

ECO TEX

Guide on the Adapted Methodology

*Circular Economy Innovative Skills in the Textile Sector
National Educational System
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Hellenic Fashion Industry Association, SEPEE, Greece

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Introduction

The main objective of the ECO TEX project is to design, develop and piloting a new job qualification profile and correspondent training curricula on the subject of "How to implement circular economy techniques in Textiles Industry" able to cope with the visible shortage of vocational skills, potentiating the best use of the outcomes in the field of design patterns, use of recycle materials, machinery, processes, developed in the frame of other EU and non EU funded Research & Development Projects with sustainable purposes, improving competitiveness in Textiles, based on the development of skills and competences of the workforce.

As many studies show "education for a circular economy does not simply bail down to just more time spent on "economy literacy" and systems literacy - it's the mindset around why this is important and the vision that underpins this mindset". The purpose of this Intellectual Output is to provide a methodological guide that contains guidelines for structuring the hosting e-courses of the online Training Platform according to the EQF and the ECVET principles.

More specifically, this deliverable contains a brief analysis of the maps of the education system of each country partner as well their VET systems, the descriptors defining the EQF levels, the ECVET principles and its linkage to the EQF and the commitment of each country partner to the implementation of the ECVET principles. At last it provides the methodological tools for the formation/organization of the training platform's courses according to the ECVET principles.

The online Training Platform will be developed as a core intellectual output of the project ECO TEX. Scope of this document is to provide a methodological tool based on which the e-courses will be formed. The proposed methodological tool is formed according to the ECVET and EQF principles.

The sections of the underlying deliverable contain information about the vocational education and training system of every partner country, as well their compliance on the ECVET principles and the policy priorities till the 2020. Furthermore, it provides information about the European Qualification Framework and the framework of the e-

courses.

1. Life Long Learning and its meaning

Nowadays we live in a rapidly changing environment, information and discoveries change, evolve and develop rapidly. Considering globalization and its impact on the current workplace, everyone whether employed or unemployed, woman or man, should receive a regular education in order to keep to be able to adapt in continuous and changes that occur over time (Mahiroğlu, 2005). Therefore, employees need to gather information rapidly and share it. That is, they need to keep up with the pace of change (Geylan, 2008). In order to meet the constantly increasing expectations of the employees, the workplaces should renew themselves (Numanoğlu, 2001). This renewal includes all the determinant factors from the technological equipment and materials in the workplace to the lifelong learning of the workers. Lifelong learning requires a systematic and regular education process, because education is a process that organizes, affects and shapes the lives of individuals (Özalp, 1999).

The concept of lifelong learning requires a paradigm shift away from the ideas of teaching and training towards those of learning, from knowledge-conveying instruction to learning for personal development and from the acquisition of special skills to broader discovery and the releasing and harnessing of creative potential. This shift is needed at all levels of education and types of provision, whether formal, non-formal or informal. The basic premise of lifelong learning is that it is not feasible to equip learners at school, college or university with all the knowledge and skills they need to prosper throughout their lifetimes. Therefore, people will need continually to enhance their knowledge and skills, in order to address immediate problems and to participate in a process of continuous vocational and professional development. The new educational imperative is to empower people to manage their own learning in a variety of contexts throughout their lifetimes (Bentley, 1998).

The acquisition of knowledge, skills, competences that lifelong learning should enable is not limited, in its conceptual understanding, to that of foundational skills, but also encompasses a larger panel of skills, bearing in mind the emergence of new skills deemed critical for individuals (as learning to learn, skills for global citizenship, entrepreneurial

skills, and other core skills). A skilled population is the key to a country's sustainable development and stability. As a consequence, policy attention to technical and vocational education and training is increasing worldwide.

Lifelong learning is about meeting the diverse and context-specific learning needs of all age groups, including the acquisition of basic literacy technical skills through both formal education and effective alternative pathways to learning. Adult learning and education, technical and vocational education and training and literacy, all represent significant components of the lifelong learning process.

Employees in different enterprises should be given the opportunity to benefit from lifelong learning activities in order to keep up with new situations that might occur in the workplace, and to improve their in-house productivity (TISK, 2005). Adapting to the changes and developing skills to deal with these changes improves the productivity of the individual in the workplace and enables quality production. Today, workers should receive regular and systematic education in order to improve the productivity of the enterprises they are engaged in (Adıgüzel, 2011).

Moreover, lifelong education is a necessity for keeping up with the changes and improving the quality and productivity in the production and service sectors, and in every aspect of life (Gürsel and İzgar, 2003). Productivity should not only be considered as the use of in-house resources. Productivity comprises all the activities of an enterprise, just as quality means quality organization in all fields of an enterprise (Özsever, et al., 2009). The factors of in-house productivity might be considered in terms of human beings, machines and equipment (Lawless, 2003). Considering the recent developments, human beings are evaluated according as to whether they are educated and skilled, and whether they conform to the requirements of the job and have the relevant professional knowledge and experience; whereas machines and equipment are evaluated in terms of information technologies (Kazan, 2008).

Lifelong learning is necessary not only for the novice but also for the experienced worker. In this regard, it is possible to improve the knowledge and skills of experienced workers through education. The amount and quality of the work done in a certain time under certain circumstances can only be increased through education (Yumuşak, 2008). The aim

of lifelong learning is to create a labor market that can keep up with the pace of change by accepting change as a natural phenomenon (DTP, 2001). The approach that considers knowledge to be a form of production, when seen in the light of these changes and developments, gains in significance (Eisenberg and Johnson, 2002). Another aspect of lifelong learning, which accelerates the personalization of education and aims to emphasize creativity, is that it considers learning as an agent for improving the quality and efficiency of life, not just its economic potential (DTP, 2001). Therefore, improving the lifelong learning skills of the workforce is a must today in order to enable greater productivity in the enterprises.

Considering the abovementioned advantages yielding from lifelong learning, the ECO TEX project will form/build an innovative training platform oriented to European textiles and clothing companies.

2. The Structure of National Education Systems

This section provides the diagram and a brief analysis of the education and training system of each country partner. Our aim is to fully comprehend each partner's educational and training system in order to have an overview about each partner's qualification system.

2.1 Background and Governance of VET

2.1.1 The Case of Spain

VET is mainly responsibility of education and labour authorities who award formal qualifications of VET programmes under the umbrella of the national system for qualifications and vocational training.

Improving education and training and supporting lifelong learning is a shared concern by the education and labour authorities. A society that allows lifelong learning of all citizens, regardless of their starting level, condition or age, which views their development as an investment for the future, is a society that promotes sustainable development, economic growth and social cohesion.

Spanish VET aims to qualify people for work and to contribute to the country's economic development. It also strives to promote social inclusion and cohesion and learning throughout life and contributes to democratic citizenship. In order to achieve these goals, VET programmes provide students with professional, personal and social skills linking theoretical and practical knowledge.

