learners need to bridge the year between the end of lower secondary and the start of apprenticeship in an upper secondary school programme or in IeFP, unless they are already 15 years old. These schemes are regulated by the regions and autonomous provinces through specific State-Regions conference agreements. Content, shared between theoretical and practical learning, the specific qualifications offered and the number of training hours are established by the regions and autonomous provinces according to minimum standards agreed at national level. The duration of the contract is determined according to the certificate or diploma to be achieved: it may not exceed the three- or four-year

training period nor be less than the national minimum standard set at 400 hours per year, though further training at enterprises can be agreed through collective bargaining. These apprenticeship schemes last three or four years and offer the possibility to acquire qualifications at operator or technician level (in 22 and 21 occupation fields respectively: *attestato di qualifica di operatore professionale* (EQF level 3) or *diploma professionale di tecnico* (EQF level 4). These qualifications are part of the national qualifications register. After obtaining the operator certificate the apprentice may proceed to the fourth year to obtain a technician diploma, in the same occupation. Access to university is possible after successful completion of secondary education and an additional one-year course at an education institute;

(b) **professional apprenticeships** (*apprendistato professionalizzante o contratto di mestiere*): This scheme targets 18 to 29 year-olds who want to acquire a qualification provided for in the collective bargaining agreements and required on the labour market. Training comprises two parts:

- (i) acquisition of key skills (120 hours over a three-year period) regulated by the regions and autonomous provinces and provided by training centres;
- (ii) acquisition of vocational skills for specific occupation areas provided directly by companies. The occupation areas and the training content are defined by collective bargaining agreements. These programmes have a maximum duration of three years (exceptionally five years for the crafts sector) and award a regional qualification.

(c) **‘higher education and research’ apprenticeships** (*apprendistato di alta formazione e ricerca*): Despite its name, this scheme leads to an array of qualification levels encompassing EQF levels 4-8. It targets 18 to 29 year-olds and fulfils various purposes. Learners can acquire qualifications that are normally offered through school-based programmes, in higher education or at universities, including a doctoral degree. Apprentices can also engage in research activities in private companies or pursue traineeship required to access the liberal professions (lawyer, architect, business consultant); this has not yet been regulated by collective bargaining.

Regions and autonomous provinces, in agreement with the social partners and public education and training centres, decide the duration of contracts, the organisation of programmes, and ensure that they are compatible with fully school-based curricula. They also define higher education credits (*crediti formativi universitari*) learners obtain at schools, universities or training centres and the skills to be acquired through on-the-job training at the enterprise. In the absence of a regional regulation, ad hoc arrangements between education institutions and enterprises are possible.

Training cost allocation is defined by the local authorities, according to the national, regional and European Social Fund regulations. Over the past few years the number of apprenticeship contracts has dropped. The latest available data also include apprentices hired under the previous regulations. In 2012, 469 855 apprentices were employed (stock data), 4.9% less than the

previous year. However, the reduction is lower than that registered in the previous year (-6.8%) and flow data show that, in the first half of 2013, 128 802 apprentices were hired.

To grasp the similarities and differences between alternating and other details (eg. Work experience, job training and guidance), aimed at strengthening the links between school and the world of work, necessary to refer to the law 24 June 1997 n.196 (cd. Treu package) and the subsequent regulation issued by the Inter-ministerial Decree 25 March 1998, n.142. Each of these training tools has its own characteristics. In common, the internships, apprenticeship and school-work alternation have the conception of the workplace as a place of learning.

The organization / company / institution that houses the student takes on the role of complementary learning context to the classroom and laboratory. Through direct participation in the operating environment, then, they realize the socialization and the permeability between different environments, as well as mutual exchange of experiences that contribute to the formation of the person. The period of learning that the student spends in a work context can be considered in all respects as a curricular internship (ref. Art. 4 of Law 53/03, the Note of the Ministry of Labour no. 4746 of 14 February 2007 and circular of the Ministry of Labour no. 24 of 12 September 2011). Therefore, although it is correct to say that the training can not be identified with the outright alternation, it is equally correct that the curricular internship is a time of alternation, or the "practice" being an alternate route, the period of training done by the student at the host hotel. However, it must remember that, no schools, when entering into the Agreements with the host organization, being yet defined a training curriculum subject, still refer to Article. 18 of Law 196/97 ("Traineeships and guidance") and its implementing decree (Decree 142/98).

The school work alternating enters the education system in Italy with the law 28 March 2003, 53 of which in Article 4 provides as the possibility to realize the courses of the second cycle, enabling young people who have reached the age of fifteen to carry out the whole training from 15 to 18 years "by alternating periods of study and work, under the responsibility of the educational institution, on the basis of agreements with enterprises or their representative associations or chambers of commerce, industry, trade and agriculture, or institutions, public and private, including the third sector, willing to accept students for internships that do not constitute individual employment relationship. " The Legislative Decree of 15 April 2005 n.77, that is achieved, the alternation which defines procedures for the realization of the second cycle courses to ensure young people, in addition to basic knowledge, acquire skills in the labor market . They are students who can make the request to carry out, under the responsibility of the school or training, the educational path chosen by alternating periods in the classroom and in the workplace, in accordance with the same educational profile of the ordinary course of studies. In other words, the young man keeps the student status, the path of the responsibility lies with the school and the alternation is presented as a teaching method and does not constitute an

employment relationship. The activities in the host structure may also be made of the teaching withdrawal periods.

The role of alternating training has subsequently been confirmed and consolidated with the Regulations issued with dd.PP.RR. Nos. 87, 88 and 89 of 2010, regarding the new systems of vocational schools, technical colleges and licei⁴, in the subsequent "Guidelines for the transition to the new arrangement, the second two years and the fifth year" of technical and vocational schools and institutes " national Guidelines "of high school courses.

With regard to vocational schools, the Presidential Decree March 15, 2010, n. 87 provides that "The paths (...) are developed primarily through methodologies based on the teaching laboratory, also to enhance inductive learning styles; the progressive orientation, analysis and solution of problems related to the reference productive sector; cooperative work on projects; customization of products and services through the use of technology and creative thinking; the management of processes in an organized setting and the school-work alternation ".

With regard to technical institutions, the Presidential Decree March 15, 2010, n. 88 provides that "Stage, internships and alternating training are teaching tools for the realization of courses of study."

For high schools, the Presidential Decree March 15, 2010, n. 89 reads as follows: "As part of the educational institutions high school courses provide, in the second two years, (...), specific arrangements for the advancement of knowledge, skills and competences required for access to the relevant courses of study and for insertion into the working world. The study can also be created as part of the school-work pathways (...) and through the implementation of modules and work-study initiatives for projects, practices and training experiences. "

In particular, the Guidelines No. 4/2012 and # 5/2012, relating, respectively, to the guidelines for the second two years and the fifth year of the technical and vocational institutes, point out that with the alternating training is recognized equivalent training value to the journeys made in the company and those curricular held in the school context. Through the alternation methodology allow the acquisition, development and application of specific skills relevant educational profiles, cultural and professional of the different courses of study.

The reorganization of vocational schools has entrusted alternation also another function: in the period of transition between the old and the new system of vocational schools has been used to replace the entire area of professionalization (ie. Third area). The Presidential Decree 87/2010, article 8, paragraph 3, insert, instead of this curricular segment of post-qualification courses, 132 hours of alternation to be organized in the fourth and fifth classes dall'a.s.2010 / 11 until the full implementation of the new vocational education system (completed nell'a.s.2014 / 15). That provision that, if only for a limited period, has made compulsory the alternating training

experiences, marking the first change of course than envisaged by Article 4 of Law 53/2003, which placed at the base of the alternation of the request students.

Within the education system of our country the alternating training has been proposed as a teaching methodology:

- a) implementing flexible and equivalent learning mode from the cultural and educational profile, compared to the results of the second cycle paths, which systematically linking classroom training with practical experience;
- b) enriching the training acquired in school and training courses with the acquisition of skills that even in the labor market;
- c) facilitate the orientation of young people to improve personal vocations, interests and individual learning styles;
- d) create an organic connection of educational and training institutions and the world of work and civil society, for the active participation of persons referred to in Article 1, paragraph 2, in the educational process;

4.5.3. Spain

The General Council of Vocational Training is the national government's advisory body on VET policy that comprises representatives of national and regional public authorities and social partners that work together with the education and labour administrations mentioned before (Cedefop, 2014b). Additionally, the National Education Council advises the central Government in all education matters including VET. This council is composed by 107 members representing all **stakeholders** within the education sector (teachers, students, administrative staff, etc.) (Refernet Spain, 2014). Thus, stakeholders are involved in developing occupational standards, creating a national register which serves as a reference for education and employment authorities when designing VET qualifications and programmes in order to ensure they respond to labour market needs (Cedefop, 2014b; Refernet Spain, 2014).

The **dual principle** was introduced in Spain in 2012 to increase access to VET and support young people in transition to the labour market and some autonomous communities have already implemented it. Students from 16 to 25 year-olds are considered employees covered by labour contracts (usually one to three years) and get at least a minimum wage. People up to the age of 30 may also benefit until youth unemployment decreases. In this programmes, students should acquire complementary skills in a specialised training centre or in the company at least 25% (first year) and 15% (subsequent years) of the time specified in the contract (Cedefop, 2014b). With the last reform, students will spend a minimum of 20% in a firm and a maximum of 80% at a training centre; overall, 70% of the time is devoted to work-based learning and 30% to applied theoretical training. As mentioned, the reform also opens up the opportunity to acquire IVET diplomas through dual track schemes (with or without a working contract) with duration up to three years (Cedefop, 2014b).

Labour market in Spain

The Spanish labour market has experienced some improvements and shows a decreasing trend of job losses. Although the number of unemployed decreased by more than 500,000 in one year, the unemployment rate is placed at 23.67% which is the second highest in the European Union. Hence, the Spanish labour market is improving but it continues presenting serious structural problems such as the high rates of youth unemployment (Eures, 2015). In this sense, VET is the main pillar on the national strategy for entrepreneurship and youth employment (2013-2016) (Cedefop, 2014b). Among other measures, the development of dual vocational training has provided successful results in 2014 as the number of companies involved increased from 513 to 1570 (+200%) and the number of students from 4,292 to 9,555 (+100%) (Employment, Social Affairs and Inclusion, 2015).

The Spanish VET is open to the needs of population and relevant sectors in the Spanish economy, adapting the training programme to current social and economic situation. The continue updating and creation of new VET programmes, the different access routes and its bridges with other training programmes, the impulse of online training, the autonomous calls, the alliance networks with companies in all sectors, and the entrepreneurship promotion, among other measures have the objective to facilitate to an increase profile of students their return to the studies and the conciliation between their labour and personal lives. Indeed, people who have finished their VET studies had achieved higher levels of **labour inclusion** in Spain (TofoFP.es, 2015). In 2014, all education levels have increased their contracting, but the VET programmes and the Bolonia programmes at Universities had experienced a higher intensity in this increase (Public System of State Employment, 2015). In numbers, the contracting of students from VET has increased a 19.15% for the students from higher level and a 17.77% for the students from intermediate-level.

5. Data Analysis

5.1 Applied Methodology for Data Analysis

The comparative analysis at European level involves the results of investigations carried out at national level among the partner countries (Greece, Italy, and Spain) which are compared through a rereading of national outputs. To address the main objectives of this intellectual output: (1) identification of strengths and weaknesses, similarities and differences among partner countries and (2) development of methodological guidelines that will be the base to create a common model for the management of curricular experiences of alternating training (2nd 3rd and 4th intellectual outputs) we applied a mixed method approach (Greene, 2007; Venkatesh et

al, 2013) consisting of a qualitative (explorative) and quantitative methods. Towards this aim we perceived the necessity to follow a coherent analytical (reporting) structure through the use of a common research template (see section 2.3) that would unequivocally lay the ground for the data analysis in this intellectual output. In this vein, it was essential that each partner provide relevant data in a common format and with predefined key parameters that address the implementation of alternating training in the particular European countries.

The overall methodological approach applied in the comparative analysis was grounded on three key resources: (1) partners' inputs regarding the national regulatory framework, ongoing reforms and policy developments at national level, overview on evaluation model adopted at national level, practices adopted by the school system, spread of ECVET in the upper secondary technical and vocational education system and relation among upper secondary schools system and relevant stakeholders, (2) relative EU projects already implemented by the project partners (Creat-it, BIOHEAD-CITIZENS (FP6), PAS-ETHICS&POLEMICS, SCICAFE 2.0, Play4Guidance) and (3) drawing on existing collected data and in particular on the sources made available by Eurydice, European Commission and Etwenning portal.

Based on the partners' contributions and input we were enabled to proceed with the identification of common ground and practices as well as domains that countries should strengthen to achieve the best possible implementation approaches as well as the development of methodological guidelines.

5.2 Analysis of the key indicators

By applying a mixed method approach both qualitative and quantitative on the analysis of the three key resources, we managed to identify main indicators that encompass both the common ground and the differences of the three researched national education systems (Greek, Italian, and Spanish). Their comparative analysis will enable us to forge a common basis towards the development of methodological guidelines that will inform and feed the design and development of operational tools that will be relevant to DESCI'S main objectives with reference to the development of both basic and professional skills and the matching between education and labor market by promoting structural links between educational institutions, labor market and civil society.

The Key indicators that have emerged from our data analysis are:

- 1. ACCESS, ATTRACTIVENESS AND FLEXIBILITY**
- 2. SKILL DEVELOPMENT AND LABOUR MARKET RELEVANCE**

3. OVERALL TRANSITIONS AND EMPLOYMENT TRENDS

Below are summarized the countries' performance (Greece, Italy, Spain) on a set of indicators selected to monitor progress in VET and lifelong learning across the European Union (EU). The charts compare the situation between the three countries with reference to the three identified indicators.

