

Partnerships for Lifelong Learning in Engineering



Design options for Integrated Learning Opportunities and Bridging Programmes

Synthesis Report Part 1

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Part 2 Country Reports on Expert Interviews

(separate document)

1. Introduction

This synthesis report addresses the operating conditions and design options of partnerships for lifelong learning. With a focus on integrated learning opportunities and bridging programmes the report explores the systemic environments in which such partnerships operate as well as the organisational arrangements that respond to these environments, and present these design options in a grounded typology. This report compiles findings of five European countries: Ireland, Germany, Greece, Latvia and Spain. The country findings serve as the basis for the compilation synthesized in the following. The idea underlying the selection of countries was to cover up different VET traditions such as school-based, modularised, or traditional dual VET systems as well as a diversity of approaches to lifelong learning partnerships which are embedded in different underlying structures of VET. Whereas Germany represents a country with a traditional dual vocational training and educational system, Spain and Greece on the other hand are examples of predominantly school-based types of vocational education. Similar structures prevail in some transition countries like Latvia. Eventually, in Ireland there is a highly modularised qualifications system, of which vocational education is a part.

This synthesis report will only briefly pick up the structural and policy contexts prevailing in the covered countries (chapter one) in so far as they are required to understand the country-specific policies and practices of lifelong learning partnerships. The second chapter will provide some insights in national LLL policy by presenting typical/paradigmatic examples, while the third chapter focusses on emerging and stabilizing governance structures taking effect in the organisation of LLL partnerships. The last section provides a synoptic comparison of the general performance of the presented partnerships as well as their potentials and challenges possibly arising.

2. Background and policy contexts

This section provides a synoptic overview of the VET systems prevailing in the different countries. Only the most important and/or unique components will be addressed here.

2.1 The Irish VET system and Lifelong Learning policy

The Irish situation relating to Vocational Education and Training (VET) and the progression issues relating to higher education are, on the surface, not entirely seamless. In Ireland, Vocational Education & Training (VET) embraces education and training which occurs primarily after second-level schooling and mainly in the further and continuing education sector. VET also occurs in some tertiary educational environments.

In Ireland a distinctive feature of further and vocational education generally is its diversity and breadth of provision and its linkages with other services such as employment, training, area partnership welfare, youth, school, juvenile liaison, justice and community and voluntary sector interests. Vocational education and training in Ireland is not only about employability, it also espouses the key concepts of lifelong learning.

It is seen both in policy and structural terms as being one of the main pillars essential to the building and maintaining of a highly skilled work force operating within a knowledge society.

Due to the competitive entry requirements for higher education, every year a share of pupils opt to remain in upper secondary education in order to improve their performance in the final year exams with the overall aim of gaining entry to their chosen course in higher education. Traditionally, therefore, for those completing second level education in Ireland, formal tertiary education has been the preferred destination for further study or training (51% of Ireland's 25-34 year-olds hold 3rd level qualifications). One of the stated aims of Government in setting up the new further/vocational education and training authority (SOLAS), which occurred at the end of 2014, is to radically enhance the image of further/vocational education and training amongst Ireland's school leavers and their parents/guardians and career guidance professionals.

During 1998 and 2012 the Irish government passed several acts (e.g. the Disability Act/20106 and the Further/vocational Education and Training Act/2013) to promote vocational education and to provide foundations for all Irish education and training. There is not a sharp distinction in Ireland between IVET and CVET. Rather, government policies make a distinction between programmes for young persons and students, programmes for the unemployed (whether old or young) and programmes for persons in employment. In recent years, CVET in Ireland is gaining more and more attention. The VET system is set in the context of the Government's National Development Plan (NDP) for 2007-2013, which emphasizes the needs for consistency with European VET and social policy. More recently, following the establishment of SOLAS, the new agency has been working to develop and give strategic direction to the further/vocational education and training sector in Ireland.

Initial Vocational Education and Training

For Initial Vocational Education & Training IVET, the administration and implementation of government policy fall mainly within the remit of the Department of Education and Skills (DES) and the Department of Enterprise, Trade and Employment (DETE), with the former being the most significant player in the area of IVET. There are five levels in the IVET system: 1) lower secondary; 2) upper secondary; 3) apprenticeship training; 4) other youth programmes and alternative pathways; and 5) post-secondary (non-tertiary).