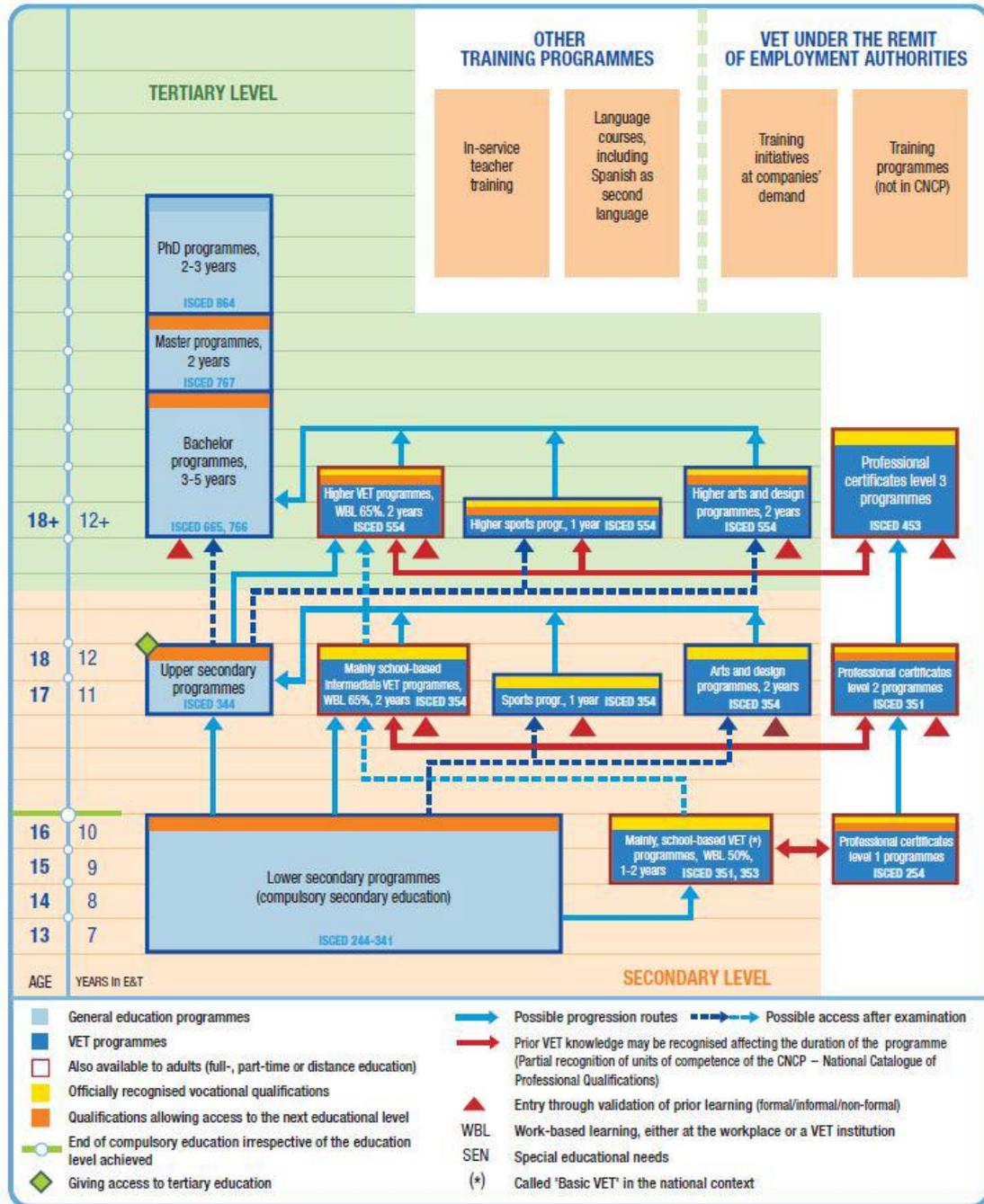
Initial VET mainly enrolls young people although it is also open to adults wishing to acquire a (first) qualification. VET is an attractive, accessible and high-quality option that provides innovative and flexible training very close to social and business reality. Vocational training for employment is offered for both unemployed and employees.

Spanish education system

Education in Spain (Figure 9) is regulated by the 2006 Education Act (21) (LOE) and the 2013 education reform Act (LOMCE) which aims to improve student performance and curb early school leaving. LOMCE implementation started in 2014/15 and is expected to be fully implemented by 2017.

Education offered from early childhood (not compulsory education, offered in two cycles, for children aged <3 and 3-6, the latter free of charge) till the end of primary schooling (compulsory education, 6 years, learners aged 6 to 12) does not include vocational training programmes.

Diagramme of the national education and training system in Spain



Source: Cedefop and ReferNet Spain

Lower secondary education (22) (ESO in Spanish), is the second and last stage of compulsory education comprising four academic years (from 12 to 16 years). After graduation, learners receive the lower secondary education certificate (ESO diploma, ISCED 2) which gives access to high school (Bachillerato), intermediate VET (FP de grado medio) or the labour market.

Students who do not obtain the ESO diploma receive an official certificate of compulsory education which details the years studied and grades obtained.

The 2013 education reform has introduced an alternative vocational path (Basic VET or FP Básica in Spanish) open to ESO students aged 15 years, who meet certain age and academic requirements (23). Students passing this basic vocational training are awarded a certificate with academic and professional validity. Basic VET cycles run in a 2-year programme of 2 000 hours of theoretical and practical training, of which 240 hours are completed in workplaces. It gives direct access to Intermediate VET cycles and the possibility of sitting the exam to obtain the ESO diploma, opening up access to upper secondary general education programmes. Royal decree 1058/2015 foresees that in 2015/16 and 2016/17 students who finish basic VET will obtain the ESO diploma directly if the teaching staff considers they have achieved the objectives and necessary skills of ESO level. The measure is expected to be made permanent, but relevant legislation has not been prepared at the moment of drafting this report.

Upper secondary education comprises high school (the general academic route, called bachillerato in Spanish) and intermediate VET. Neither of them is compulsory. High school (Bachillerato) consists of two academic courses that are taken between 16 and 18 years old. There is a core curriculum with compulsory subjects and a specialised part with a few preselected options students can choose from. After successful completion, students obtain the end of upper secondary education diploma (título de Bachillerato, ISCED 3) which gives direct access to higher VET programmes (ISCED 5) and, via a university entrance exam, to university studies (ISCED 6).

2.1.2 The Case of Portugal

The Portuguese education system is very centralized in terms of organization and funding. The Ministry of Education (ME) is responsible for general non-higher education in Portugal, the vocational and professional paths are the joint responsibility of the ME and the Ministry of Labour, Solidarity and Social Security (MTSSS) and higher education is the responsibility of the Ministry of Science, Technology and Higher Education (MCTES). The Adult education and training is the joint responsibility of the ME and the MTSSS.

However, pre-school and basic and secondary education schools have some autonomy, namely

at pedagogical level, as well as with regard to timetables and non-teaching staff management¹. Education is compulsory from ages 6 to 18 in Portugal (two years more than the OECD average)² and the public education is free and universal.

The Education System is divided into 5 study cycles:

1. **Pre-school Education** – Pre-school education covers children from 3 years up to the age of compulsory schooling. There is a public and a private network of pre-school education institutions, which are complementary.
2. **Basic Education** - Basic education lasts for nine years and is divided into three sequential cycles:
 - The 1st cycle corresponds to the first four years of schooling, aims at the development of basic skills in Portuguese Language, Mathematics, Study of the Environment and Expressions;
 - The 2nd cycle corresponds to the next two years;
 - The 3rd cycle lasts for three years and corresponds to lower secondary education; the main objectives are the development of skills necessary to the active life or continue studies.
3. **Secondary education** - lasts for three years and corresponds to upper secondary education. It is organised into different forms according to different aims, either focusing on access to further studies or preparation for working life.

This level of education and training comprises different types of courses:

- Science-Humanities courses (essentially for students wishing to pursue higher education);
- Vocational Courses (essentially for students wishing to enter the labour market) (note: the Vocational Technical Courses are being gradually discontinued as from 2017/18);
- Specialised Artistic Courses (essentially for students who want to provide specific training in: visual arts, audiovisuals, dance and music, allowing them to enter the labour market or continue their studies);
- Apprenticeship Courses (essentially for students to obtain a school and professional certification, geared towards the labour market and pursuing studies in higher education);
- Education and Training Courses (either to pursue further studies or to obtain specific training to be qualified for working life;

¹https://eacea.ec.europa.eu/national-policies/eurydice/content/portugal_en

²http://www.oecd.org/education/EDUCATION%20POLICY%20OUTLOOK_PORTUGAL_EN.pdf

➤ Recurrent Secondary Education (is geared towards adults who have not benefited from education at the usual age or failed to complete their studies);

4. **Non-Higher Post-Secondary Education** - The Technological Specialization (CET) courses allow technological training in different technological areas allow the insertion in the job market or pursuit of higher education studies.