The charts used in the comparative analysis involve the comparison among the three countries but also allow for a comparative survey at a European level since the data in the charts are presented as an index where the EU average equals 100.

5.2.1 ACCESS, ATTRACTIVENESS AND FLEXIBILITY

Greece

Greece has relatively low figures on many indicators in this group compared with the other two countries and the EU average. The percentage of upper secondary students enrolled in IVET is low (33.1% compared to 50.4% for the EU). Female enrolment figures differ even more: 26.1% of females in upper secondary education are enrolled in IVET compared to 45.0% in the EU in 2012. The share of adults involved in lifelong learning in 2013 (2.9%) is also lower than the EU average (10.5%), and far below the average target (15%) set by the strategic framework education and training 2020. Participation in lifelong learning by adults with low-level education (0.4%), unemployed adults (2.7%) and older adults (0.8%) is also lower in Greece than in the EU.

Based on 2010 CVTS data, employee participation in CVT courses and on-the-job training suggest that employer-sponsored training is generally less frequent than in the EU. The rate of young VET graduates who participate in further education and training is lower than the EU average (16.6% in Greece and 30.7% for the EU in 2009). The percentage of individuals who wanted to train but did not (17.3%) is higher than the EU average (9.5%) (based on 2011 data).

Italy

Italy scores highly compared with the EU average for participation in IVET: the proportion of IVET students as a percentage all upper secondary students is proportionally higher (59.2%) than the EU average (50.4%) (data for 2012). In contrast, data for 2013 show that Italy has fewer adults involved in lifelong learning (6.2%) than the EU as a whole (10.5%). At 6.2% Italy is still

below the average target of 15% set by the education and training 2020 strategic framework. Older Italians and those with low-levels of educational attainment are less likely to be involved in lifelong learning. The incidence of, and participation in, employer-sponsored training – derived from the 2010 CVTS data – have increased compared with 2005, but still stand below the EU averages. In 2010, 36% of employees participated in CVT courses compared with 38% in the EU, and 56% of employers reported provision of training compared with the EU average of 66%.

Differences in employee participation in on-the-job training are more evident: 11% for Italy compared with 20% for the EU as a whole. The share of individuals who wanted to train, but did not do so is also relatively large in Italy (17.8%) compared with the EU (9.5% in 2011).

Spain

The rate of all upper secondary students participating in IVET in Spain is 45.5%, slightly below the EU average of 50.4% (data for 2012). At 3.2%, a small proportion of IVET students are engaged in combined work- and school-based training compared with the EU average of 26.5%. Spain has proportionally more adults (11.1%) involved in lifelong learning than the EU as a whole (10.5%). This figure has been stable from 2010 to 2013 and it is still below the target (15%) set by the strategic framework education and training 2020. The rates of older adults and adults with relatively low qualifications participating in lifelong learning are comparable to corresponding EU averages. Participation of unemployed adults in lifelong learning is higher than in the EU: 13.2% compared with 10.0% across the EU. Training provided by employers is also higher: it stands at 75% in Spain compared with 66% across the EU (based on 2010 CVRS data). The percentage of employees who receive employer-sponsored CVT courses is 48%, also higher than the EU average of 38% (Cedefop, 2015).

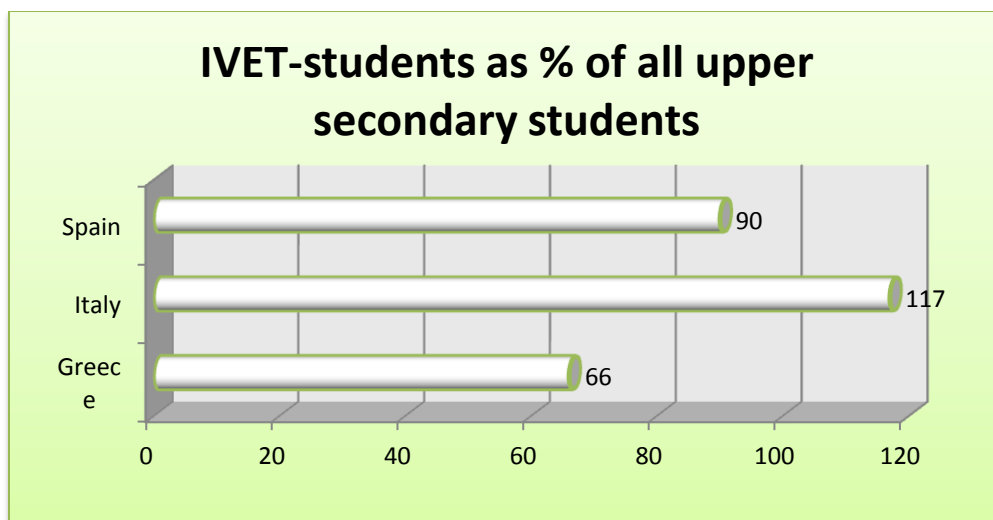


Table 5. IVET-students as % of all upper secondary students

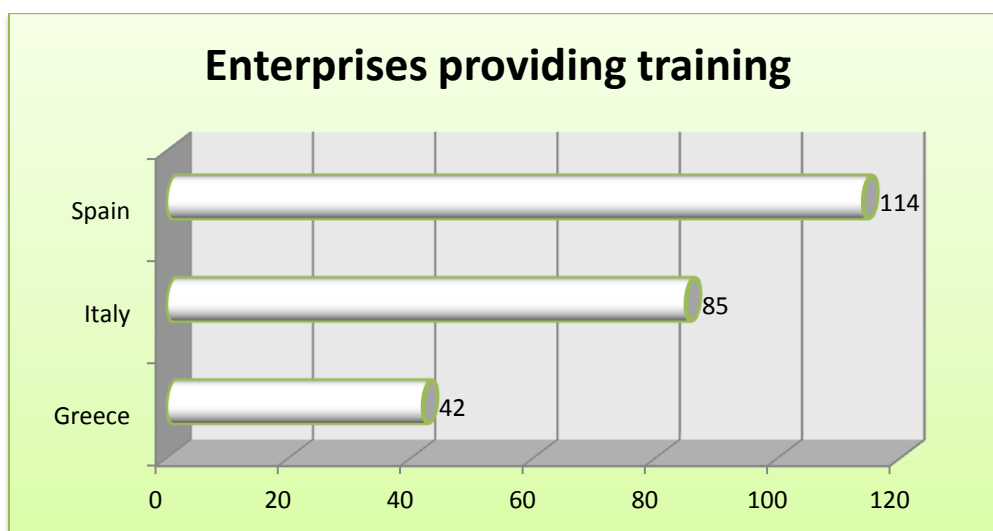


Table 6: Enterprises providing training

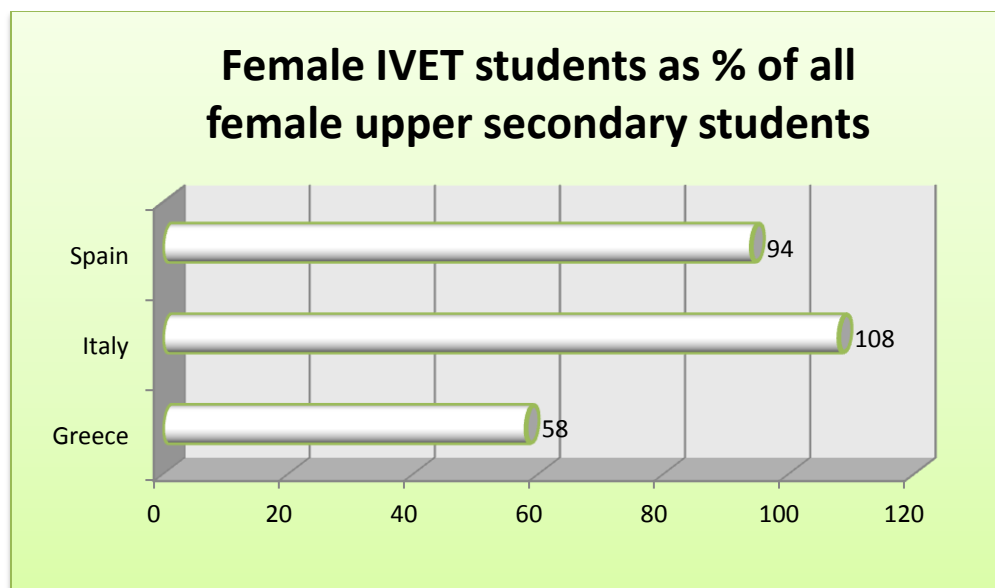


Table 7 Female IVET students

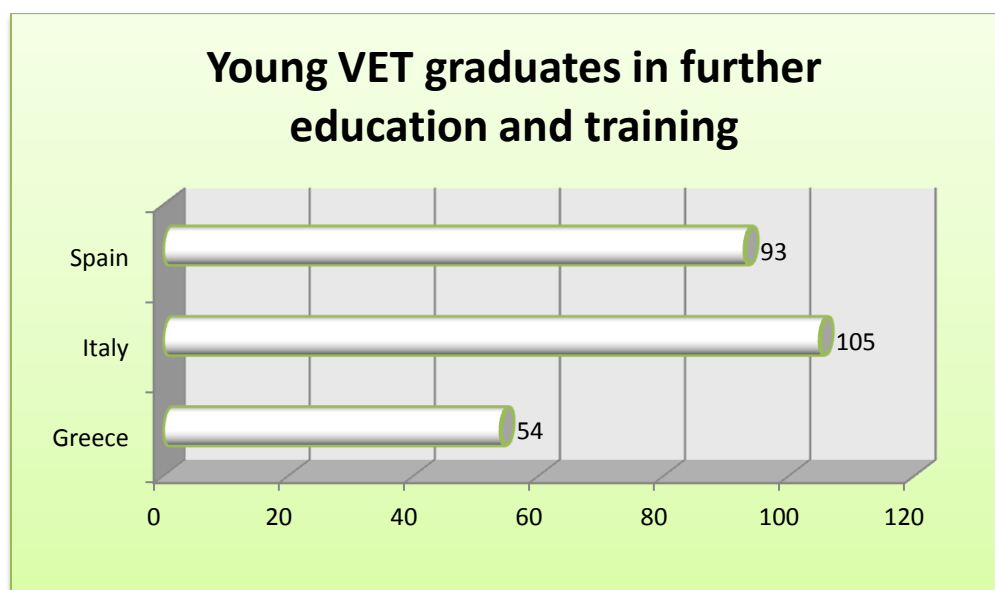


Table 8 Young VET graduates in further education and training

5.2.2. SKILL DEVELOPMENT AND LABOUR MARKET RELEVANCE

Greece

Some data are missing for several indicators of this group; where data are available, the situation in Greece compared to the EU varies. The average number of foreign languages learned in upper secondary IVET is lower in Greece (0.7) than in the EU (1.2). A higher rate (12.9%) of 30 to 34 year-olds has completed tertiary-level VET (ISCED 5b) than in the EU (8.7% in 2013).

Based on 2009 data, the employment percentage of 20 to 34 year-old IVET graduates at medium level of education (ISCED 3-4) differs slightly from the EU average (78.7% in Greece and 79.1% in the EU). IVET graduates in Greece enjoy a positive premium on their employment rate compared to graduates from general education at the same ISCED level, as well as to graduates at a lower ISCED level. Their employment rate is 4.6 percentage points higher than that of their counterparts from general education; this is a positive employment premium, although it remains lower than the EU average of 5.6 percentage points. The employment rate of IVET graduates is 5.9 percentage points higher than those with lower-level qualifications (also a positive employment premium, though much lower than the EU average of 17.4 percentage points). All these employment figures relate to 2009 and exclude young people in further education.

Italy

In Italy the proportion of 30 to 34 year-olds who have completed tertiary-level VET is particularly low, at 0.2% compared with 8.7% in the EU in 2013 – more than a twenty-fold difference. Enterprise expenditure on CVT courses as percentage of total labour costs also shows a striking difference: Italy scores 0.4% compared with 0.8% for the EU (data from CVTS 2010). For other indicators, such as the average number of foreign languages learned in IVET, workers with skills matched to their duties, and workers helped to improve their work by training, the scores are slightly higher than the EU average.

Based on 2009 data, the employment rate of IVET graduates (aged 20-34) at ISCED 3-4 (74.6%) is lower than the EU average (79.1). Their employment rate is 7.8 percentage points higher than for counterparts from general education (they enjoy a positive employment premium and this is above the corresponding EU average premium of 5.6 percentage points); their employment rate is also 13.6 percentage points higher than that of graduates with lower-level qualifications (but this is lower than the EU average premium of 17.4 percentage points). All these employment figures relate to 2009 and do not include young people in further education.

Spain

In Spain the rate of 30 to 34 year-olds who have completed tertiary-level VET is higher than the EU percentage, at 12.9% compared with 8.7% in the EU in 2013. On the contrary, training to

support innovation is provided by 23.5% of innovative enterprises, which is much lower than the EU average of 41.6% (data for 2010).

The employment rate of IVET graduates at ISCED 3-4 at the ages of 20-34 years is 72.2%, lower than the EU average of 79.1% (data for 2009). In Spain, IVET graduates enjoy a positive premium on their employment rate compared to graduates from general education at the same ISCED level, as well as to graduates at a lower ISCED level. Their employment rate is 3.3 percentage points higher than that of their counterparts from general education. However, this is lower than the EU average premium of 5.6 percentage points; their employment rate is 10.4 percentage points higher than the one for graduates with lower-level qualifications (again a positive premium but lower than the EU average premium of 17.4 percentage points). All these employment figures relate to 2009 and leave out young people in further education (Cedefop, 2015).