Responsibility for the provision of IVET in schools and centres and different institutes of further/vocational education and training is devolved from the DES to thirty-three Vocational Education Committees (VECs). The Higher Education Authority (HEA) is responsible for the supervision and funding of educational programmes in universities and designated third-level education institutions. Quality and Qualifications Ireland (QQI), established in 2012, is responsible for the external quality assurance for IVET courses and for maintaining the national framework of qualifications.

Continuing Vocational Education and Training

For Continuing Vocational Education & Training (CVET), the administrative responsibility for funding and policy for publicly provided CVET falls mainly within the Department of Education and Skills and the Department of Enterprise Trade and Employment (now Department of Jobs Enterprise and Innovation – DJEI). SOLAS has a remit for funding of CT for publicly funded education provision while other government departments make provision for CVET in their own specific sectoral areas. In terms of intermediate organizations, the DES supervises and funds increasingly through SOLAS further vocational education colleges and adult education centres. QQI is responsible for the certification and accreditation of all CVET courses where programmes offered lead to QQI awards.

Lifelong Learning Policy

A particular characteristic of the Irish context in relation to lifelong learning is the promotion of the interdependence of the objectives of economic development and social inclusion. Thus social forces have always been viewed as key drivers, alongside the economic forces at play, in the promotion of lifelong learning agenda in Ireland. In 2000, the Irish Government's paper on Lifelong Learning was published (White Paper on Adult Learning, Learning for Life, 2000) and this decoupled lifelong learning from purely economic motives. Rather than being merely a tag-on to the economic rationale for lifelong learning, the White Paper prioritized the issue of social cohesion through its emphasis on active citizenship through personal, community and cultural development. This was the first legislative attempt to try to define lifelong learning from a policy context. Within the Irish context, the lifelong learning agenda has come to be based on three fundamental attributes:

- It is lifelong and therefore concerns everything from the cradle to the grave.
- It is life-wide recognising that learning occurs in many different setting.
- It focuses on learning rather than limits itself to education.

2.2 The German VET system and Lifelong Learning policy

The educational system in Germany is divided into pre-school, primary, secondary (level I and II), tertiary and continuing education. Compulsory education begins for all children with the age of 6 years and consists of 9 (or 10) years of full-time schooling. The dual VET system is an integral part of the general education and training system in Germany.

After completion of compulsory education, which is normally at the age of 15, pupils proceed to upper secondary education. Depending on the type of qualification end entitlement obtained at the end of lower secondary education, they can choose among the following options:

- a) Full-time general education (Gymnasium, Gymnasiale Oberstufe, i.e. types of schools leading to a general university entry qualification),

or vocational pathways, such as

- b) vocational education and training (apprenticeship) within the “dual system”, including part-time training at a vocational school and in-company training,
- c) vocational education (at vocational schools like Berufsschule, Berufsfachschule, Fachoberschule, Berufsoberschule and berufliches Gymnasium), and
- d) vocational preparation schemes, offered by the transitional sector (also an option for pupils leaving school without a secondary general school certificate).

New entrants into the three sectors of vocational education and training can roughly be divided into 51% (dual system), 22% (school-based occupation system) and 27% (transitional sector), a distribution that has been relatively stable with regard to the dual system (Autorengruppe Bildungsberichterstattung 2014 and 2008), but with a rising share of school based and a declining tendency in the share of the transitional sector.

Dual vocational education and training has a very long tradition, is deeply embedded and widely respected in German society. It is – among others – due to the high degree of involvement of employers and other social partners including a shared financing system combining public and private funding that dual VET is well-functioning and often seen as an inspiring example for other countries.

However, in recent years, Germany has – like many other countries – faced a general trend towards tertiary education as the following graph shows. While there is an increase in the number of school leavers with a general higher education entrance qualification and subsequently an increase in the number of students, enrolment in vocational education and training is slightly declining. In a 10-year perspective, this general trend becomes visible as the following figure shows.