5. **Higher education**– Portuguese higher education system is a binary system that includes the university and the polytechnic systems. Universities are geared towards offering solid scientific training, gathering the efforts and competences of teaching and research units, while polytechnics focus on vocational and advanced technical training for the working life. In higher education the following academic qualifications are conferred:

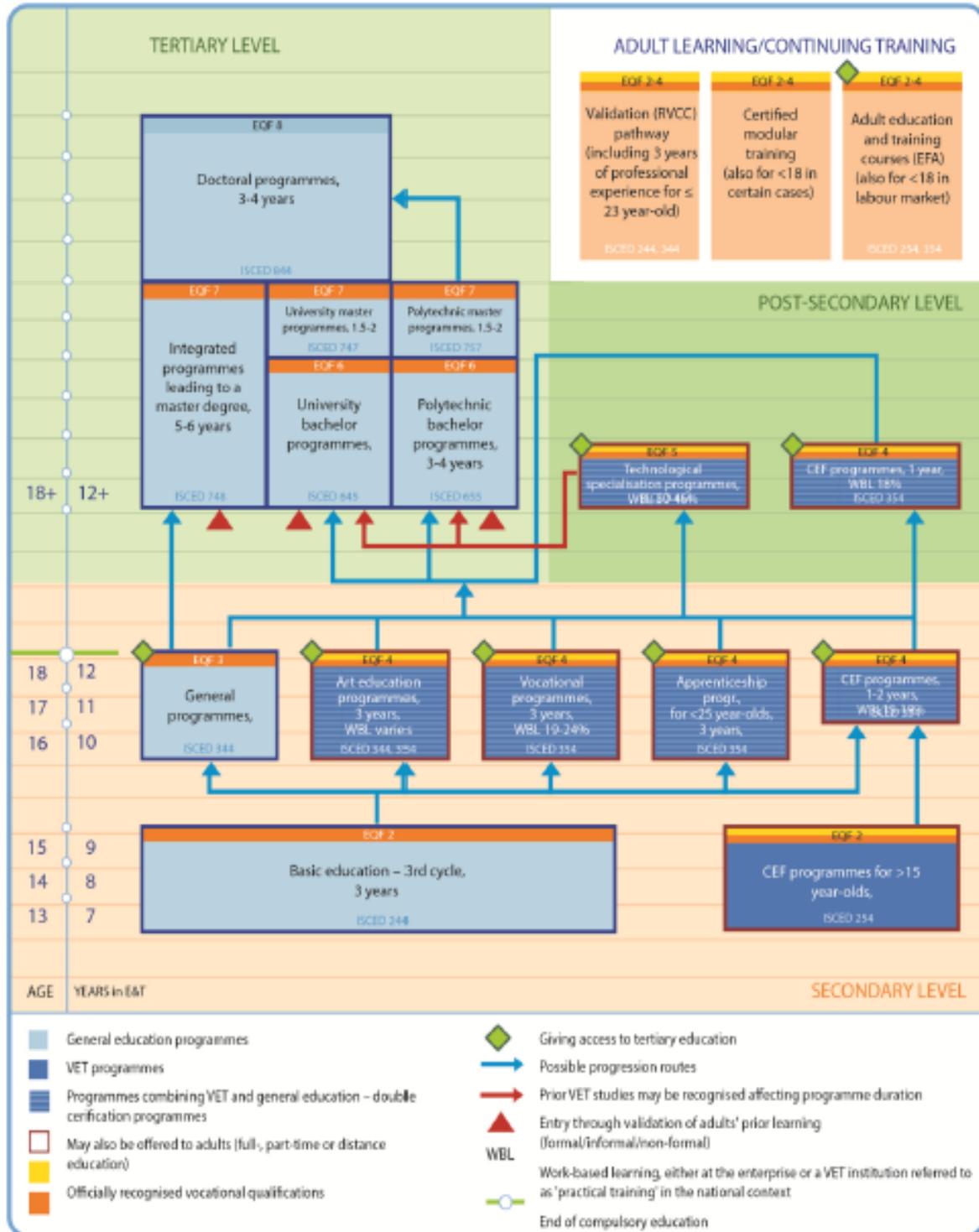
- Bachelor degree;
- Master degree;
- Doctoral degree (PhD).

Modalities in the field of Adult Education and Training:

- **Recognition, Validation and Certification of Skills** –Processes in the QualificaCentres involving the recognition of academic and vocational competences acquired by adults and that provide academic and/or vocational certification;
- **Basic Competences Training Programme** – Designed for adults to acquire basic reading, writing, maths skills and information and communication technologies competencies (ICT);
- **Adult Education and Training Courses** – These courses aim to boost adult qualifications via dual certification;
- **Modular Training** – Permit the conclusion of basic or secondary education and the acquisition of academic and vocational competences, in order to return to or progress in the labour market;
- **Technological Specialization Courses** –These courses are designed to respond to socio-economic needs for middle level staff and provide an alternative for improving young people’s qualification and retraining of the working population;
- **Secondary Education Completion Paths** - Aimed at those who attended but did not courses whose syllabuses no longer exist or will soon disappear;
- **Recurrent education** – Designed for adults who have not completed their primary or secondary education at the usual age;

- **Portuguese for Speakers of Other Languages** – Designed to meet the legal requirement of knowledge of Portuguese language to acquire Portuguese nationality, permanent or long-term residence, as well as to promote proficiency in reading, writing and speaking.

Diagramme of the national education and training system in Portugal



Source: Cedefop and ReferNet Portugal

2.1.3 The Case of Greece

Greece schooling is compulsory for all children aged 5 to 15. The national education system of Greece comprises the following education levels:

- a. **pre-school education** (0-5 years)
- b. **primary education**, including compulsory pre-primary class (preparatory group, 5-6-year-olds)
- c. **lower secondary education** (three years), at a day or, for working students, an evening school. Graduation from lower secondary education completes the cycle of compulsory schooling and students can then choose whether to continue in general or vocational education.
- d. **upper secondary - general education** where they will attend classes at a general upper secondary school (GEL), for three years; there are also evening schools for working students, and in these the programme is four years. Students enter upper secondary school at the age of 15 and graduate at 18. In the first year the programme is general, while in the second and third years' students take both general education and special orientation subjects. The choice of subjects is informed by educational or vocational guidance offered through the decentralized structures of the Ministry of Education's Vocational Orientation Guidance and Educational Activities Directorate (SEPED). Those who graduate from a general upper secondary school can sit the national examinations for admission to a tertiary education programme.
- e. **bachelor programme or technological bachelor programmes**(4-5 years).
- f. **master programmes**(1-2 years).
- g. **doctoral programmes**(3+ years).

According to the new law regulating secondary education (Law 4186/2013), which aims among other things to attract more students into VET, students now have the following options in addition to the general upper secondary school:

- a. 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)
- b. 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.

At national level, formal VET leads to the acquisition of certificates recognized nationally by public authorities and is part of the education ladder. Formal education also includes education for adults. According to the law on secondary education (Law 4186/2013), vocational education is provided by the vocational upper secondary school. These schools (public or private) are founded exclusively by the Ministry of Education and Religious Affairs and may be day or evening schools. The minimum age for enrolment in a vocational evening school is 16. The public vocational upper secondary schools offer the specialties that are listed in the legislation. The programmes are organised by sector, group and specialty, with most sectors offering two or more specialties. The sectors currently covered are information science, mechanical engineering, electrical engineering/electronics/automation, construction, environment and natural resources, administration and economics, agronomy-food technology and nutrition, and occupations in the merchant marine (captain, mechanic).

According to the new law specialties should be tailored to national and regional economic needs, following the recommendations of the ministries, regional administrations and social partners. Curricula can be developed in line with the European credit system for VET (ECVET), and take into account, where these exist, related job profiles certified by the National Organisation for the Certification of Qualifications and Vocational Guidance.