Table 9 Enterprises with supportive training practices

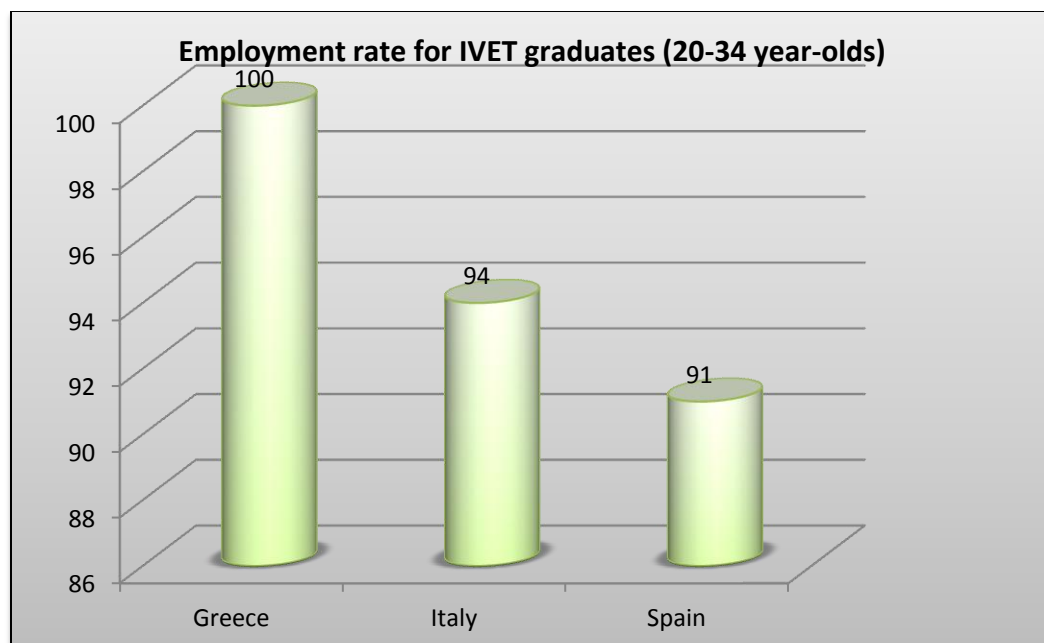


Table 10 Employment rate for IVET graduates

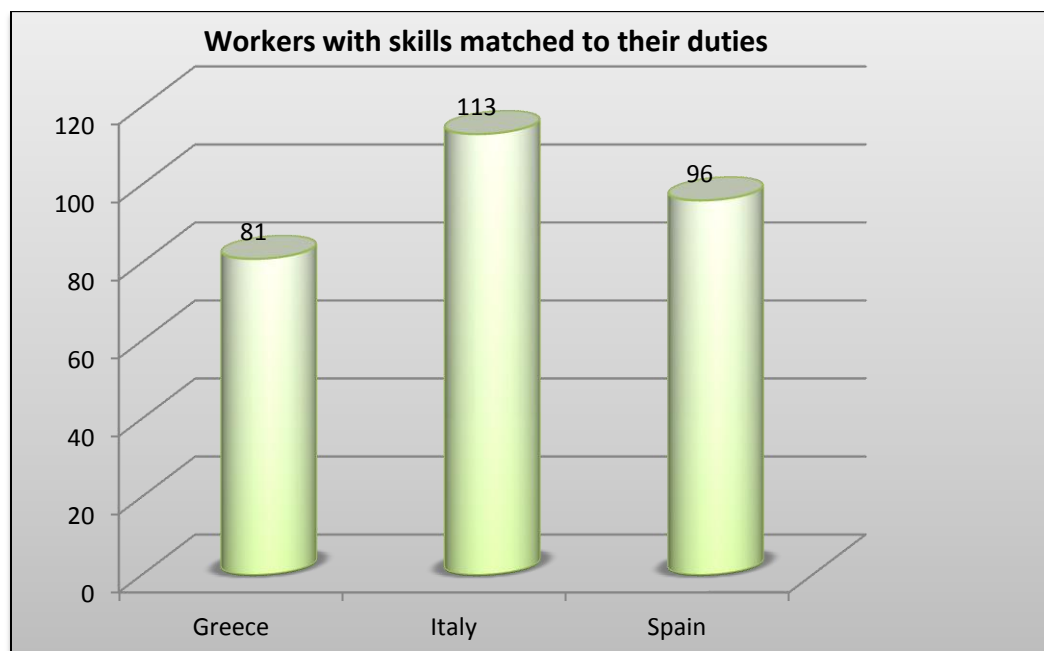


Table 11 Workers with skills matched to their duties

5.2.3. OVERALL TRANSITIONS AND EMPLOYMENT TRENDS

Greece

The proportion of NEET in Greece (28.6%) and the unemployment percentage for 20 to 34 year-olds in the country (39.6%) are much higher than the corresponding EU averages which are 17.0% and 15.1%, respectively. At 39.8%, the employment rate of recent graduates is less than half the corresponding average for the EU as a whole (75.4%). All unemployment- and employment-related indicators have changed significantly toward an unfavorable direction between 2010 and 2013.

The rate of 30 to 34 year-olds who have completed tertiary-level education (34.6%) is smaller than the EU average (36.8%). At this level, it is below the Europe 2020 average target (40%) but above the national target (32%). The proportion of adults with lower level of education is also substantially higher (32.8%) than in the EU (24.8%).

The share of early leavers from training and education is lower than the EU average (10.1% compared to 11.9%) and it decreased more than it did in the EU between 2010 and 2013 (3.6 percentage points and 2.0 percentage points respectively). At 10.1%, it is slightly above the Europe 2020 average target (10%) and the national target (9.7%).

Italy

In Italy, indicators for early leavers from education and training (17% in Italy, 11.9% in the EU), the unemployment rate for 20 to 34 year-olds (21.7% in Italy, 15.1% in the EU), and the NEET rate for 18 to 24 year-olds (29.3% in Italy, 17.0% in the EU) are all relatively high. The share of early leavers decreased from 18.8% in 2010 to 17.0% in 2013, and almost reached the national target of 16%. Both the unemployment percentage for 20-34 year olds and the NEET proportion increased from 2010 to 2013 more than the EU-average. The employment rate of recent graduates has decreased by 9.4 % between 2010 and 2013. At 48.3 percentage points, it remains much lower than the EU average, which is 75.4%.

The share of 30 to 34 year-olds who have completed tertiary-level education is lower than the EU-average (22.4% versus 36.8%). This rate is lower than both the national target (26-27%) and the Europe 2020 average target (40%). Between 2006 and 2010, and between 2010 and 2013, the number of people who completed tertiary-level education increased, but reached a lower percentage than in the EU as a whole over the same periods.

Spain

The share of early leavers from education and training (23.5%) is significantly higher than the EU average of 11.9%. This percentage has decreased over recent years; however, it is still above the Europe 2020 average target (10%) and the national target (15%) as well (Cedefop, 2015).

The unemployment rate of 20 to 34 year-olds has increased substantially from 25.3% in 2010 to 34.3% in 2013, to stand at a level that is significantly higher than the EU average of 15.1%. The employment rate of recent graduates has decreased substantially from 70.6% in 2010 to 59.9% in 2013, to stand at a level that is much lower than the EU average of 75.4%. The employment rate for 20 to 64 year-olds (58.2%) is also lower than in the EU (68.3%), and has been decreasing much faster in Spain than in the EU as a whole. The percentage of adults with low-level educational attainment (44.8%) is higher than the EU average (24.8%). More favorably, the share of 30 to 34 year-olds who have tertiary-level educational attainment (40.7%) is higher than the EU average of 36.8%. This indicator is above the Europe 2020 average target (40%) and close to Spain's national target (44%)(Cedefop, 2015).

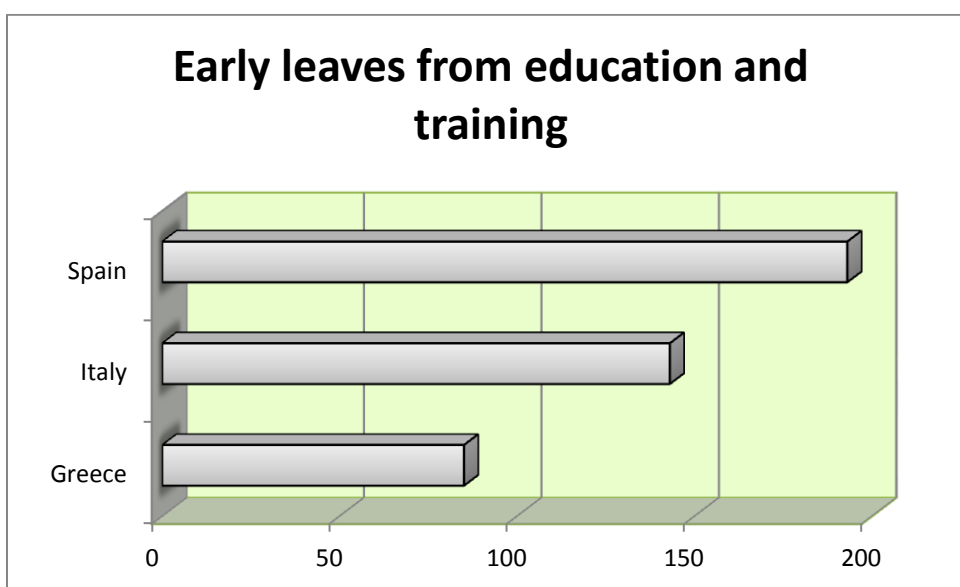


Table 12 Early leaves from education and training



Table 13 Unemployment rate for 20-34 year-olds

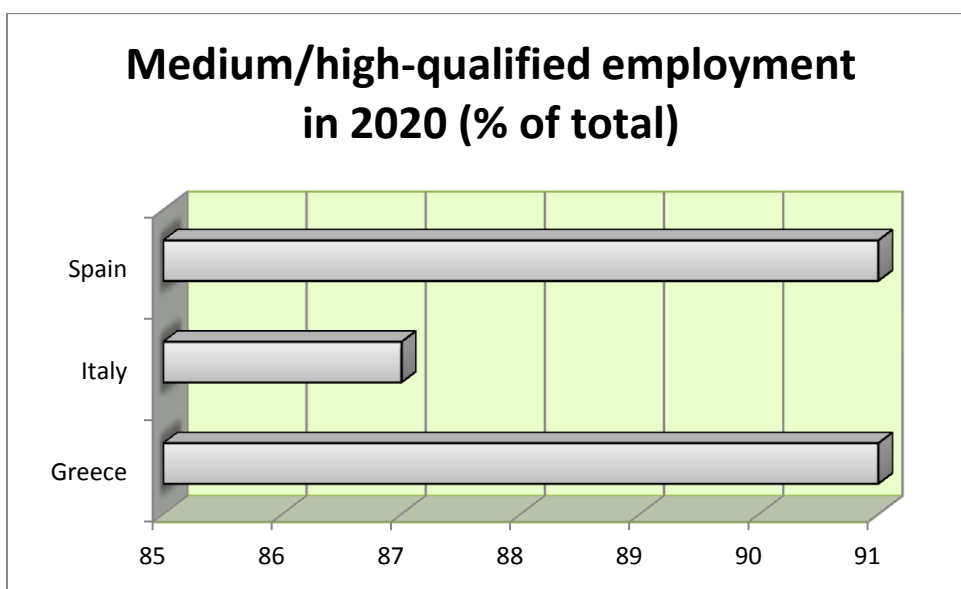


Table 14 Medium/high-qualified employment in 2020

5.3 Results

5.3.1.ACCESS, ATTRACTIVENESS AND FLEXIBILITY

Concerning the rates of upper secondary students, in Greece the percentage of upper secondary students enrolled in IVET is low (33.1% compared to 50.4% for the EU). Female enrolment figures differ even more: 26.1% of females in upper secondary education are enrolled in IVET compared to 45.0% in the EU in 2012. In Italy, however, the proportion of IVET students as a percentage of all upper secondary students is proportionally higher (59.2%) than the EU average (50.4%) according to the data for 2012. In Spain the rate of all upper secondary students participating in IVET in Spain is 45.5%, slightly below the EU average of 50.4% (data for 2012).

The rate of IVET work- based students of all upper secondary IVET in Spain is worth mentioning, because although it is low (3.2%) in the other two countries it is non-existent (see table 11).

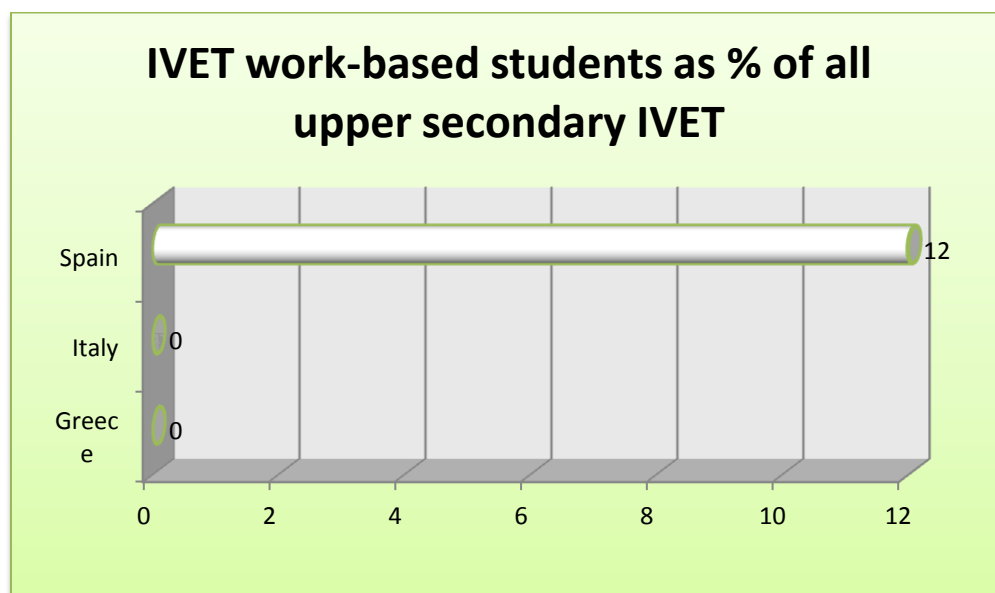


Table 15 IVET work-based students

The share of adults involved in lifelong learning in 2013 (2.9%) in Greece is also lower than the EU average (10.5%), and far below the average target (15%) set by the strategic framework education and training 2020. In addition, data for 2013 show that Italy has fewer adults involved in lifelong learning (6.2%) than the EU as a whole (10.5%). At 6.2% Italy is still below the average target of 15% set by the education and training 2020 strategic framework. Spain has proportionally more adults (11.1%) involved in lifelong learning than the EU as a whole (10.5%). This figure has been stable from 2010 to 2013; nevertheless, it is still below the target (15%) set by the strategic framework education and training 2020.