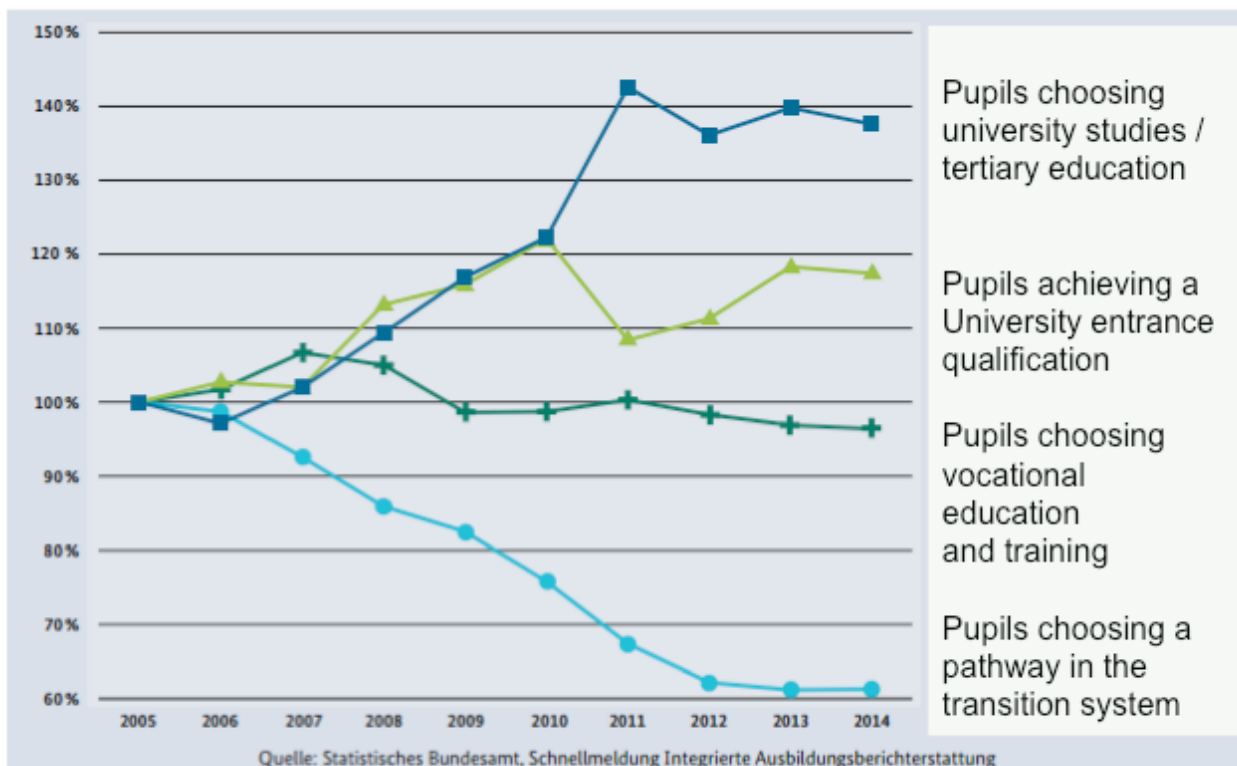


Fig 1: Development of entrants into tertiary education, (entrance qualifications into tertiary education), vocational education, the transition system in a 10 year-perspective. Source: BMBF (2015): Berufsbildungsbericht 2015, p. 58

In 2013 and for the first time in Germany, the number of young people who opted for tertiary education after leaving school was higher than the number of youngsters choosing vocational education and training as the initial step of their career after leaving school (Frank, Heister, Walden 2015). Moreover it can be observed, that in recent years, dual study programmes combining VET and higher education (integrated learning opportunities) or dual programmes with practical training as an integral part are getting more and more attractive. It can be argued, that – apart from a general trend in this domain – this recent developments have been supported by the German Lifelong Learning Strategy.