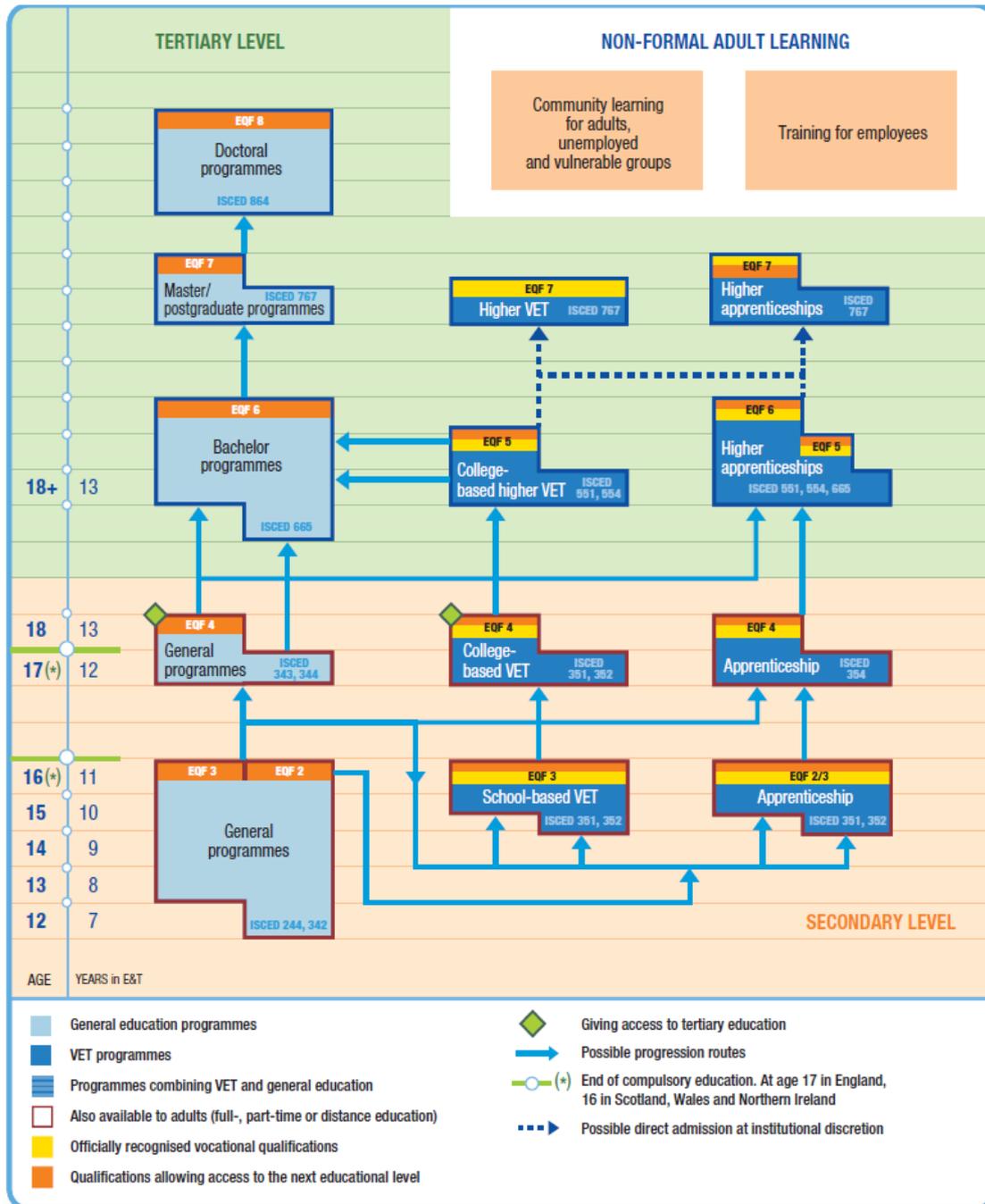
Programmes at vocational upper secondary school can lead to two levels:

- a. a three-year programme
- b. an additional 'apprenticeship year'.

In the day schools the secondary cycle comprises three years. Students with lower secondary leaving certificates or equivalent qualifications enrol in the first year without entrance examinations. Students promoted from the first year of a vocational upper secondary school are entitled to enrol in the second year of a general upper secondary school: this means that the system allows for horizontal mobility. The "apprenticeship year" (education in the workplace), which is optional and is an innovation introduced by the new law, is open to those who have earned the certificate and diploma attesting completion of the three-year upper secondary education at a vocational upper secondary school. Implementing OAED's dual learning principle, it includes learning at the workplace, a specialisation course, and preparatory courses for certification at the school. The vocational upper secondary schools and OAED share

responsibility for implementing the apprenticeship year, assigning the students to work placements, and all that this entails.

Diagramme of the national education and training system in Greece



Source: Cedefop and ReferNet Greece

2.1.4 The Case of Romania

The national education system of Romania comprises the following education levels (pre-university):

- a. pre-school education (0-5 years)
- b. primary education, including compulsory pre-primary class (preparatory group, 5-6-year-olds) and grades I-IV
- c. compulsory lower secondary education (grades V-VIII)
- d. upper secondary education (school grades IX-XII/XIII, of which years IX and X part of compulsory education) that leads to upper secondary leaving diploma (qualification of level 3 in National Qualifications Framework - NQF) and higher education through baccalaureate exams. Upper secondary education includes the following paths:
 - i. a theoretical path with two programmes (profiles): Science (mathematics and computer programming or natural sciences) or Humanities (social studies or languages)
 - ii. technological path with the following programmes: technical (engineering, electrotechnics, construction), services (trade, public catering), natural resources and environmental protection. It leads to a qualification at level 3 of NQF. Pupils/students graduating from the 10th grade of the technological path who have also completed practical training (internship) may enrol for a certification exam leading to a vocational qualification at level 3 of the NQF. Internships (practical training) may be performed in education units or, alternatively in public institutions or enterprises that have signed contracts for this purpose with entities from the education system (IVET)
 - iii. a vocational pathway with the following programmes: military, theological, sports, artistic and educational.
- e. professional education in Romania stands for education (initial VET) that is provided in professional schools (arts and trades schools). It is available to lower secondary education graduates who are not enrolling in upper secondary school education and offers a qualification included in the National Qualification Framework (free of charge if it is completed until the age of 18 years). It leads to either professional qualification (NQF level 1 after two years of studies or EQF level 2 after a third 'completion' year) or to two more years of studies in the technological part of upper secondary education. It comprises: arts and trades schools, technological path of the upper secondary school and post high school.
- f. post-secondary non-university education

After completing lower secondary education students can continue their studies in upper secondary schools or professional schools. Admission is based on each student's portfolio including the graduating diploma and transcript and on the grades received at national evaluation exams taken at the end of VIII grade. National evaluation consists of written examinations in Romanian language and literature, mother language (if different from Romanian), mathematics and sciences, and foreign language. Computer skills are assessed during the year of study.