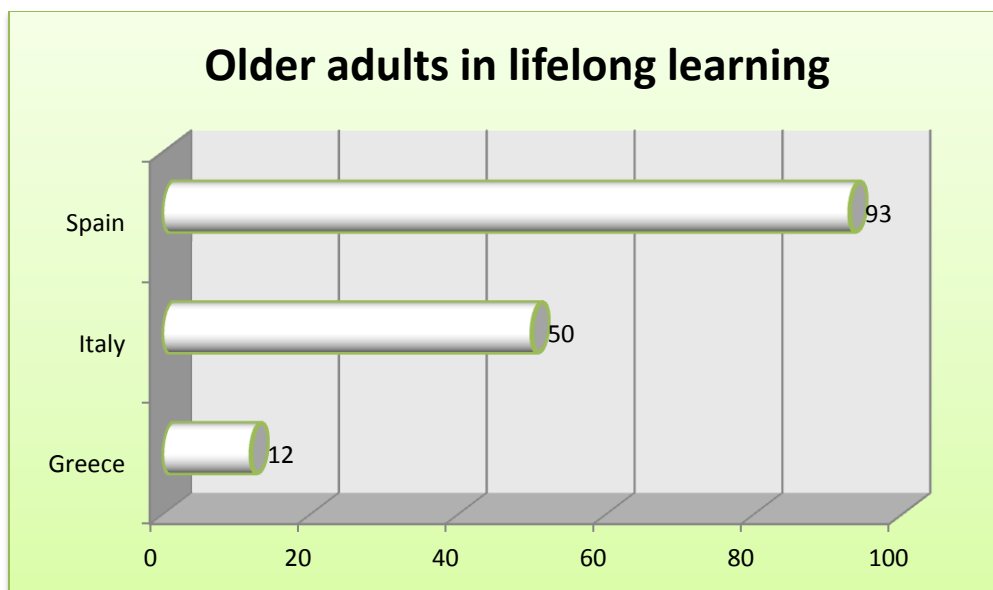


Table 16 Older adults in lifelong learning

Participation in lifelong learning by adults with low-level education (0.4%), unemployed adults (2.7%) and older adults (0.8%) is also lower in Greece than the EU. Older Italians and those with low-levels of educational attainment are less likely to be involved in lifelong learning in Italy as well. However, in Spain the rates of older adults and adults with relatively low qualifications participating in lifelong learning are comparable to corresponding EU averages (See tables 13, 14).

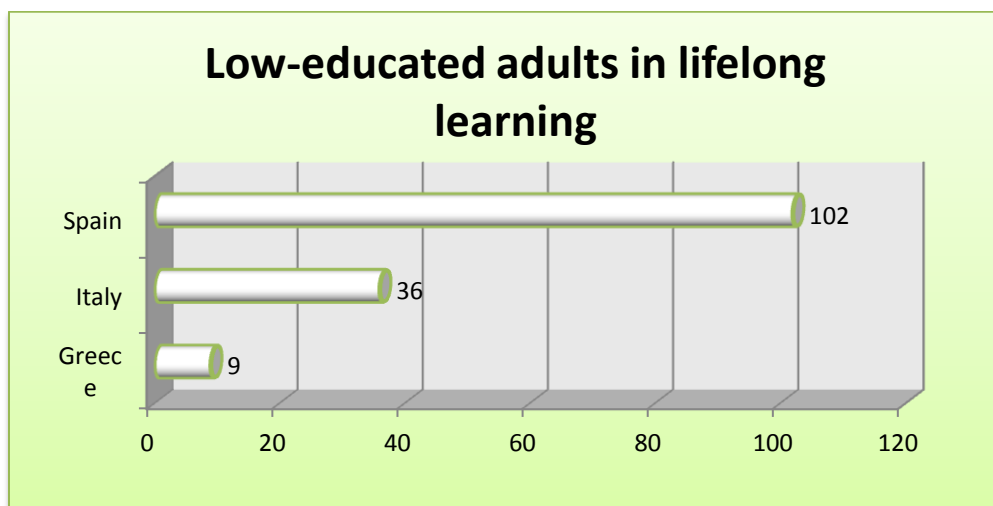


Table 17 Low-educated adults in lifelong learning

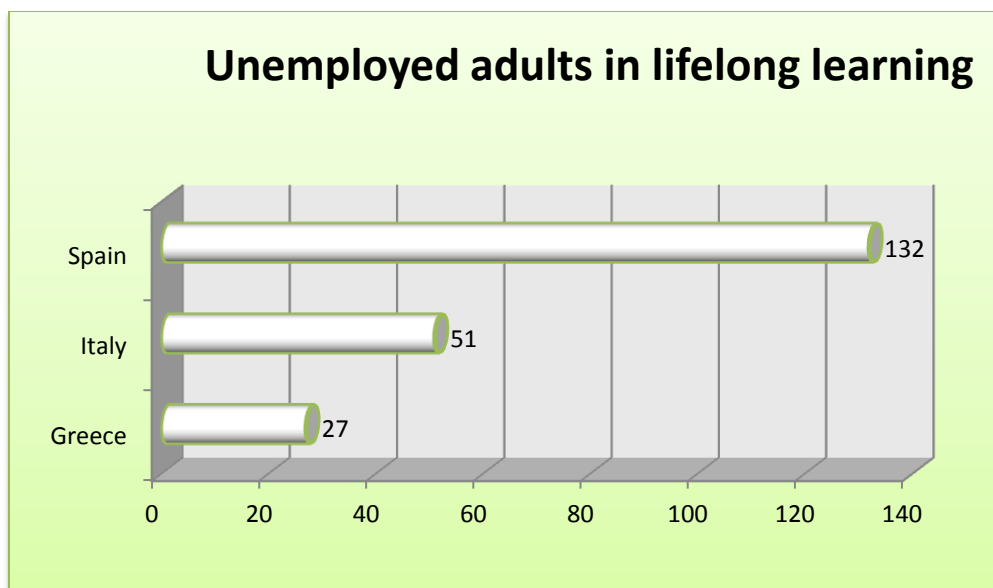


Table 18 Unemployed adults in lifelong learning

Based on 2010 CVTS data, employee participation in CVT courses and on-the-job training suggest that employer-sponsored training is generally less frequent in Greece than in the EU. The rate of young VET graduates who participate in further education and training is lower than the EU average (16.6% in Greece and 30.7% for the EU in 2009). Differences in employee participation in on-the-job training are evident in Italy as well: 11% for Italy compared with 20% for the EU as a whole. The percentage of employees who receive employer-sponsored CVT courses in Spain is 48%, which is higher than the EU average of 38% (see table 15).

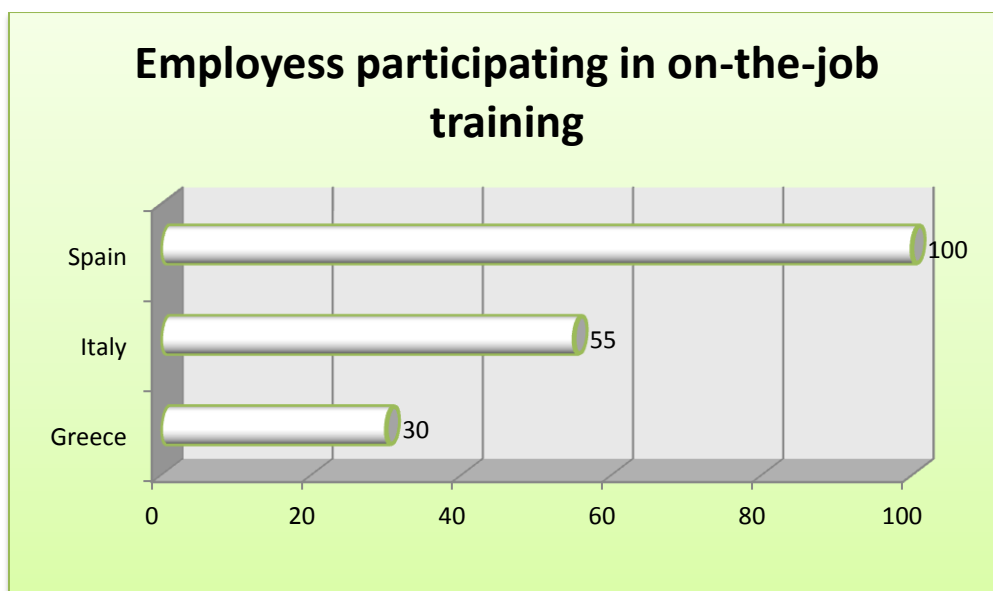


Table 19 Employees participating in on-the-job training

5.3.2. SKILL DEVELOPMENT AND LABOUR MARKET RELEVANCE

In Greece the average number of foreign languages learned in upper secondary IVET is lower (0.7) than in the EU (1.2). In Italy, other indicators, such as the average number of foreign languages learned in IVET, workers with skills matched to their duties, and workers helped to improve their work by training, the scores are slightly higher than the EU average (see table 16).

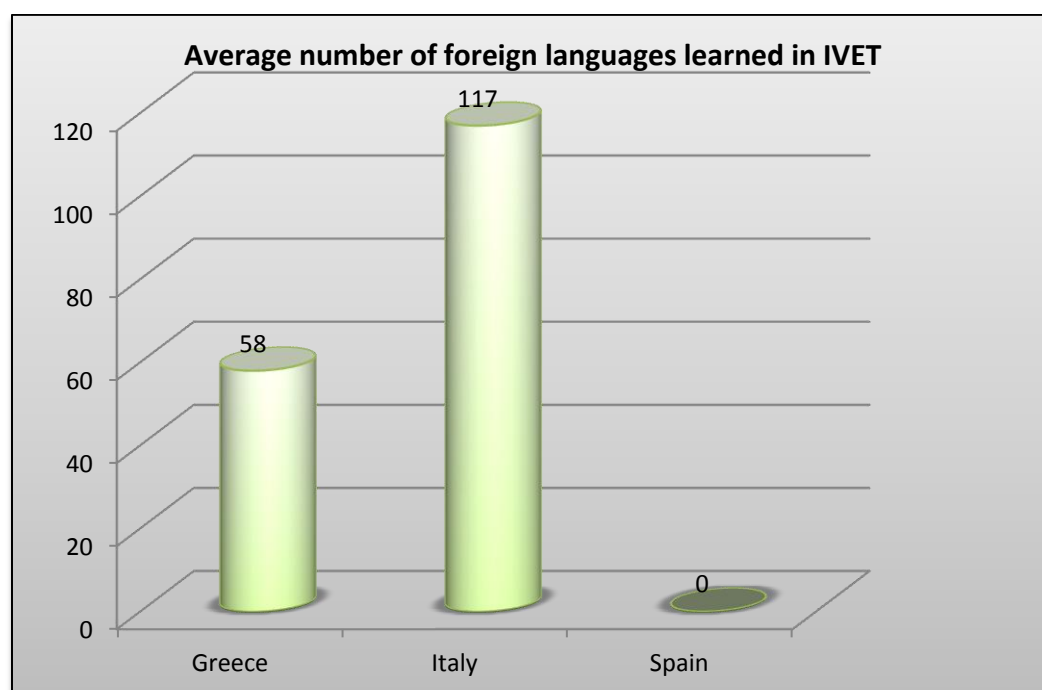


Table 20 Average number of foreign languages learned in IVET

Based on data from 2009 for Greece, the employment percentage of 20 to 34 year-old IVET graduates at medium level of education (ISCED 3-4) differs slightly from the EU average (78.7% in Greece and 79.1% in the EU). IVET graduates in Greece enjoy a positive premium on their employment rate compared to graduates from general education at the same ISCED level, as well as to graduates at a lower ISCED level.

In Italy, the employment rate of IVET graduates (aged 20-34) at ISCED 3-4 (74.6%) is lower than the EU average (79.1). Their employment rate is 7.8 percentage points higher than for counterparts from general education (they enjoy a positive employment premium and this is above the corresponding EU average premium of 5.6 percentage points). In Spain the employment rate of IVET graduates at ISCED 3-4 at the ages of 20-34 years is 72.2%, lower

than the EU average of 79.1% (data for the year 2009). In Spain, IVET graduates enjoy a positive premium on their employment rate compared to graduates from general education at the same ISCED level, as well as to graduates at a lower ISCED level (see tables 17 and 18).