Lifelong Learning Policy

In 2004 a joint strategy for lifelong learning has been adopted by the Federation and the Länder aiming at demonstrating how learning can be encouraged and supported by citizens of all ages and at all stages of their lives. In this regard Lifelong Learning is understood as a way of learning that may be formal, informal or non-formal, i.e. a broad range of learning opportunities is concerned. The German strategy of lifelong learning is oriented towards the various phases in a person's life and addresses children, young people, young adults, adults and older people. A lifelong learning strategy framework has been set up which builds on the existing educational structures but which is flexible and open for continuous and further education. According to the summary on the German lifelong learning strategy (provided by the Standing Conference of the Ministers of Education and Cultural Affairs of the 'Länder' in the Federal Republic of Germany, KMK; KMK 2014, p. 24), the development focuses of the strategy are as follows:

- Inclusion of informal learning
- self-guidance
- development of competences
- networking
- modularisation
- learning counselling
- new learning culture/popularisation of learning
- fairness of access

Among others, the initiatives to support lifelong learning focus on an increased permeability between and dovetailing of the educational sectors, expanding educational counselling, recognition of qualification (also obtained abroad). Within the frame of the lifelong learning concept and within their spheres of competence, the Federation and the Länder are implementing measures in the following areas:

- improving educational opportunities for children under six years.
- measures to improve the training situation
- facilitating the transition from school to higher education and facilitating access to higher education for vocationally qualified learners (without a general higher education entrance qualification – Abitur)

- creating more than 600.000 additional study opportunities for first-year-students until 2015 (within the framework of the higher education pact 2020/Hochschulpakt 2020)
- reinforcing the interest in technical subjects and natural sciences
- improving opportunities for women, especially low qualified or migrant workers or returners (long-time unemployed)
- considering the interests of people with disabilities in participating in lifelong learning
- structural improvements of education at all stages of life at local level.

With regard to the topic addressed in this study, the third point of the list concerning the transition from vocational to higher education is of particular relevance. As it was announced in the conception paper it is among the most important aims to expand the access opportunities for vocationally qualified personnel to higher education and to support students with a vocational background by offering scholarships or grants for talented graduates of the dual VET system who wish to enter universities after completion of their training. Another measure in this regard was the amendment of the law which regulates the financial support of journeymen or skilled workers who wish to become master craftsmen.

Actual initiatives to improve the permeability between VET and tertiary education included the project ANKOM („Anrechnung beruflicher Kompetenzen auf Hochschulstudiengänge“) ‘Recognizing vocational competences towards programmes of higher education’, and the creation of a National Qualifications Framework.

2.3 The Greek VET system and Lifelong Learning policy

In Greece schooling is compulsory for all children aged 5 to 15. Compulsory education includes primary (kindergarten, one year, and primary school, six years) and 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. If they choose to continue in general education they will attend classes at a general upper secondary school (GEL), for three years of upper secondary education; 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 decentralised 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 attend the national examinations for admission to a tertiary education programme. 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 (EPAL)* in the second cycle of secondary education at a vocational upper secondary school (day or evening school). The minimum age for enrollment in a vocational evening school is 16. 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).
- (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 (LLC).

Providers of vocational training (public or private) outside the formal education system are supervised by the General Secretariat for Lifelong Learning (GSLL) of the Ministry of Education. Under the new law, the specialties offered in public vocational training and the sectors under which they are classified is determined by decision of the Minister for Education in accordance with the needs of the national and local economy and proposals of regional administrations, competent ministries and social partners. Curricula for each specialty should take into account related job profiles or required occupational qualifications. Curricula for initial vocational training are developed and overseen by the GSLL and certified by the EOPPEP. They can be defined in terms of learning outcomes and linked to credits, following ECVET.

In the following some selected VET programmes will be sketched:

The newly-established SEK (vocational training schools) which replace the previous EPAS can be public or private and provide initial vocational training to those who have completed compulsory education. The programmes are of three years' duration; there are no tuition fees at public schools. Students who are over 20 or employed attend evening vocational training schools for four years. The last year of the three-year SEK programme is apprenticeship. During the 'apprenticeship year', workshop lessons are combined with workplace learning (28 hours/week). Tertiary education programmes are not open to SEK graduates (no 'vertical mobility').