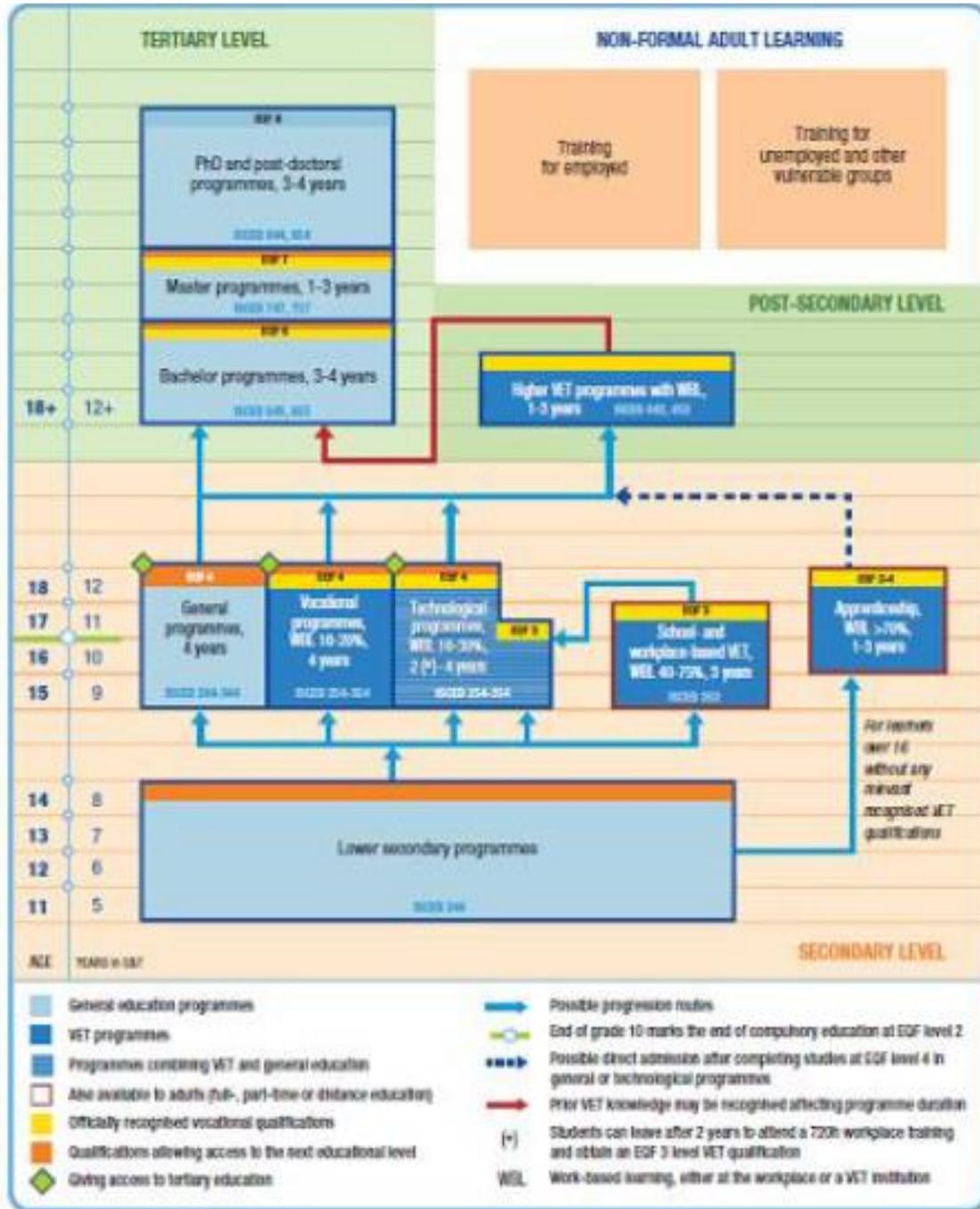
Upper secondary school graduates having acquired (formally, non-formally or informally) professional competences can take a certification exam and if they pass this exam they attain a qualification certificate and a descriptive supplement (Europass).

Upper secondary education graduates may also receive a school leaving certificate (baccalaureate). The baccalaureate requires a given combination of subjects, including centralised examinations.

For students at technological upper secondary schools this combination reflects their vocational specialisation to an extent, but also includes relevant scientific subjects and Romanian (for all students) and a foreign language. Candidates who pass the baccalaureate, regardless of whether they come from a theoretical or vocational path or if and whether they have a vocational qualification, can go on to university.

Vocational and technological upper secondary education can be organized for the qualifications included in the national register of qualifications which is periodically updated according to the labour market needs identified through strategic documents planning training supply at regional level. These routes of upper secondary education can be organized according to the requests of the employers or from the National Agency of Employment.

Diagramme of the national education and training system in Romania



Source: Cedefop and ReferNet Romania

2.1.5 The Case of Latvia

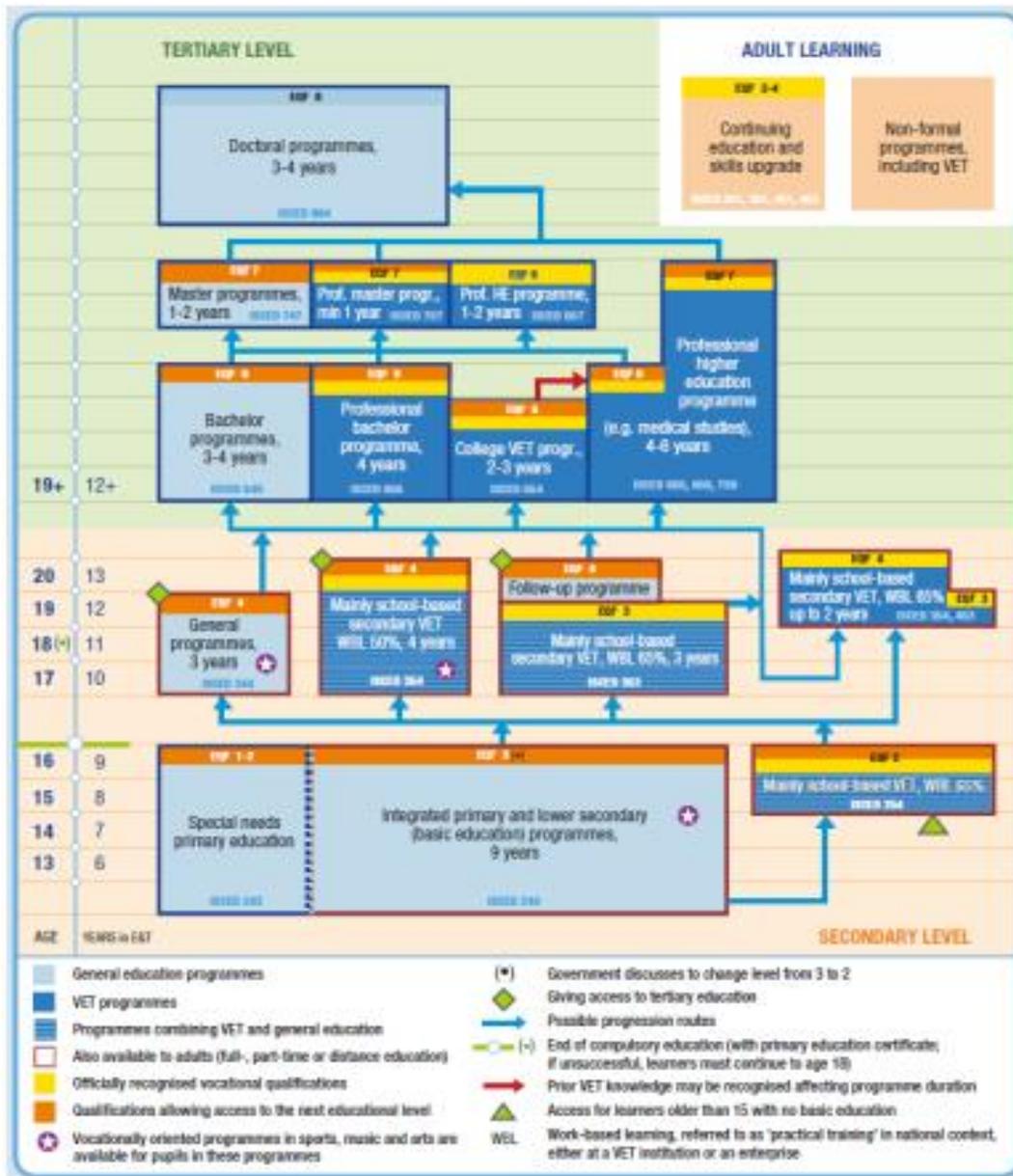
The Latvian education system consists (Figure 1.) of pre-school education, basic education, secondary education and higher education. General education in Latvia in total lasts 12 years consisting of compulsory 9-years basic education and 3-years secondary education. Additionally, pre-school education at age of 5-6 is compulsory in Latvia.

Basic education stage comprises general basic education (grades 1-9) and vocational basic education. Secondary education stage comprises general secondary education, vocational secondary education and vocational education. Higher education comprises both academic and professional study programmes.