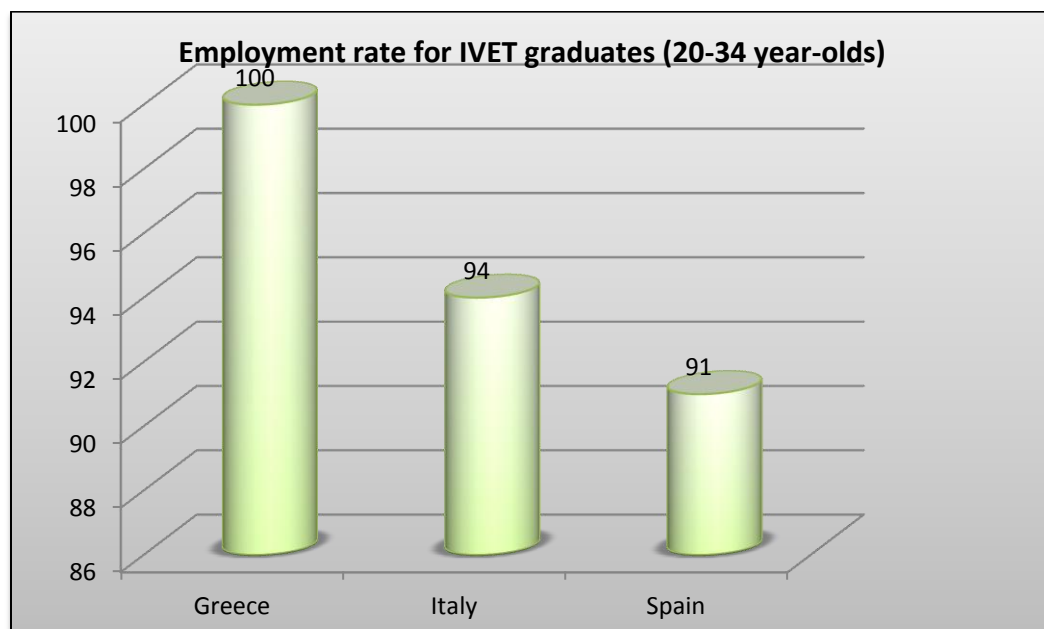


Table 21 Employment rate for IVET graduates (20-34 year old)

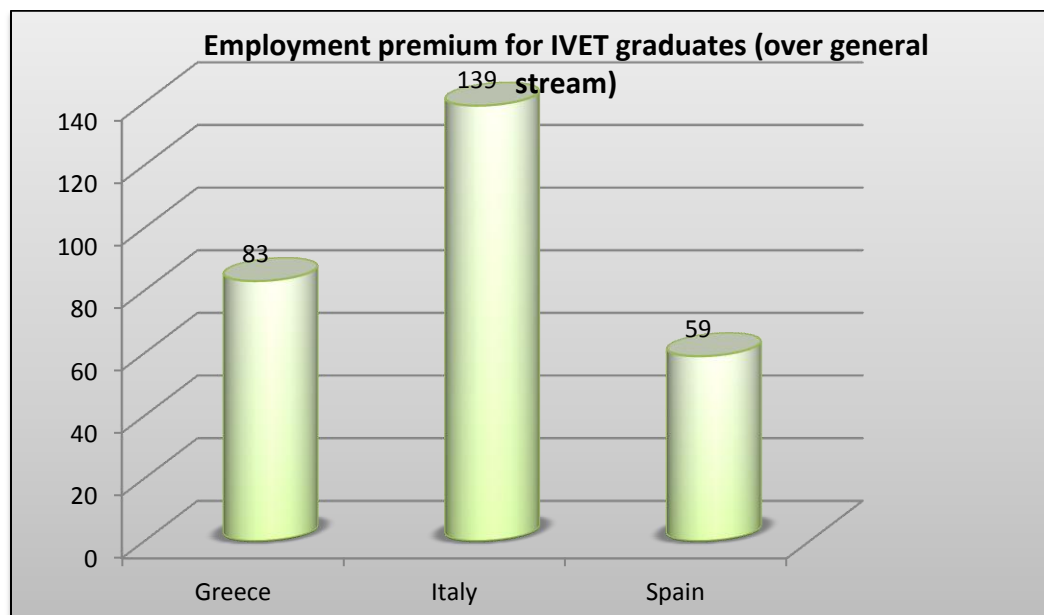


Table 22 Employment premium for IVET graduates

In Greece a higher rate (12.9%) of 30 to 34 year-olds has completed tertiary-level VET (ISCED 5b) than in the EU (8.7% in 2013). In Italy the proportion of 30 to 34 year-olds who have

completed tertiary-level VET is particularly low, at 0.2% compared with 8.7% in the EU in 2013 – more than a twenty-fold difference. In Spain the rate of 30 to 34 year-olds who have completed tertiary-level VET is higher than the EU percentage, at 12.9% compared with 8.7% in the EU in 2013 (see table 19).

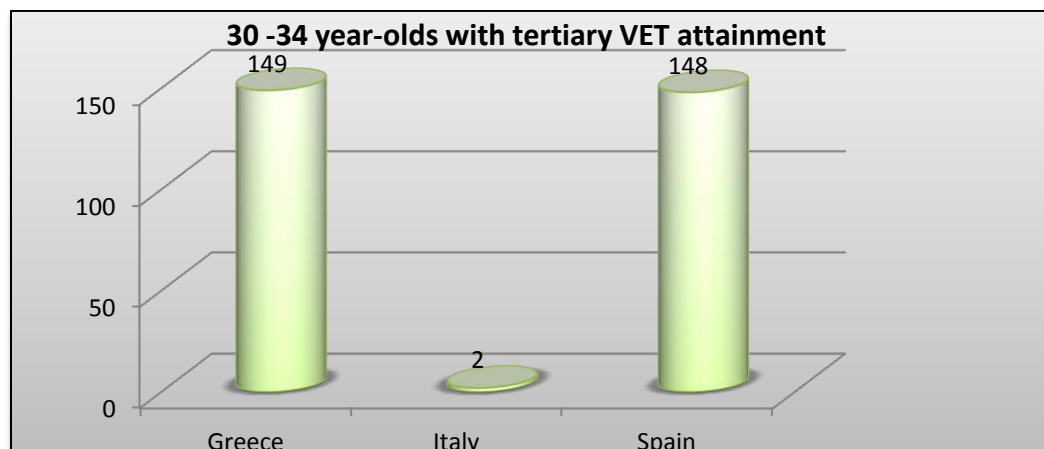


Table 23 30-34 year old with tertiary VET attainment

Concerning enterprise expenditure on CVT courses as percentage of total labor costs, Italy scores 0.4% compared with 0.8% for the EU (data from CVTS 2010). In Spain training to support innovation is provided by 23.5% of innovative enterprises, which is much lower than the EU average of 41.6% (data for 2010). In Greece, however, these figures touch zero (see table 20).

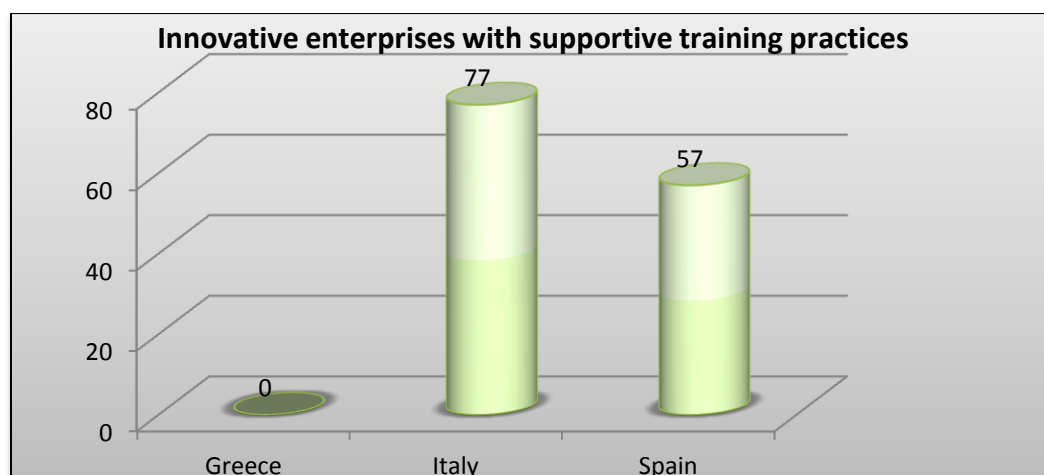
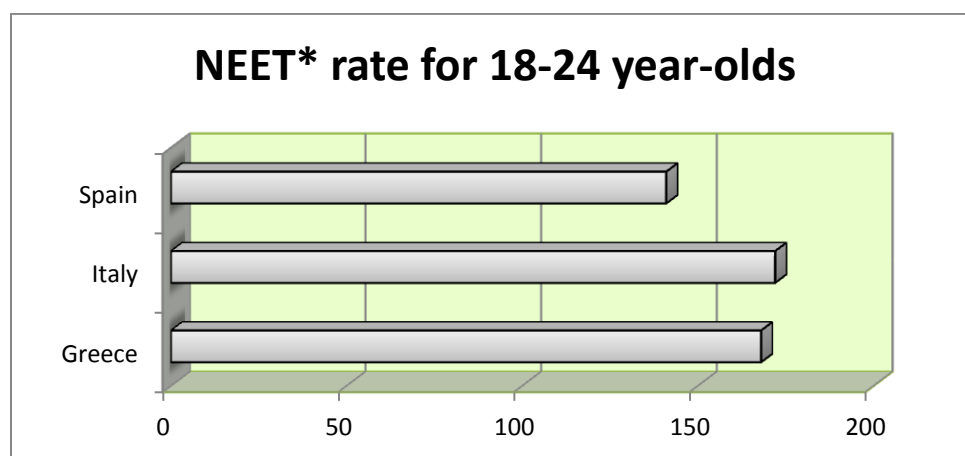


Table 24 Innovative enterprises with supportive training practices

5.3.3.OVERALL TRANSITIONS AND EMPLOYMENT TRENDS

The proportion of NEET in Greece (28.6%) and the unemployment percentage for 20 to 34 year-olds in the country (39.6%) are much higher than the corresponding EU averages which are 17.0% and 15.1%, respectively. In Italy, the unemployment rate for 20 to 34 year-olds (21.7% in Italy, 15.1% in the EU), and the NEET rate for 18 to 24 year-olds (29.3% in Italy, 17.0% in the EU) are all relatively high (see table 21). The unemployment rate of 20 to 34 year-olds in Spain has increased substantially from 25.3% in 2010 to 34.3% in 2013, to stand at a level that is significantly higher the EU average of 15.1% (see table 22).



**Youth not in employment, education or training*

Table 25 NEET rate for 18-24 year-old

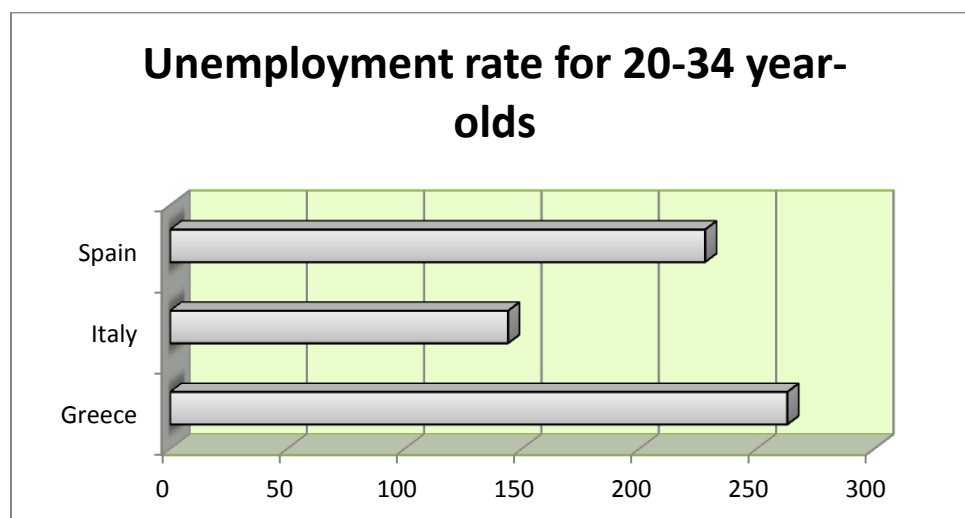


Table 26 Unemployment rate for 20-34 year-old

The rate of 30 to 34 year-olds who have completed tertiary-level education in Greece (34.6%) is smaller than the EU average (36.8%). At this level, it is below the Europe 2020 average target (40%) but above the national target (32%). In Italy, the share of 30 to 34 year-olds who have

completed tertiary-level education is lower than the EU-average (22.4% versus 36.8%). This rate is lower than both the national target (26-27%) and the Europe 2020 average target (40%). In Spain, the share of 30 to 34 year-olds who have tertiary-level educational attainment (40.7%) is higher than the EU average of 36.8%. This indicator is above the Europe 2020 average target (40%) and close to Spain's national target (44%).

The share of early leavers from training and education is lower in Greece than the EU average (10.1% compared to 11.9%) and it decreased more than it did in the EU between 2010 and 2013 (3.6 percentage points and 2.0 percentage points respectively). At 10.1%, it is slightly above the Europe 2020 average target (10%) and the national target (9.7%). The share of early leavers in Italy decreased from 18.8% in 2010 to 17.0% in 2013, and almost reached the national target of 16%. In Spain the share of early leavers from education and training (23.5%) is significantly higher than the EU average of 11.9%. This percentage has decreased over recent years; however, it is still above the Europe 2020 average target (10%) and the national target (15%) as well.

6. Summary and Conclusions

6.1 Overview of the state-of-art of upper secondary vocational education and alternating training systems in Greece, Italy and Spain

This study is based on a comparative analysis of the three countries' reports. The synthesis report presents some background information to the study and the main results on the comparative analysis of the issues addressing upper secondary vocational education and alternating training in the form of indicators. Our study has shown strong differences among the partner countries. Therefore, we show the differing results which should be considered in order to pave a common ground for the implementation of methodological guidelines and the necessity for the adoption of different approaches in the relevant tools to be designed.