The vocational training institutes (IEK), either public or private institutions, provide initial vocational training mostly for graduates of upper secondary schools, and secondarily to those who have completed a SEK programme, with a view to integrating them into the labour market. They are open to EPAL graduates (who may enter the third semester of a related specialty), graduates of general upper secondary school, graduates of lower secondary school (in a limited number of specialties) and foreign nationals (with language competence certificates).

IEK programmes last five semesters, four of theoretical and laboratory training totalling up to 1200 teaching hours in the specialty, and one of practical training or apprenticeship totalling 1050 hours, which may be continuous or segmented. Students who successfully complete all the prescribed semesters are awarded an attestation of vocational training. This attestation entitles them to take part in the (practical and theoretical) vocational training certification examinations conducted under the jurisdiction of Eoppep, with which they acquire an upper secondary VET certificate. IEK graduates are awarded occupational specialisation diplomas at EQF level 5.

Vocational programmes are also offered at *tertiary level by higher professional schools*. Their programmes require at least two years of study and may be as long as five years. In most cases they include a period of practical training in the workplace, which is a particularly important feature of their courses. In some cases admission to these schools is contingent upon passing the general examinations for admission to higher education programmes, while others require special admission examinations (such as university-level schools of dance, theatre). These higher professional schools operate under the supervision of the competent ministries (Ministry of Tourism, Ministry of Culture, etc.). The diplomas awarded by these schools, and consequently the qualifications they represent, are in some cases (such as the school of educational and technological sciences, the merchant marine academies) deemed equivalent to the diplomas awarded by TEI, that is, they correspond to EQF level 6. Otherwise (such as the higher professional schools of tourism occupations, military schools for lower grade officers, police academies, dance and theatre schools), they are considered non-university tertiary level institutions and the qualifications they provide correspond to EQF level 5.

Colleges offer programmes based on accreditation and franchising agreements with foreign higher education institutions that are recognised by the competent authorities in the country in which they are established or included in a list set up by decision of the Minister for Education which contains internationally accredited programmes (Law 3996/2011, on the operation of colleges). These programmes lead to a first diploma after at least three years of studies or to a postgraduate qualification.

College programmes are outside formal education and training, but the diplomas, degrees, certificates, and any other type of attestation awarded by the colleges can be recognised as professionally equivalent to higher education titles awarded in the formal Greek education system.

In all the forms and at all levels of formal and non-formal VET provision is made for *special categories of students*. More specifically, special education vocational upper secondary schools and pilot vocational training and special education schools can be set up, as can public and private special education IEKs. Also, most lifelong learning providers have general adult education and continuous vocational training programmes for those with special needs (AMEA), for example in the LLCs or in centres specialising in social and vocational integration for the disabled, and for recovering or recovered addicts, like the

Therapy Centre for Dependent Individuals (Kethea) or the Organisation Against Drugs (OKANA).

Lifelong Learning Policy

According to the Executive Summary National Report by the title “Lifelong Learning in Greece 2012” lifelong learning (LLL) is considered a policy priority at European as well as at international level. It is strongly linked to a person’s employment, prosperity and full participation in society. The challenges placed today by the ageing population, the skills and competences deficiency of the workforce and the global competition are further enhanced by the ongoing financial crisis and thus, highlight the crucial role of Lifelong Learning in addressing these issues.

More specifically, the Law No 3879/2010 Development of Lifelong learning and other provisions that was voted by the Greek Parliament in September 2010 – which sets the basis for the planning and implementation of a national holistic strategy on lifelong learning and for the creation of the National Network of Lifelong Learning (NNLL) – defines the term “Lifelong learning” as *all forms of learning activities during a person’s life that are aimed at the acquisition or development of knowledge, skills and abilities, which contribute to the formation of an integrated personality; the individual’s vocational integration and development; social cohesion; the development of the ability of active citizenship and social, economic and cultural development. It includes formal education, informal education and informal learning.*

2.4 The Latvian VET system and Lifelong Learning policy

The Latvian education system consists 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 (grades 7-9). Secondary education stage comprises general secondary education, vocational secondary education and vocational education. Higher education comprises both academic and professional study programmes.