- The elementary level of education includes general basic education (1st –9th grade) and professional education (7th – 9th grade).
- Secondary education includes:
general secondary education,
vocational secondary education and
vocational education.
- Higher education includes both:
academic,
professional study programs.

The Latvian qualifications framework (LQF) has eight levels corresponding to the European qualifications framework (EQF) (see Section 2.2.8). Since 1999, VET comprises of the national professional qualification levels, which have been referenced to the LQF levels in 2015 through the amendments to the legislation (Saeima, 1999a). In this report both levels are indicated as in VET diplomas/certificates.

Diagramme of the national education and training system in Latvia



Source: Cedefop and ReferNet Latvia

3. National Policy Developments in Vocational Education and Training

This section describes the developments in vocational education and training (VET) policy and the policy priorities for the period 2016-2020 to the partner countries participate in the ECO – TEX project.

3.1 Policy priorities for 2016-20

3.1.1 The Case of Spain

The country's priorities in this area for 2016-20, as set by the Director General for vocational education and training and reported by CEDEFOP, are threefold:

(a) for young people: track measures related to access to VET included in the organic Law No 8 of 9 December 2013 on improving education quality (LOMCE);

(b) for adults:

(i) review the offer and implementation of VET that uses distance teaching;

(ii) improve and streamline procedures for evaluation and accreditation of professional skills acquired through work experience, as well as recognition of prior learning to pursue vocational training courses, with the aim of making a return to education more attractive in order to continue training without relearning what is already learned;

(iii) track and evaluate the implementation of partial and modular VET offers;

(c) on information and guidance:

(i) make tools available to citizens for making decisions about their future training or employment;

(ii) make resources for teacher orientation available, by promoting the use of information and communication technology and bringing training closer to citizens;

(iii) contribute to gender equality through the development of information and guidance materials that improve the access of women and men to VET in profiles traditionally associated with the opposite gender;

(iv) reduce early school leaving and dropout rates in post-compulsory levels through better understanding of the tasks associated with the various professional profiles in the different production processes and service delivery.

➤ **Key Competences in initial VET**

For 2016-20, the country's priority in this area is to make visible and promote subject-related methods which support transversal integration of the key competences already embedded in VET diplomas.

In intermediate VET, Article No 42 of the 2013 education Law (LOMCE) (13) allows the regions

to offer optional language training (Spanish and foreign), mathematics and other subjects to upper secondary VET learners willing to progress to higher studies. Implementation began in 2016-17.

A 2015 Ministerial Decree (ECD/65/2015) stipulates revising and updating key competences in curricula. The Decree describes the relationship between competences, content and evaluation criteria for primary, compulsory and secondary education. Article No 5 on key competences in the curriculum has several stipulations: that they should be integrated into the curriculum (including in VET): they should be defined, explained and well-developed; the selection of content and methodologies should ensure the development of key competences throughout academic life; evaluation criteria should serve as a reference for assessment: and they are broken down into assessable learning standards that help measuring if key competences have been achieved.

➤ **Key Competences in Continuing VET**

Subsidized training for employment supports the acquisition of key competences by those who left school without a secondary education certificate. In 2015 and 2016, the public employment service (SEPE) published calls for proposals offering key competences for adults and young people (within and outside the Youth guarantee programme), and early leavers from education and training.

Although not exclusively devoted to key competences, these calls for proposals cover training in maths and Spanish language (in some cases, also foreign languages) for workers who lack the necessary qualification to study an occupational standards certificate programme. Key competences training takes place before the certificate study programme, allowing people with low qualifications access to training to obtain a full or partial occupational standard certificate.

3.1.2 The Case of Portugal

According to CEDEFOP for 2016-20, the country's priorities in this area, as set by the education and labour ministries, are twofold:

- (a) for young people:
 - (i) boost vocational education by valuing secondary education and

vocational education;

(ii) strengthen guidance and educational and social mediation for better permeability;

(b) for adults:

(i) value adult lifelong education and training;

(ii) promote compatibility between adults' individual needs and education and training opportunities.

➤ **Key Competences in initial VET**

Compared with general education graduates, those who completed VET programmes feel they have stronger (ranged by priority):

(a) sense of initiative and entrepreneurship;

(b) digital and computer skills;

(c) ability to be creative;

and weaker:

(a) foreign language speaking;

(b) mathematical skills;

(c) cultural awareness

As VET enrolls 45% of all upper secondary learners in the country, this trend is likely to be reflected in the key competences trained for in VET programmes. Key competences (competências-chave), known as basic competences (competências básicas or de base or essenciais) or simple competences, have been included in the national legislation on secondary general and vocational education and training (VET) since 2001. Since then, several education reforms have taken place, including VET and those focusing on VET curricula. Most key competences, as defined in the 2006 EU framework, are implicitly present in VET curricula. Competences such as learning to learn, interpersonal, intercultural, social, civic, entrepreneurship and cultural expression are partially included in curricula of some VET programmes.

➤ **Key Competences in Continuing VET**

For 2016-20, the country's priorities in this area, as set by the education and labour ministries, are to: (a) further develop CVET qualifications within the CNQ and (b) update the qualifications'

referential.

In 2014 and 2015, stakeholders analysed qualifications in the tourism and commerce sectors. This led to changes in 2016; new qualifications emphasized digital and foreign language competences and others (social and transversal) designed in terms of learning outcomes.

3.1.3 The Case of Greece

According to CEDEFOP for 2016-20, the country's priorities in this area, as set by the Director General for vocational education and training, are:

- (a) for young people: ensure access to formal qualifications as a way to enable young people to upskill to emerging skills requirements;
- (b) for adults: ensure access to VET and return to labour market;
- (c) for recently arrived refugees: ensure the identification of their educational level and qualifications aiming to define educational needs, care and support.

➤ **Key Competences in initial VET**

The country's priority in this area for 2016-20, as set by the Director General for vocational education and training, is to increase the share of key competences in the curriculum framework and gradually take them into account in assessment practices.

The 2016 national strategic plan for VET and apprenticeships highlighted the need for integrating key competences for lifelong learning in VET curricula. The 2016-17 EPAL reform put emphasis on key competences at A class level (the first of three levels at EPAL schools).

Since 2017, two ESF programmes have supported adjustment of VET curricula to this new setting, especially for numeracy and literacy. This process has also been supported by OMNIA who helped developing a guidebook for integrating key competences in VET curricula.

➤ **Key Competences in continuing VET**

For 2016-20, the country's priority in this area, as set by the Director General for vocational education and training, is to strengthen the professional development of teachers and trainers in VET schools.

The VET strategy includes provisions for teachers' CPD in all forms (schoolbased or apprenticeship) and levels of VET (upper-secondary IVET, postsecondary IVET and CVET).

Adjustment of teachers' CPD is planned to ensure a smooth transition to the new VET system; it will be focused on implementation of the post-secondary apprenticeship year, the new learning-outcomes based VET curricula (to be designed as of October 2017), and reinforcement of links with the labour market.

Particular attention is paid to the CPD of teaching staff who worked in school-based programmes and will be (re)allocated to the new apprenticeship programmes (mostly the EPAL class, 4th year, but also public IEK, postsecondary VET institutes that may opt for apprenticeships). Focus is on developing their knowledge and competences for collaborating with enterprises and apprentices. Also important is peer-learning and capturing the experience of teachers who already piloted work-based learning activities (other than apprenticeships) in previous years. Approximately EUR 4.1 million are earmarked for CPD of teaching staff in school-based settings from 2016 to 2019.

A CPD programme targeted at training 27 500 teachers in using information and communication technology (ICT) in teaching and 60 000 teachers in introductory ICT training was established in 2015. Several sensitisation seminars (of short duration) on apprenticeship have also been carried out in 2016 and 2017, before the first implementation of the post-secondary apprenticeship year.

3.1.4 The Case of Romania

According to CEDEFOP the country's priorities in this area for 2016-20, as set by the Director General for vocational education and training, are two-fold:

(a) for young people:

- (i) identify young people not in education, employment or training (NEETs), register them within public employment services (PES) and create an offer of integrative measure packages;
- (ii) improve access of young people to IVET, especially of those coming from disadvantaged groups;

(b) for adults, increase adult participation in CVET.