There is general consensus that IVET is vocational preparation predominantly provided at upper secondary level - lasting for a maximum of around six years - for entry into the labour market, although courses are also available at the lower secondary level, post-secondary nontertiary, and tertiary level. There are two pathways through secondary education: (1) a vocational route (IVET) and (2) a general academic route. However, attempts are being made to integrate the two pathways so that students can follow a mixed pathway through secondary and tertiary education.

6.1.1. Greece

In Greece, VET is in transition. There is no explicit and firm definition of the IVET system in Greece. The three institutions (the Ministry of National Education and Religious Affairs, the

Organisation for Vocational Education and Training (OEEK) and the Greek Manpower Employment Organisation (OAED)) involved in IVET do not work on the basis of a single coordinated system. Although the level of participation in education is generally high in Greece (ELSTAT, 2013) participation in VET has consistently been low. The vast majority of youngsters in Greece (about 75%) opt for the general upper secondary school which gives them access to university studies whereas vocational education usually attracts low performers. This way, negative stereotypes are reinforced at the expense of vocational education (Ioannidou and Stavrou, 2013). Eurostat figures for 2012 show that the early leaving rate in Greece (11.4%) is below the European average (12.7%, EU-28) but above the target set for 2020. In particular, early leaving from VET is particularly high (20,3 %) compared to (3,3 %) early leaving from the unified lyceum (Pedagogical Institute, 2006: 184, 109). However, due to high youth unemployment and other labour market imbalances there has been a lot of effort through the last couple years (eg. the 2013 legislation on secondary education; Law 4186/2013) to upgrade VET, boost apprenticeship and broaden career guidance offered to young people. In Greece, university graduates unemployment has been rising and people who work at a level below their qualifications has risen by six percentage points ⁹. Cedefop estimates suggest that by 2020 about 60% of jobs in Greece will require medium-level qualifications, often of a vocational nature (Cedefop, 2012).

In an effort to upgrade VET and attract more students a law on secondary education (Law 4186/2013) has been implemented according to which vocational education is provided by the vocational upper secondary school, founded exclusively by the Ministry of Education and Religious Affairs allowing the following options in addition to the general upper secondary school: (1) initial vocational education within the formal education system in the second cycle of secondary education at a vocational upper secondary school (day or evening school); (2) initial vocational training outside the formal education system (referred to as non-formal) in vocational training schools (SEK), vocational training institutes (IEK), centres for lifelong learning and colleges (Cedefop, 2014a). In these vocational secondary schools, Curricula can be developed in line with the European credit system for VET (ECVET), and take into account related job profiles certified by the National Organization for the Certification of Qualifications and Vocational Guidance (Eoppep). In terms of evaluation and accreditation, the students who complete an upper secondary programme are awarded a vocational upper secondary school leaving certificate (equivalent to the general upper secondary school leaving certificate) and a specialization diploma at European qualifications framework (EQF) level 4, following school examinations administered by EPAL. Graduates of the ‘apprenticeship year’ receive a diploma at EQF level 5 issued jointly by the Ministry of Education and OAED. The ‘apprenticeship year’ (education in the workplace), addresses those who have earned the certificate and diploma

⁹Pouliakas, K. (2014). *A balancing act at times of austerity: matching the supply and demand for skills in the Greek labour market*. IZA Discussion paper; No 7915. <http://ftp.iza.org/dp7915.pdf> [30.03.2016].

attesting completion of the three-year upper secondary education at a vocational upper secondary school. For its implementation the vocational upper secondary schools (EPAL) and OAED are responsible. Apprenticeship year' programmes are to be financed from national and/or EU funds, with no contribution from the participating enterprises (Participating enterprises are subsidized), in contrast to most other European countries that implement apprenticeship systems (Cedefop, 2014a). In 'apprenticeship year', workshop lessons are combined with workplace learning (28 hours/week); a process governed by a contract between OAED and the employer. Graduates of apprenticeship may prepare for exams to obtain their vocational diploma from Eoppep.

In Greece continuous vocational training and general adult education is provided by lifelong learning centers (LLCs) which are managed by the Greek regional administrations. The initial vocational training curricula are developed by the GSLL and certified by Eoppep in which the learning outcomes are expressed as knowledge, skills and competences by subject and specialty. The Hellenic qualifications framework has officially been presented in February 2014. However, the recent changes in the institutional framework for VET (Law 4186/2013 on secondary education) suggest that economic forecasts were not taken into account in deciding which specialties would be offered by VET bodies (EPAL, SEK and IEK). As a result, there is a risk of mismatch between skills being developed and the real needs of the economy. However, the development of Greece's national qualifications framework (NQF) (Eoppep, 2013) will enable the recognition and correlation of all forms of formal and non-formal education and informal learning, so that they can be certified and classified and referenced to the levels of the European qualifications framework (Article 16). In addition, in Greece, the law on the development of lifelong learning (Law 3369/2010) and the new law restructuring secondary education (Law 4186/2013) make provision for curricula to be geared to the ECVET system (Article 10). The organization responsible for developing and implementing the VET credit transfer system is Eoppep and the whole process will be coordinated by the State Scholarships Foundation (IKY) (IKY, 2013). For the moment credit points for existing vocational training programmes are being awarded on a pilot basis.

6.1.2. Italy

Italy scores highly compared with the EU average for participation in IVET: the proportion of IVET students as a percentage all upper secondary students is proportionally higher (59.2%) than the EU average (50.4%) (data for 2012). In Italy, the definition "vocational education and training" (VET) tends to be 'reserved' for specific programs primarily organized by Regions and Autonomous Provinces (such as leFP). From a European perspective the term 'education and training' comprises all types and levels of education and vocational education and training (VET). Regardless of the governance scheme, VET can take place at secondary, post-secondary

or tertiary level in formal education and training or non-formal settings including active labor market measures. VET addresses young people and adults and can be school-based, company-based or combine school- and company-based learning (apprenticeships). Therefore, the term VET also covers the technical and vocational schools.

With reference to VET governance, responsibilities are shared among the different actors involved in planning and organising VET as follows:

- the Ministry of Education, University and Research (MIUR) sets the framework for VET in national school programs (technical and vocational schools) for ITS and IFTS;
- the Ministry of Labor and Social Policies (MLPS) sets the framework for leFP, while the regions and autonomous provinces are in charge of planning, organisation and provision;
- regions and autonomous provinces are also in charge of planning, organisation and provision of ITS, IFTS, post leFP, post-higher education, and most of the apprenticeship-type schemes;
- goals of CVT under the public system are set by the Ministry of Labor, while CVT activities are managed by either regions and autonomous provinces or social partners;
- social partners play an important role in promoting company-level training plans (single or group of companies) to be financed by the regions or by the joint Inter-Professional Funds;
- the social partners have a general advisory role in VET policy, from which VET provision is then defined;
- the social partners contribute to designing and organizing active labor market policies

The leFP programmes (percorsi triennali e quadriennali di istruzione e formazione professionale) offer young people the opportunity to fulfill their right/duty to education and training. The training is designed and organized by Regions. Over the past few years, increased cooperation between State, regions and provinces has made these programs more flexible. In 2011, regulations issued by the State-Regions conference, have introduced several important systemic elements:

- (a) a set of training standards for basic skills to be developed in the three- and four-year programs;
- (b) a set of minimum standards (valid at national level) for technical and vocational skills in relation to the occupation profiles included in the national qualifications register (Repertorio nazionale delle qualifiche);
- (c) Intermediate and final certifications that are valid at national level. The national qualifications register created in 2011 contains the national occupation profiles and the corresponding qualifications and programs or learning pathways, as well as minimum education and training

standards (valid at national level). Qualifications leading to a certain national occupation profile need to be described in terms of learning outcomes and to be allocated the corresponding EQF level.

The leFP programs are organised in training modules and aim to develop basic, transversal and technical-professional skills. Statistics (ISFOL, 2013a) show that over 300 000 people enrolled in three year leFP programs in 2012/13. Italy scores quite highly compared with the EU average on participation in IVET (data for 2011), the share of IVET students as a percentage all upper secondary students being higher (60.0%) than the EU average (50.3%). Almost 163 000 were enrolled in programs at upper secondary vocational schools and almost 128 000 in training centers. This represents an increase of 18% in enrolments compared to the previous year, a positive trend due to increase in enrolments in three-year leFP programs at upper secondary vocational schools. During 2012/13, an increase in enrolments was also registered in the four year leFP: 9 471 more students enrolled in 2012/13 compared to previous year. Data from ISFOL show that in 2013, 50% of those who have acquired a leFP qualification in the past three years are employed (ISFOL, 2014a).

People who have completed the three- or four-year vocational training leFP and those who have obtained an upper secondary diploma can access specific training organised by Regions or Autonomous Provinces. They generally last 400 to 600 hours and are jointly financed by the European Social Fund (ESF). Upon completion, a regional vocational certificate /a 'second level qualification' is awarded. These courses aim at acquiring theoretical, technical and management skills. Practical work experiences and traineeship are generally required. Admission is often subject to selective procedures that may include admission tests or interviews. Courses are job-oriented and should meet the requests coming from the local labor market. They lead to a regional qualification, corresponding to specific professional areas, although these are not listed in the national register of qualifications. Job placements are mandatory, due to the job-oriented characteristic of these courses, and are organised in collaboration with enterprises. Distance learning is widespread. These courses are organised by training centres accredited by the regions and are not homogeneously offered in the country. They lead to a qualification certificate awarded by the regions according to their own specific register, not recognised nationally. There is no national register of qualifications for regional courses.

Italy is one of the most active states in disseminating information on ECVET. At the moment, in Italy there is a shared system for the recognition of skills obtained in non-formal and informal settings. Law 92/2012 "Reform of the labor market" and the introduction of the EQF (European Qualification Framework) created important links between the strategy of the Italian Lifelong Learning program and the ECVET system for the recognition of credits in the training and education professional. Formally, in Italy does not exist a coordination center for the ECVET, but activities related to ECVET are currently managed by ISFOL (Institute for Professional

Training of Workers). The same organization acts as contact point for ECVET for EQF (The development of ECVET in Europe - Cedefop, 2013).

The approach based on learning outcomes has been implemented in different areas of the Italian qualifications system, but still different subsystems exhibit differences above all in terminology field. A system based on modular qualifications (ECVET model) has been partially adopted. With the implementation of the last national training standards and vocational education, the approach based on learning outcomes will be further developed (The development of ECVET in Europe - Cedefop, 2013).

Apprenticeship in Italy defines a work contract with a specific training purpose; it includes both on-the-job and classroom training. Apprenticeship-type schemes were reformed in 2011 aiming to promote the integration of young people into the labor market. The initiative to offer apprenticeship-type schemes in higher education and in fields of studies and types of programmes that are traditionally perceived as general and academic education is innovative. Workers registered in so called 'mobility lists' can participate in this scheme to qualify or requalify (usually they are offered a place in the 'professional' apprenticeship scheme. The apprenticeship system includes three types of contract: (a) apprenticeships leading to a professional operator certificate and a professional technician diploma (apprendistato per la qualifica ed il diploma professionale), (b) professional apprenticeships (apprendistato professionalizzante o contratto di mestiere), (c) 'higher education and research' apprenticeships (apprendistato di alta formazione e ricerca). Regions and autonomous provinces, in agreement with the social partners and public education and training centres, decide the duration of contracts, the organisation of programmes, and ensure that they are compatible with fully school-based curricula. Over the past few years the number of apprenticeship contracts has dropped. In 2012, 469 855 apprentices were employed (stock data), 4.9% less than the previous year. Finally, guidance activities for VET learners are carried out regionally and locally by training centres whose objective is to provide guidance to students moving horizontally and vertically between various training options and also to support the transition into the labour market.

6.1.3. Spain

The education system in Spain is decentralized, with different levels falling under the responsibility of the Ministry of Education, Culture and Sports (hereinafter MECD) and the Regional Ministries of Education. The MECD is responsible for developing and implementing the basic legislation on education. The autonomous communities have responsibilities for VET, consisting of developing and applying the basic regulations enforced by the MECD. In Spain from 2014/15, vocational training is delivered in three stages offering three different qualification levels: basic, intermediate and higher VET diplomas. In this new scheme, programmes last two years with a minimum of 20% spent in a firm and a maximum of 80% at a

training centre; overall, 70% of the time is devoted to work-based learning and 30% to applied theoretical training. The reform also opens up the opportunity to acquire IVET diplomas through dual track schemes (with or without a working contract) with duration up to three years (Cedefop, 2014b). The quality and efficiency of publicly funded Continue VET is guaranteed through accreditation system of VET providers and formal qualifications development.

Although the number of students registered at every level of VET has increased, the Bachillerato (High School) continues to be the preferred option among young people. In the 2010/2011 academic year, about 70% of all the students that had completed compulsory secondary education chose to study the Bachillerato and over 30% chose intermediate VET levels (Spanish Ministry of Employment and Social Security, 2012). However, in recent years in Spain, the social image of VET and its popularity after completing the compulsory secondary education has improved (ReferNet Spain team, 2014). Indeed, the variation to the course 2013-2014 from the previous one is 5.2% (4% for in person intermediate level, 4.8% for in person higher level and 16.6% for online courses) (Spanish Ministry of Education, Culture and Sport, 2013) and the overall increment from the course 2007/2008 to the course 2014/2015 (prevision) is 22,44% (Gomendio, 2015).

Modernising VET and making it more flexible as supporting to lifelong learning are aspects at the heart of Spanish education and employment policies (Cedefop, 2014b). Education and employment authorities in Spain are responsible of the VET programmes. The national system for qualifications and vocational training is the umbrella for VET programmes leading and awarding formal qualifications.