There are five laws which are relevant to the Latvian education system:

- The Education Law (1991, 1998);
- The Law “On Crafts” (1993);
- The Law on Higher Education Institutions (1995);
- The General Education Law (1998);
- The Vocational Education Law (1999).

The Education Law regulates all types and stages of education, defines rights and functions of involved institutions, as well as education types, levels and types of education establishments. The Law “On Crafts” concerns craftsman and journeyman qualifications.

The Law on Higher Education Institutions states the cooperation between HEI and state institutions to harmonize autonomy of HEI with interests of society and state; regulates legal basis of HEI and colleges, sets and protects the autonomy of HEI. The General Education Law stipulates the organisational and functional principles of general education; regulates rights and obligations of institutions and persons involved in general education. The Vocational Education Law regulates the implementation of all vocational education forms and stages (except first and second level professional higher education), awarding relevant professional qualifications; as well as responsibilities of the involved institutions.

The education system is made up of a general education and a vocational education pillar. While general education comprises of pre-school education, general basic education and general secondary education, vocational education provides various opportunities to continue education after graduating from the basic school or secondary school and to acquire the initial professional qualification, as well as to develop abilities for continuing vocational education and to acquire the right to continue education on a higher education level. Vocational education establishments offer education programmes in all lines of economic activities.

Section 4 of the Vocational Education Law (1999) defines three levels of vocational education:

1. Vocational basic education;
2. Vocational secondary education;
3. Professional higher education:
 - First level professional higher education (college education);
 - Second level professional higher education.

The content of vocational secondary education programme is defined by the state vocational secondary education standard and the relevant occupational standard. Vocational secondary education programmes are elaborated and implemented in conformity with all lines of economic activities in Latvia. When graduating vocational education programmes, a professional qualification of a certain level is awarded. According to the Vocational Education Law (1999), there are five professional qualification levels in the Latvian vocational education system.

Vocational basic education

Persons are enrolled in vocational basic education programmes without restrictions as regards previous education and not before the calendar year, in which the person turns 15. Vocational basic education programmes last 1-2 years. a certificate of vocational basic education indicates that the student has acquired vocational basic education and has obtained Latvian professional qualification level 1 (theoretical and practical readiness, which allows fulfilling simple tasks in a specific sphere of practical activities, for example, a cook's or a carpenter's assistant). Those students without complete basic education before the age of 15 have the possibility to finish general basic education programme parallel to the acquisition of professional qualification.

Vocational education

The state vocational education standard stipulates that vocational education programmes last three years or one year (short –cycle education) for those persons, who have finished basic school. The completion of a vocational education programme is attested by a certificate of vocational education. It attests that the awarded qualification conforms to the Latvian professional qualification level 2 (theoretical and practical readiness, which gives the possibility to perform independently qualified executor work, for example, a carpenter, a hair-dresser, a cook, a seamstress, a welder). General education subjects are integrated into vocational education programmes. Vocational education does not ensure the right to continue education in a HEI, however, to those students, who wish to continue their education, a one-year adjustment course of secondary education is offered, or they have to study additionally at an evening school.

Vocational secondary education

Pupils, who have completed general or vocational basic education, may be enrolled into the vocational secondary education programmes. These programmes last for 4 years following the acquisition of basic education or 1.5 years after general secondary education (short–cycle education). Upon completion of the programme a diploma of vocational secondary education is awarded, as well as the Latvian professional qualification level 3 (increased theoretical readiness and professional mastery, which allows performing certain duties of an executor, which comprise the planning and organisation of work, for example, various technicians, car mechanics, modellers, and hospitality service specialists). The diploma gives the right to continue education at a HEI.

On the post-secondary (non-tertiary) level there are short cycle programmes designed for basic education and general secondary school graduates, at the age of 17-29, which are more oriented towards the acquisition of vocational knowledge and skills and obtaining Latvian professional qualification level 2 or 3. The duration of these programmes is one or 1.5 years.