➤ **Key Competences in initial VET**

The country's priority in this area for 2016-20, as set by the Director General for vocational education and training, is to strengthen key competences in VET curricula.

The 2016-20 VET strategy (Sections 1.2.2, 2.2 and 3.2.2) foresees updating occupation standards and VET curricula and reviewing qualifications based on learning outcomes, including eight key competences defined by the 2006 EU framework. In 2016, new initial VET standards for qualifications at EQF levels 3 to 4 were approved by the Education Ministry.

These standards are based on units of learning outcomes, each comprising key competences. Consultations with companies and other stakeholders resulted in developing new training standards for 131 initial VET qualifications at EQF level 3 and 59 qualifications at level 4. The standards were approved by the Education Ministry in 2016. The curriculum for grade 9 of vocational schools and technological high-schools was revised using these standards. In 2017, curriculum revision continues for grades 10 and 11 for vocational school and for 10, 11 and 12 grades. The new training standards and qualifications support acquisition of key competences in a professional context.

In December 2015, a national jobs competition was launched. In the first round, it included 68 schools (gymnasium and technological high schools) from three (of eight) regions. The competition is an opportunity to demonstrate and evaluate key (life) competences of learners. Since 2015, business plan competitions and international fairs of training firms have also national promoted entrepreneurship.

➤ **Key Competences in continuing VET**

The 2015-20 lifelong learning strategy (Sections 1.2.1 and 3.2.1) addresses the acquisition and validation of basic and transversal competences that help early leavers from education to find jobs. The measures include revision of the validation methodology, quality assurance, and training of staff in assessment centres of prior learning. The allocated financing allows 45.000 adults to acquire basic and transversal competences.

The Youth guarantee initiative (2015) supports training of adults with low skills and early leavers from education through continuing VET. Evaluation of their skills is available for free in the assessment centers that can receive financial support, similar to the authorized training providers.

3.1.5 The Case of Latvia

According to CEDEFOP for the 2016-20 period, the country's priorities in this area, as set by the Director General for vocational education and training, are two-fold:

(a) for young people:

- (i) modularisation of programmes;
- (ii) revision of sector qualification framework;

(b) for adults:

- (i) broadening access to various target groups;
- (ii) critical review of the situation to identify and address gaps.

➤ **Key Competences in initial VET**

The country's priorities in this area for 2016-20, as set by the Director General for vocational education and training, are to introduce module-based VET programmes and revise the sectoral qualifications framework. This will be a major reform and will involve extra funding and the social partners.

Since 2015, legislation has allowed learners to choose between nationally organised centralised state exams and recognised international language exams. In early 2016, national VET standards were amended to promote the acquisition of competences in maths, science and technology, communication in foreign languages, and social and civic competences. Compulsory general subjects in all VET programmes have been complemented by natural sciences, second foreign language and literature.

In December 2016, an ESF-funded project Lifelong learning competences was launched to develop modular VET programmes comprising key competences: initiative and entrepreneurship, security of society and person, information and communication technologies, social and civic competences, and language and culture awareness and expression.

➤ **Key Competences in continuing VET**

In May 2015, the inclusive employment guidelines for 2015-20, prepared by the Ministry of Welfare, were adopted. They provide for acquisition of qualifications and key competences by jobseekers in line with labour market needs.

Developing the key competences of the unemployed is also part of the ESF project Support to the education of the unemployed (2015-21) implemented by the public employment service (EUR 91.9 million, including EUR 2.2 million private and EUR 11.6 million State budget shared financing).

4. Overview of the Methodological Tools

One of the aims of the ECO TEX project is to create the contents of a training toolkit with courses for the Sustainability Expert in textiles and clothing companies. This EQF will serve as a reference tool to compare the qualification levels of the different qualification systems and to promote both lifelong learning and equal opportunities in the knowledge-based society, as well as the further integration of the European labour market, while respecting the rich diversity of national education systems.

So, the main goal of the ECO TEX project is the undertaking of an innovative training toolkit oriented to European textiles and clothing companies in order to encourage them to cooperate for the adoption of innovative Digital Training Platform which will host e-courses and the entire curricula.

In order to achieve the best results and produce a targeted and useful Curricula and Digital training platform, the partnership had first detected and identified the skill needs and gaps of the target group and analyze them in a meaningful way. Having completed IO1 and IO2 the project partners have a clear overview of current Sustainability Expert's / Officer's staff skills needs and the existing gaps in EU MSMEs.

In this section we present the methodological tools in order to form the courses of the Digital training platform. The training platform will be embodied with units/courses organized

in accordance to the ECVET principles and regulations.

According to the ECVET Recommendation, the description of a unit should comprise of the following:

- ✓ The title of the Unit
- ✓ The title of the respective qualification to the unit
- ✓ The EQF level of the qualification
- ✓ The ECVET points allocated to the unit
- ✓ The Learning Outcomes contained in the unit
- ✓ The assessment procedures and criteria
- ✓ The validity in time of the unit

a. ECVET Unit Title

The first step in creating a Unit is to provide a title for it. Project partners should consider the outcomes from the IO1 and IO2 and shape the profiles of each partner country in order to extract their needs and create the Units respectively. Some of the criteria could be:

- Importance (vital to the sector or sub-sector)
- High demand (unavailable profiles that the market needs)
- Lack of training (profiles that might have shown a need for better training)

The above criteria are simple suggestions as to how the partners could choose the occupational profiles that are needed. These occupational profiles will then become ECVET Unit Titles, which will clearly state the position or occupation a professional hold when classified under them. The Title should offer a general image of what the professional needs to know and do in a work environment, and it can be as specific as is deemed necessary.

b. Qualification Title

Qualifications are constituted of one or more units. Thus it is facilitating and useful to name the qualification which relates to each unit.

c. EQF Level

Following the title should be the EQF Level of the Qualification that is associated with the Unit. According to the ECO TEX Project Description, the module should be compatible with the EQF Level 5.

d. ECVET points

ECVET points is the numerical representation of a qualification. The number of ECVET points allocated to a particular unit, indicate the grade to which it contributes towards achieving that qualification and therefore it represents the weight of the unit in the qualification's framework. At this point, we must pinpoint that ECVET points are linked to the qualification's structure and its component Learning Outcomes and they are not related to the success or failure on achieving the qualification. Meaning that the ECVET points are recognized when a learner completes a particular unit, even if s/he does not succeed in the overall number of units required to acquire the full qualification.

e. Learning Outcomes

The next step is the choice and designation of Learning Outcomes to those Titles. Both the occupational profiles and the results of the needs questionnaires will be extremely helpful for this. Learning Outcomes are the end goal for any professional and they make up the required qualifications. They should note what the professional is expected to have learned by completing this Unit.

Each ECVET Unit needs to have at least one Learning Outcome that is appropriate to the Title and what that entails. The Learning Outcomes will be divided into knowledge, skills and competences. The project Partners need to make sure that the Learning Outcomes they create and assign to each Unit, cover the learning experience along with what a person under that occupational profile will need to know in order to do that specific job.

- ✓ Knowledge
- ✓ Skills
- ✓ Competence
- ✓ Attitude

When the LOs are complete for the Unit, they should be followed by the knowledge, skills and

competence pertaining to it, in order to be complete. At this stage, the ECVET Units and Learning Outcomes should be analysed into all their essential theoretical and practical aspects. These will create descriptions of the required knowledge, skills and competences.