In 2014, almost all VET Diploma programmes have been updated and adapted to the requirements of the productive sectors and also some new Diploma programmes have been created. As consequence, the current Catalogue of VET Diploma programmes within the Education System includes 175 Diplomas: 21 Basic, 64 Intermediate, and 90 Higher VET Diploma programmes (ReferNet Spain team, 2014); belonging to 26 professional families (Todofp.com, 2016). Considering these families, the main registrations in intermediate and higher levels are recorded in Administration (near the 25%) and Health (15% for intermediate level and 13 for higher level) (Spanish Ministry of Education, 2011).

The General Council of Vocational Training is the national government's advisory body on VET policy that comprises representatives of national and regional public authorities and social partners that work together with the education and labour administrations (Cedefop, 2014b). Additionally, the National Education Council is involved in developing occupational standards, creating a national register which serves as a reference for education and employment authorities when designing VET qualifications and programmes in order to ensure they respond to labour market needs (Cedefop, 2014b; Refernet Spain, 2014).

Although the number of unemployed decreased by more than 500,000 in one year, the unemployment rate is placed at 23.67% which is the second highest in the European Union. Hence, the Spanish labour market is improving but it continues presenting serious structural problems such as the high rates of youth unemployment (Eures, 2015). In this sense, VET is the main pillar on the national strategy for entrepreneurship and youth employment (2013-2016) (Cedefop, 2014b). Among other measures, the development of dual vocational training has provided successful results in 2014 as the number of companies involved increased from 513 to 1570 (+200%) and the number of students from 4,292 to 9,555 (+100%) (Employment, Social Affairs and Inclusion, 2015).

The Spanish VET is open to the needs of population and relevant sectors in the Spanish economy, adapting the training programme to current social and economic situation. The continue updating and creation of new VET programmes, the different access routes and its bridges with other training programmes, the impulse of online training, the autonomous calls, the alliance networks with companies in all sectors, and the entrepreneurship promotion, among other measures have the objective to facilitate to an increase profile of students their return to the studies and the conciliation between their labour and personal lives. Indeed, people who have finished their VET studies had achieved higher levels of labour inclusion in Spain (TofoFP.es, 2015). In 2014, all education levels have increased their contracting, but the VET programmes and the Bolonia programmes at Universities had experienced a higher intensity in this increase (Public System of State Employment, 2015). In numbers, the contracting of students from VET has increased a 19.15% for the students from higher level and a 17.77% for the students from intermediate-level.

6.2 Recommendations

In the context of major economic and social challenges that Europe has been facing in the recent years, particularly affecting Italy and Spain, with Greece been hit especially hard, there has been given a lot of consideration and attention on the need to identify potential areas of growth and enhance education and training to respond to those challenges. As a result, all three countries have focused on the development of effective policy amendments that address the strong interconnection among economy, labour market and education and training. At a time when high youth unemployment and the need to empower young people require urgent handling, vocational education and training (VET) relevant to the labour market became a priority for Greece, Italy and Spain. Towards this aim there was identified the need to make relevant improvements and increase the provision of work-based learning or apprenticeships to ensure that young people will be enabled to acquire knowledge, skills and competences that will lead to better job prospects

and meet the requirements of the labour market. The relevant reforms legislated by all three countries were in alignment with the qualitative priorities set in Europe 2020.

The Qualitative priorities set in Europe 2020 and Education and training 2020 contributing to European VET policy strategic goals for 2020 are (Cedefop, 2014a):

- **making initial VET an attractive learning option** with high relevance to labour market needs and pathways to higher education;
- **easily accessible continuing VET** for people in different life situations simplifying skill development and career changes;
- **widening accessibility to VET** making it more inclusive;
- **flexible systems** based on recognition of learning outcomes, including diplomas, and supporting individual learning pathways;
- **supporting permeability** and making it easier to move between different parts of the education and training system;
- **cross-border mobility** as an integral part of VET practice;
- **skill development**;
- **language learning**;
- **improving VET quality**;
- encouraging **investment in VET**;
- **technological innovation**;
- **entrepreneurship**

For Italy and Spain the number of students who opt for VET is increasing as a result of the focus on employment of VET programmes and the support they offer in the transition of students to the labour market. In addition, in recent years, the social image of VET in Italy and Spain has

improved and it has been an increasingly popular option after completing compulsory secondary education. However, in Greece, VET is in transition and the participation of students in VET is still low requiring further policies that would render VET an attractive learning option.

A common ground identified in the requirements addressed in the national reports of the three countries for the successful implementation and attainment of legislative reforms and national goals is the engagement of all stakeholders and the setting of a closer communication between education and training and the world of work.

DESCI's main objectives is the development of a set of guidelines and methodological tools as a point of reference for the implementation of best practices that will aim to:

- help to **decrease the mismatch** between education and labor market
- **promote a structural link** between educational institutions, labor market and civil society
- **correlate the educational offer** to the cultural, social and economic development of the territory
- **widen the range of learning contexts**, transforming businesses in places of training and investment in human capital

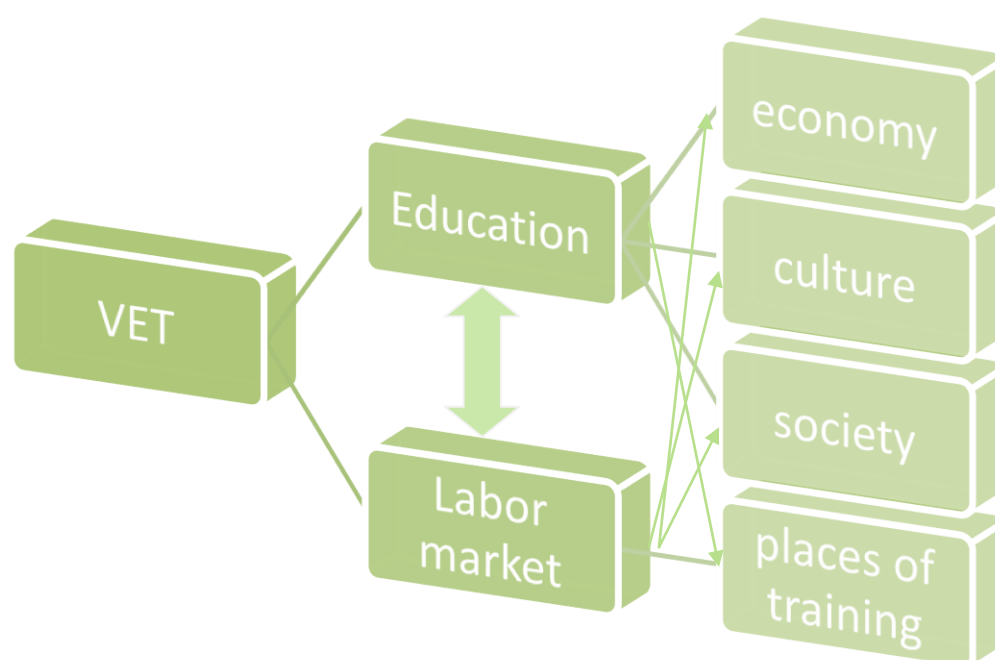


Figure 9DESCI's approach and underlying objectives

In the context of DESCI's approach and underlying objectives, VET goes beyond the mere teaching activity in a company or an educational institution. It applies as an effective means of knowledge transfer between educational institutions and companies, which in turn results in the best improvement of training quality, the better employability of those who study programmes included in this type of provision, and ultimately, company innovation potential and the country's socio-cultural and financial enhancement.

In all three countries there is an ongoing review of VET Diploma and Professional Certificates programmes aimed at adapting curricula to the new requirements of the labour market and providing employment careers guidance with direct reference to the demands of the labour market. The evaluation of vocational training, based on a system of indicators, focuses on quality, impact, effectiveness and efficiency in line with EU recommendations and directives referenced to the European Quality Assurance in Vocational Education and Training (EQAVET) Reference Framework guidelines.

VET assures graduates access to the occupation and the labour market. This entails and requires students' proficient acquisition of formal, basic and soft skills, and development of lifelong learning, skills and competences. To achieve these goals, the curricula of VET certificate programmes aim to equip students with professional, personal and social skills linking theoretical and practical knowledge.

DESCI aims to design and develop relevant tools that will enhance the promotion of formal qualifications that can be acquired through VET that will promote at the same time equal opportunities for men and women. DESCI's approach addressing equally both the educational and working sectors as well as their resulting effects on the financial, social and cultural aspects adopts a generic scheme of skills that lies on the consortium members expertise on relevant EE projects (CREAT-IT, BIOHEAD-CITIZENS (FP6), PAS-ETHICS&POLEMICS, SCICAFE 2.0, Play4Guidance). These skills are in alignment with the learning objectives identified as a common point of reference throughout the relevant curricula addressing VET which are adopted by the three countries and are in alignment with the EE directives. As in CREAT-IT and Play4Guidance projects, also in DESCI we adopt a holistic approach using problem solving, inquiry based and citizen science approaches that address the identified learning objectives of the VET curricula.

With reference to skills, VET systems aim to provide young people with generic, transferable skills to support occupational mobility and lifelong learning, and with occupationally-specific skills that meet employers' immediate needs. In addition, they aim to ensure that all students in vocational programmes have adequate numeracy and literacy skills to support lifelong learning

and career development (OECD, 2011) .In the context of DESCi's approach a set of key aspects are considered that shape the DESCi's generic scheme of skills:

- develop generic, transferable skills to support occupational mobility and lifelong learning
- encourage individual and team work and self-learning capabilities
- develop communication skills
- develop social competences
- encourage commitment to learning and adaptation to a changing economic and social environment
- promote creativity, problem solving, innovation and entrepreneurship
- develop transversal, scientific and technical skills
- develop entrepreneurship skills: problem solving, analytical thinking, creative thinking, critical thinking, Conceptual Thinking, Flexibility, Information Seeking, Innovation, Self-Confidence, Decision making, etc.

The above key aspects shape the DESCi's generic scheme of skills and are summarised in the form of four broader sectors: (1) **Thematic / domain competences** (e.g. innovating in the domain of ICT, entrepreneurship, technical skills, professional skills), (2) **Basic skills** (e.g. numeracy skills, literacy skills, maths, economics, acquisition of foreign languages) (3) **Social skills** and (4) **Affective skills** (e.g. optimism, endurance, determination, sustain motivation for learning).



Figure 10DESCI's Generic Scheme of Skills

As shown in the illustration above, DESCI's generic scheme of skills is developed in a way to involve all relevant skills and competences which influence systemic practice and address its dual target (education/training and work labor). DESCI's generic scheme comes also in alignment with the EE key policy challenge to provide the right mix of skills for the labour market (OECD, 2011). This way students will be enhanced and strengthened to meet the needs of a future work career and be empowered to become competitive.

Through our multi-method study, we have achieved a better understanding of the various settings of VET implementation in the three countries with a main focus on their similarities and differences. We have therefore created a solid base for the development of guidelines and tools which should take the key findings and competences into account in order to address the issue of students' joint development of educational/training and work related generic competences.

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ISFOL: Professioni, occupazione, fabbisogni [Occupations, employment, needs].
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ISTAT, National Institute of Statistics.[<http://www.istat.it/en/>]

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ANNEX-GLOSSARY

Glossary of terms related to European alternating training systems and national relevant terms

Term in English	Term in Native language (EL, ES, IT)	Definition/Description	Source	Related term(s)
Alternance training Education or training combining periods in an educational institution or training centre and in the workplace. The alternance scheme can take place on a weekly, monthly or yearly basis. Depending on the country and applicable status, participants may be contractually linked to the employer and/or receive a remuneration.	Μαθητεία (EL)	Εκπαίδευση ή κατάρτιση που συνδυάζει περιόδους εκπαίδευσης σε ένα εκπαιδευτικό ίδρυμα ή κέντρο κατάρτισης και στο χώρο εργασίας. Το σύστημα εναλλαγής μπορεί να λάβει χώρα σε εβδομαδιαία, μηνιαία ή ετήσια βάση. Ανάλογα με τη χώρα και τους ισχύοντες νόμους, οι συμμετέχοντες μπορούν να έχουν σύμβαση με τον εργοδότη ή/ και να λαμβάνουν αμοιβή.	CEDEFOP, 2013 http://www.cedefop.europa.eu/en/publications-and-resources/publications/531	apprenticeship ,‘dual’ system
	Formación en alternancia (ES)	Enseñanza o formación que combina periodos lectivos en la escuela o centro educativo o formativo con otros de prácticas en un centro de trabajo. Dicha alternancia puede tener lugar a intervalos semanales, mensuales o anuales. En función del país y del reglamento aplicable, los participantes pueden tener una relación contractual con el empleador, y/o percibir una remuneración.		
	Formazione in alternanza (IT)	Istruzione o formazione che alterna periodi in un istituto di istruzione o di formazione e sul posto di lavoro. Lo schema di alternanza può avvenire su base settimanale, mensile o annuale. A seconda del paese e delle regole applicabile, i partecipanti possono essere contrattualmente legati al datore di lavoro e/o ricevere un salario.		
Apprenticeship Systematic, long-term training alternating periods at the workplace	Μαθητεία (EL)	Η συστηματική, μακροχρόνια περίοδος κατάρτισης που εναλλάσσεται στο χώρο εργασίας και σε ένα εκπαιδευτικό ίδρυμα ή κέντρο κατάρτισης. Ο μαθητευόμενος συνδέεται με σύμβαση με τον εργοδότη και λαμβάνει αμοιβή (μισθό ή επίδομα). Ο εργοδότης αναλαμβάνει την ευθύνη για την παροχή στον εκπαιδευόμενο κατάρτισης που οδηγεί σε		