Continuing vocational education

In Latvia, initial and continuing vocational education shares the legal and governance framework, although education pathways are different. The Vocational Education Law (1999) regulates two formal types of continuing education:

- 1) Vocational continuing education – (1) minimum duration of programme is 960 hours (to acquire Latvian professional qualification level 3 (EQF level 4) and with vocational secondary or vocational education as previous education); (2) 480 or 640 hours depending on the relevant occupation standard (to acquire the Latvian professional qualification level 2 (EQF level 4) and with no limitations for previous education), and (3) 480 hours (to acquire the Latvian professional qualification level 1 (EQF level 3) and with no limitations for previous education). Vocational continuing education enables adults with previous education and work experience to obtain professional qualifications. Programmes are always concluded by a specific qualification for a specific profession acknowledged by the state.

2) Professional improvement – minimum duration of programme is 160 hours (professional qualification level is not awarded, no limitations for previous education). Professional improvement enables people regardless of their age and previous education or professional qualifications to master systematized professional knowledge and skills corresponding to the requirements of the labour market.

Recently initiatives have been taken to establish a stronger work-based component into the existing framework of vocational education. One such project is the so-called 'dual vocational education' in which VET schools and companies work closely together with the purpose of increasing the practical training in real world environment. These newly established work-based learning programmes are not based on any specific regulation but provided within the framework of the Vocational Education Law.

Besides the stronger appreciation of work-based learning there exist apprenticeship programmes (especially in the crafts sector) which run over three years with a not pre-defined proportion of theory and practice. Apprenticeships are marginal and implemented separately from other education sectors. The age for entries into apprenticeships lies at 16 regardless of the previous education. Upon completion of training period, apprentice may take exam for journeyman and further for master of crafts. These qualifications do not provide, however, access to regulated professions, nor do they give access to any opportunity to continue in the formal education system.

Besides academic higher education there is also a strand of *professional higher education*. The objective of professional higher education is to ensure the acquisition of in-depth knowledge in a concrete field, ensuring the graduates' ability to develop or improve systems, products and technologies and to prepare the graduates for creative, research and pedagogical work in this field. The graduates of the first level professional higher education programmes (college education) are awarded with the relevant education document and the Latvian professional qualification level 4 (theoretical and practical background that enables the holder to perform complicated tasks as well as to organise and manage others in their work). When graduating a second level professional higher education programme (university education), graduates are awarded with the relevant diploma and the Latvian professional qualification level 5 (highest specialist qualification which provides for practical performance as well as abilities to plan and perform research and scientific work).

The *professional bachelor study programmes* ensure the acquisition of professional competence, the amount of these programmes is at least 160 Latvian CP (240 ECTS credit points).

Second level professional higher education programmes ensure the acquisition of the Latvian professional qualification level 5 upon their completion. These programmes are in the amount of at least 40 CP (60 ECTS credit points) after the acquisition of a Bachelor's degree or at least 160 CP (240 ECTS credit points) after the acquisition of secondary education. If the programme of 240 CP comprises the mandatory part of a bachelor's programme, the graduates acquire the right to enroll in a master programme.

The amount of *professional master study programmes* is at least 40 Latvian CP (60 ECTS credit points).

The graduates, who have acquired any type of the Bachelor's degree – either academic or professional, – have the right to enrol into master studies, but those who have acquired a Master's degree – into doctoral studies.

2.5 The Spanish VET system and Lifelong Learning policy

The milestone Law 5/2002 (“Ley Orgánica 5/2002, de 19 de junio, de las Cualificaciones y de la Formación Profesional” in Spanish) defines Vocational Education and Training (VET) as the set of training activities that prepare one for the qualified performance of the diverse occupations, access to employment and active participation in social, cultural and economic life. It includes those programmes available in initial VET, vocational integration and reintegration schemes for workers and unemployed, including schemes intended to facilitate continuous VET in enterprises to foster the acquisition and continuous updating of professional competences (lifelong Learning).

VET in Spain comprises two different subsystems, that is to say, the VET subsystem for Employment (addressing the training needs of those employed and unemployed, under the scope of the employment authorities), and the VET subsystem for Education (under the scope of the education system and geared primarily to initial vocational training of young people).

VET subsystem for Employment

VET for employment comprises tools and actions which aim to promote amongst companies, employed and unemployed workers any training activities that meet their needs and help develop a knowledge-based economy. It is based on cooperation between the various employment administration authorities and social agents at a national and regional level, combined with mediation and collective sector negotiation at a national level.