- Knowledge will represent all the necessary theoretical concepts that the professional should learn before being in a relevant work environment.
- Skills signify a person's ability to put into practice the knowledge acquired in order to complete tasks and solve problems that may occur in a work environment. Therefore, depending on each ECVET Unit, there needs to be a relevant description of all the skills that should be acquired by the end of the person's education.
- Competence is a more perplex issue, since it needs to consider the subjective factor of personality, which means that a person uses the knowledge and skills he or she has along with social and methodological abilities in a work environment. The competences need to be specified according to the Unit and its LOs and should generally include a practical application of the relevant knowledge and skills, that will prove the person has assimilated all the information and practices needed and is able to apply them in a work environment.
- Attitude is defined as 'the ability to carry out tasks and solve problems of lesser or greater degrees of complexity and involving various levels of autonomy and responsibility', and is divided into subdomains responsibility and autonomy.³

f. Assessment procedures

In order to describe sufficiently a particular Unit of a qualification it is necessary to mention the assessment procedures and criteria (types and duration of the exams, threshold values, etc.), which are going to determine whether the candidate succeeded or failed in acquiring the anticipated Learning Outcomes, in terms of knowledge, skills and competences. The suggested assessment tools and methods are further analyzed subsequently.

g. Validity in time

Depending on the educational content of the unit and the nature of the expected Learning Outcomes of a qualification, it is possible that a certification provided, after a candidate's

³ Used in the case of Portugal according to the Cedefop Publication Analysis and overview of national qualifications framework developments in European countries "Portugal European Inventory on NQF 2016"

successful performance, is valid in a specific period of time and has to be updated at regular intervals. In this case, this information must be included in the Unit's presentation.

➤ **Template Table for ECVET Unit Title, LOs, Knowledge and Skills Competence**

Each ECVET Unit needs to be recorded in a specific Table that will consist of several information, according to the template below.

Table: ECVET Unit Knowledge, Skills and Competence

ECVET Unit: (title:)		
Reference Qualification	(title of the qualification)	
EQF level	(note the appropriate level)	
Learning Outcomes	(List the LOs)	
Knowledge	Skills	Competence
(note down the theoretical knowledge relevant to every LO the unit consists of)	(note all the practical aspects which a professional should be able to apply in a work environment)	(note down abilities to combine several aspects of Knowledge and Skills that the professional will then use in a work environment, but also with special care to social or methodological abilities that may play a significant role)

By filling the above sections of the template, we have a clear overview of the aims of each Unit and all the necessary means to achieve them. This template consists/forms the basis for the creation of the curricula.

➤ **Template table for Educational Methods/Courses**

The table provides an overview of the training methods that will be employed during the module

for each ECVET Unit. The Template Table found below should be filled in accordingly to show the methods used in the module.

Table: ECVET Unit Educational methods template

ECVET Unit: (Title)				
Reference Qualification	(title)			
Module Title	(title given)			
Training Methods			Training Hours	Weight
Instructor/ Classroom -based	Theoretical learning	(way of accomplishing it i.e. classes, lectures etc.)	(duration of theoretical training, i.e. 300 hours)	(note down the weighting grade representing the theoretical learning's contribution to the achievement of the

				qualification, i.e. 60%)
	Practical learning	(way of accomplishing it, i.e. workshops, projects during module etc.)	(duration of practical training i.e. 50 hours)	(note down the weighting grade representing the practical learning's contribution to the achievement of the qualification, i.e. 60%)
E-learning	(describe means available to trainees and the programme they will have to follow to complete this)		(note down the duration of e-learning training, i.e. 5 or 10 hours)	(note down the weighting grade representing the practical learning's contribution to the achievement of the qualification, i.e. 5% or 10%)
Other	(describe any methods included that do not fall under the categories already mentioned, i.e. work placement etc.)		(note down the duration of training, i.e. 20 hours)	note down the weighting grade representing the practical learning's contribution to the achievement of the qualification, i.e. 5% or 10%)
Total Training hours			(sum of the duration of all used training methods, i.e. 690 hours)	
Total ECVET points			(attribution to the ECVET points considering that 60 points are awarded to 800 hours of training)	

The final filled-in table can be transformed according to the needs of the educational methods. The template records the training methods in detail and any other Unit-specific training variations. The ECVET points are allocated according to the declared duration of training hours, considering that 60 points are awarded to 800 hours of training. So, in case that the duration of all unit's training methods is 950 hours, the corresponding ECVET points are $(950 \cdot 60 / 800 = 71,25)$. The duration, the content and types of learning, of the training courses must be carefully designed and decided, since they are the determining factors concerning the amount of credits that should be allocated to each Unit. Furthermore, the type of training (theory, practice) could prove helpful in this conversion, since, depending on the LOs, it is possible that formal, non-formal and informal learning can be used and validated, under ECVET.

The description of the courses might also, given with proper words, verbs and structured, in a way to clearly designate the association to relative LOs, assist to allocate specific weights for each of the LOs, in terms of their contribution towards achieving the qualification. For example, for some Units, theoretical training and acquired knowledge could be considered more important than practical training and gained skills and/or competences, and vice versa.

Thereafter that might also need to be reflected in the allocated credits. We should keep in mind that it is necessary to accumulate the LOs demonstrated by the needs assessment questionnaires and apply these principles to convert them into ECVET Credits, which will allow them to be sorted into the appropriate EQF Level. This way the knowledge, skills, and competences acquired as well as the time a professional has devoted to completing an ECVET Unit will factor in the credits and prove that the respective EQF Level has been reached. The expected LOs that a learner shall obtain after completing the learning process are categorized according to the ECVET Units.

The overall ECVET Points allocated to the qualification “ECO TEX” result from the total of ECVET Points of the respective units. That number represents the amount of ECVET Points that is needed in order to acquire this qualification. In case that the learner does not manage to succeed in the total number of units needed to obtain the qualification, there is recognition of the ECVET Points achieved through successful completed units.

➤ **Credit accumulation and transfer**

ECVET Credits are not to be confused with ECVET Points. While points exist on their own and are linked to the structure and LOs of a particular qualification, credits do not exist at all, unless someone has achieved them. More specifically, credits involve the fact that a learner has successfully completed a Unit and thus, has achieved the expected learning outcomes, after having been assessed through exams (or credits have been attributed to him/her through non formal and/or informal learning).

Therefore, credits can be accumulated towards a qualification or transferred to other learning programmes or qualifications. Credit transfer respects to the process which enables taking the

learning outcomes achieved in one context and putting them into another context.

This process obligatorily involves the assessment of learning outcomes which are to be transferred. The result of the assessment is recorded in a learner's personal transcript and constitutes credit, which can then be validated and recognized by another competent institution. Credit transfer fosters the learners' geographical, professional and educational mobility and enables credit accumulation, which is a process allowing learners to obtain qualifications progressively through successive assessments and validation of LOs.

However, the recognition for the part of a competent institution of the achieved LOs assessed from another partner institution is not a simple process, as it automatically means acceptance of the partner institution's quality assurance, assessment and validation criteria and procedures as satisfactory. At this point emerges the necessity of partnerships' consolidation and composition of a Memorandum of Understanding.

Conclusions

Within the Methodology Guide we determine (1) the existing situation in each partner country regarding the VET and life long learning together with the policy priorities for the 2016-2020 period, (2) how the courses of the online training platforms should be organized, and (3) the ECVET units of every course according to the ECVET principles.

More specifically, after analyzing the main findings from the national survey that took place for the purposes of the ECO TEX project (IO1) and after choosing the Moodle for the development of the ECO TEX digital training platform, we provide a guide for the formation/organization of the training platform's courses according to the ECVET principles.

At this end, we provide a brief analysis of Lifelong learning as a part of country's education and training system, so we examine each partner country's education and training system giving more emphasis in the vocational education system. After the aforementioned analysis, we have a perspective about each country's education system and the qualifications that each learner acquires based on the selected path of education.

Considering that this is an international project, we propose the organization of the e-courses based on the ECVET and EQF principles. Our aim, is to equip textiles and clothing industry and its participants with European tools, able to support and increase European mobility. ECVET is meant to support learners on their career and learning paths to a recognized vocational qualification, through transfer and accumulation of their assessed learning outcomes acquired in different national, cultural and education and training contexts. The e-courses will be formed based on ECVET principles and in respect to the needs of each partner regarding skill gaps and mismatches in EU level.

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