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and in an educational institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation.		ένα συγκεκριμένο επάγγελμα.		
	Aprendizaje (ES)	A largo plazo períodos alternantes de formación sistemáticos en el lugar de trabajo y en una institución o centro de formación educativa. El aprendiz está contractualmente al empleador y recibe una remuneración (sueldo o subsidio). El empleador asume la responsabilidad de proporcionar al alumno con el líder de formación a una ocupación específica.		
	Apprendistato(IT)	Sistematiche, periodi di formazione alternati a lungo termine sul posto di lavoro e in un centro di istituto o di formazione. L'apprendista è contrattualmente legato al datore di lavoro e riceve una retribuzione (stipendio o indennità). Il datore di lavoro si assume la responsabilità di fornire il tirocinante con leader di formazione per una professione specifica.		
Basic Vocational Training	FP Básico (ES)	Leading to corresponding basic professional title and are teaching compulsory and free offer.	http://todofp.es/todofp/sobre-fp/informacion-general/sistema-educativo-fp/fp-actual.html	
Child education	Educación infantil (ES)	Child education is the educational stage covers children from birth to six years in order to contribute to their physical, emotional, social and intellectual development. It is organised in two cycles: the first comprises up to three years; the second, which is free, ranging from three to six years old.	http://www.mecd.gob.es/educacion-mecd/areas-educacion/sistema-educativo/enseanzas/educacion-infantil.html	
Credit system	Πιστωτικό σύστημα (EL)	An instrument designed to enable accumulation of learning outcomes gained in formal, non-formal and/or informal settings, and facilitate their transfer from one setting to another for validation and	http://www.cedefop.europa.eu/en/publications-and-	European credit system for vocational education and training (ECVET),

	Sistema de créditos (ES)	recognition. A credit system can be designed: – by describing an education or training programme and attaching points (credits) to its components (modules, courses, placements, dissertation work, etc.); or – by describing a qualification using learning outcomes units and attaching credit points to every unit.	resources/publications/531	European credit transfer system (ECTS)
	Sistema di crediti (IT)			
Dual track schemes / dual vocational training	Modalidad dual (ES)	The regulation RD 1529/2012, of 8th of November, reforms the contract for training and apprenticeship and establishes the basis for dual professional training. Its aim is to set the initial conditions allowing a progressive development of dual training, understood as vocational training initiatives and measures that combine training in a training centre and practical experience/ apprenticeship in a company.	Σφάλμα! Η αναφορά της υπερ-σύνδεσης δεν είναι έγκυρη.	
Dual system It is called "dual" because it combines apprenticeships in a company and vocational education at a vocational	Δυικό σύστημα(EL)	Ονομάζεται "δυικό" γιατί συνδυάζει τη μαθητεία σε μια επιχείρηση και την επαγγελματική εκπαίδευση σε μια επαγγελματική σχολή. Στην εταιρεία, ο μαθητευόμενος λαμβάνει πρακτική εκπαίδευση που συμπληρώνεται από τη θεωρητική εκπαίδευση στην επαγγελματική σχολή, εξασφαλίζοντας με αυτό τον τρόπο μια σωστή ισορροπία μεταξύ θεωρίας και πρακτικής. Ο εκπαιδευόμενος συνδέεται με σύμβαση με τον εργοδότη και λαμβάνει αμοιβή (μισθό ή επίδομα).		

school in one course. In the company, the apprentice receives practical training which is supplemented by theoretical instruction in the vocational school; ensuring this way a proper balance of theory and practice. The trainee is contractually linked to the employer and receives remuneration (wage or allowance).	Sistema dual (ES)	Se llama "dual", ya que combina el aprendizaje en una empresa y la formación profesional en una escuela profesional en un curso. En la empresa, el aprendiz recibe una formación práctica que se complementa con la instrucción teórica en la escuela de formación profesional; asegurando de esta manera un equilibrio adecuado entre la teoría y la práctica. El aprendiz se está contractualmente al empleador y recibe una remuneración (sueldo o subsidio).		
	Dual sistema (IT)	Si chiama "duale" perché combina l'apprendistato in un'azienda e formazione professionale presso una scuola professionale in un corso. In compagnia, l'apprendista riceve una formazione pratica che viene completato da un insegnamento teorico nella scuola professionale; garantendo in questo modo un giusto equilibrio tra teoria e pratica. Il tirocinante è contrattualmente legato al datore di lavoro e riceve una retribuzione(stipendio o indennità).		
ECVET	Ευρωπαϊκό Πιστωτικό σύστημα επαγγελματικής εκπαίδευσης και κατάρτισης (EL)	European Credit system for Vocational Education & Training (ECVET) is a system for the recognition, accumulation and transfer of credits in the field of vocational education and training. With this system, knowledge, skills and competences (learning outcomes) acquired by an individual during his professional education and training both within the borders of his country as well as in other Member States of the European Union, can be assessed and certified.	http://www.iky.gr/en/ecvet-network	Credit system
	Sistema Europeo de Transferencia de Créditos de Formación Profesional (ES)			
	Sistema europeo di trasferimento dei crediti per l'istruzione e la formazione professionale (IT)			

Eoppep	Εθνικός Οργανισμός Πιστοποίησης Προσόντων και Επαγγελματικού Προσανατολισμού(Ε.Ο.Π.Π. Ε.Π.) (EL)	<p>EOPPEP is the National Organisation for the Certification of Qualifications and Vocational Guidance, an all-encompassing statutory body investing on better quality and more efficient & reliable lifelong learning services in Greece. EOPPEP aims at quality assurance in:</p> <ul style="list-style-type: none"> • inputs: accredited Providers implementing VET programs, developed upon accredited standards & specifications, based on accredited occupational profiles, employing accredited Trainers for Adults, with the aid of accredited Support Services Professionals for social vulnerable groups, • outputs-learning outcomes: accredited knowledge, skills and competences acquired via non-formal & informal learning pathways and certification of qualifications, • vocational guidance & counseling services: viable services & tools for supporting citizens of every age, as well as educational information tools according to the latest ICT applications. 	http://www.eoppep.gr/index.php/en/	Learning outcomes, credit system
EPAS	Επαγγελματικές σχολές (EL)	Vocational/apprenticeship schools are run by OAED and apply the alternating system.	http://www.oaed.gr/epas	Alternating system
General Vocational Training Council	Consejo General de Formación Profesional (ES)	Created by Law 1/1986 (Law 19/1997). It is a tripartite consultative body: business organisations, trade unions and government. It is the expert body that advises the government on vocational training.	http://www.mecd.gob.es/ministerio-mecd/organizacion/organismos/consejo-fp.html	
High school	Bachillerato (ES)	The high school is part of upper secondary education, and therefore is voluntary. It comprises two academic courses, which are usually performed between 16 and 18 years old. It is developed in different modalities, organised flexibly and, where appropriate, in different ways, so that it can offer specialised training to students according to their perspectives and interests or incorporation into active labour life.	http://www.mecd.gob.es/educacion-mecd/areas-educacion/sistema-educativo/enseanzas/bachillerato.html	
High Vocational Training	FP superior (ES)	Leading to the title of Senior Technician is part of higher education.	http://todofp.es/todofp-sobre-fp/informacion-general/sistema-	

			educativo-fp/fp-actual.html	
Higher education	Educación universitaria (ES)	<p>The Spanish University System consists of two types of universities: public and private.</p> <p>According to the Organic Law 6/2001 of Universities, public universities are the institutions created by Act of the Legislative Assembly of the Autonomous Community in whose territory they are established and those created by Act of Parliament, proposed by the Government and according to the Autonomous Community where they are established.</p> <p>By contrast private universities are those created by natural or legal persons pursuant to paragraph 6 of Article 27 of the Spanish Constitution, in accordance with constitutional principles, and subject to the provisions of the Organic Law 6/2001 of Universities.</p> <p>There are also universities specialised in distance learning that allow undergraduate, master's and doctorate. Also, an increasing number of public and private universities include the possibility of part of its educational offerings in this non-contact mode.</p>	http://universidad.es/es-tudiar-en-espana/el-sistema-universitario-espanol	
Intermediate Vocational Training	FP medio	Leading to the title of Technician and are part of the post-compulsory secondary education.	http://todofp.es/todofp/sobre-fp/informacion-general/sistema-educativo-fp/fp-actual.html	
ISCED	<p>Η Διεθνής Τυποποιημένη Ταξινόμηση της Εκπαίδευσης (ISCED) (EL)</p> <p>Clasificación Internacional Normalizada de la Educación (CINE) (ES)</p>	<p>International standard classification of education.</p> <p>The definitions used for levels of education are those agreed by ISCED in 1997. They are shown below:</p> <p>Level 0 – pre-primary education</p> <p>Level 1 – primary education</p> <p>Level 2 – lower-secondary education;</p> <p>Level 3 – upper-secondary education;</p> <p>Level 4 – post-secondary non-tertiary education;</p>	<p>CEDEFOP, 2013</p> <p>http://www.cedefop.europa.eu/en/publications-and-resources/publications/5531</p>	

	La classificazione internazionale standard dell'istruzione (ISCED) (IT)	Level 5a – first stage of tertiary education theoretically based or research preparatory (history, maths, etc.) or giving access to professions with high skills requirements (medicine, etc.); Level 5b – first stage of tertiary education which is practical/technical/occupationally specific, although some theoretical foundations may be covered, participants acquire practical skills, and know-how for employment in a particular occupation or trade or class of occupations or trades; Level 6 – second stage of tertiary education (leading to an advanced research qualification)		
Learning outcomes	Μαθησιακά αποτελέσματα (EL)	Accredited knowledge, skills and competences acquired via non-formal & informal learning pathways and certification of qualifications	http://www.eoppep.gr/index.php/el/qualifications-certificate/ecvet	ECVET, certification of learning outcomes
	Resultados de aprendizaje (ES)			
	Risultati dell'apprendimento			
Lifelong learning	Δια βίου μάθηση (EL)	All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social and/or professional reasons.	http://www.cedefop.europa.eu/en/publications-and-resources/publications/5531	continuing education and training
	Aprendizaje a lo largo de la vida (ES)			
	Istruzione e formazione lungo tutto l'arco della vita (IT)			
National system for qualifications and vocational training	Sistema nacional de cualificaciones y formación profesional (ES)	The National System for Qualifications and Vocational Educational and Training consists of the instruments and actions which are necessary to promote and develop the integration of vocational education and training through the National Catalogue of Professional Qualifications.	http://www.educacion.gob.es/educa/incual/ice_ncfp_ing.html	

		Besides, it aims at promoting and developing the assessment and accreditation of professional competences in order to encourage the professional and social development of the people and to meet the needs of the productive system.		
OAED	Οργανισμός Απασχόλησης Εργατικού Δυναμικού (EL)	The operation of Manpower Employment Organization (OAED) is based on the following three pillars: (i) promotion to employment; (ii) unemployment insurance and social protection of maternity and family; (iii) vocational education and training.	http://www.oaed.gr/index.php?lang=en	Manpower Employment Organization
Primary education	Educación primaria (ES)	Primary education is compulsory and free. Includes six academic courses, which will usually between six and twelve years old. In general, the students will join the first year of primary education in the calendar year in which they are six years old.	http://www.mecd.gob.es/educacion-mecd/areas-educacion/sistema-educativo/enseanzas/educacion-primaria.html	
Secondary education	Educación secundaria obligatoria (ES)	The Compulsory Secondary Education is free and compulsory education stage that completes the basic education. It consists of four academic courses usually performed between 12 and 16 years old. However, students have the right to remain in ordinary regime pursuing basic education until eighteen years old.	http://www.mecd.gob.es/educacion-mecd/areas-educacion/sistema-educativo/enseanzas/educacion-secundaria-obligatoria.html	
Unified Lyceum	Ενιαίο Λύκειο (EL)	The Unified Lyceum belongs to upper secondary education. It consists of three classes and study lasts three years. Holders of a Gymnasium leaving certificate are admitted to the first class of the Unified Lyceum without examinations.	http://www.ekep.gr/english/education/deuterobathmia.asp	Upper secondary education
VET	Επαγγελματική εκπαίδευση και κατάρτιση (EL)	Vocational education and training (VET) refers to education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market.	http://todofp.es/todofp/sobre-fp/informacion-general/sistema-educativo-fp/fp-actual.html	vocational training (VET)
	Enseñanza y formación profesional (EFP) (ES)	The professional training is close to the reality of the labor market and		

	Istruzione e formazione professionale (IFP) (IT)	provides a response to the need for qualified jobs specialized in different professional sectors to meet the current demand for jobs. Professional training offers more than 150 training courses in 26 professional families, suitable to various professional fields with theoretical and practical content.		
Work-based learning Acquisition of knowledge and skills through carrying out – and reflecting on – tasks in a vocational context, either at the workplace (such as alterance training) or in a VET institution.	Μάθηση μέσω εργασίας (EL)	Απόκτηση γνώσεων και δεξιοτήτων μέσα από την εκτέλεση - και τον αναστοχασμό σε σχέση με - τα καθήκοντα σε ένα επαγγελματικό πλαίσιο, είτε στο χώρο εργασίας (όπως η μαθητεία) ή σε ένα ίδρυμα επαγγελματικής εκπαίδευσης και κατάρτισης.	http://www.egavet.eu/gns/library/publications/2011.asp	vocational training (VET)
	Aprendizaje en el trabajo (ES)	Adquisición de conocimientos y habilidades a través de la realización de - y reflexionar sobre - las tareas en un contexto profesional, ya sea en el lugar de trabajo (como la formación alterance) o en un centro de EFP.		
	Apprendimento basato sul lavoro (IT)	Acquisizione di conoscenze e competenze attraverso svolgimento - e riflettendo su - attività in un contesto professionale, sia sul posto di lavoro (come la formazione alterance) o in un istituto di formazione professionale.		