Different public funding schemes are available to provide access to vocational training for employment. Participants completing the training actions are awarded a certificate of attendance and those being positively evaluated receive a diploma. The skills acquired through this training can be fully or partly recognised through professional certificates, depending on the procedure and requirements for the evaluation and accreditation of skills acquired through work experience or non-formal training.

VET subsystem within the Education System

Generally speaking, Vocational Education and Training (VET) offered in the education system is mainly related to Initial Vocational Education and Training (IVET) offered for young people. The aim of IVET in Spain is to prepare students to work in a professional field and facilitate their adaptation to possible future changes in the labour market, as well

as to contribute to their progression through the education system, the system of vocational training for employment and lifelong learning.

The Spanish IVET, that can be followed on a presence-based basis or by distance learning, is primarily organised around two main levels, that is to say, the Intermediate and the Advanced Vocational Training Cycles:

- The so-called Intermediate Vocational Training Cycles (“Ciclos Formativos de Grado Medio” in Spanish). For entering these cycles, students need to have the Compulsory Secondary Education Certificate (“Educación Secundaria Obligatoria “ (ESO) in Spanish) as an entry requirement. These cycles have a modular structure and range between 1,300 and 2,000 hours in total to be imparted in two years, including a compulsory traineeship period at workplace (Formación en centros de trabajo -FCT) that takes place in a company and aims to apply the theoretical knowledge learned in schools (usually a three months period or 20% of total training time). Those students who pass these cycles get the diploma of Technician of the corresponding profession (ISCED- 3B).
- The so-called Advanced Vocational Training Cycles (“Ciclos Formativos de Grado Superior” in Spanish). For accessing these cycles, students require to have the Spanish Baccalaureate as the principal entry requirement (usually when they are 18 years old). These Advanced level cycles have also a modular structure which includes theoretical and practical contents, of both instrumental subjects and vocational modules, corresponding to the different professional fields. This modular structure, of a total time extension of 2,000 hours in two academic years, includes also a compulsory traineeship period at workplace (Formación en centros de trabajo - FCT) that takes place in a company (usually a three months period or 20% of total training time). Students who successfully complete their studies receive the Diploma of Higher Technician/Advanced Vocational diploma of the corresponding profession (ISCED- 5B), enabling them to register subsequently for university studies in areas related to that Diploma.

It is important to stress that the social image of VET has significantly improved in the last decade in Spain, in the sense that it is becoming an increasingly popular option after completing compulsory secondary education (at the age of 16). Just to give some data, the total number of students registered in VET courses was 661,047 in the course 2012-2013, where 332,495 were in the so-called Intermediate VET Cycles (“Ciclos Formativos de Grado Medio” in Spanish) and 328,552 students in the so called Higher VET Cycles (“Ciclos Formativos de Grado Superior” in Spanish). Both figures represent an increase of 38.8% and 47.4% in comparison to the academic year 2007-2008, respectively.

The new Spanish „Dual Vocational System“

Recently in time, and specifically since 2012, there is a new type of VET provision called *Dual Vocational Training*, regulated by the Royal Decree 1529/2012 of 8th November and the Order ESS/2518/2013 of 26th December. This “Dual Vocational Training” is intended to complement the existing supply of VET studies under the Intermediate and Advanced

Vocational Training Cycles. In this sense, this “Dual Vocational Training” provision is intended to cover both ISCED- 3B and ISCED- 5B qualification levels.

Participation in dual VET has increased since the initial course 2012-2013, although it remains limited in terms of scale. Thus, data provided by the Autonomous Communities show that the number of vocational training centres involved in dual VET projects has increased from 172 in 2012- 2013 to 726 in 2014-2015. The most popular professional profiles for these experiences are taking place in several manufacturing-related sectors, particularly Mechanical Manufacture, Electricity and Electronics and Installation and Maintenance Services. Most of the VET programmes (78%) are aimed at awarding a higher level VET diploma, whereas only 28% of the projects are related with intermediate level VET. The number of companies involved in dual VET projects has also increased from 513 companies in the year 2012-2013 to 4,826 in 2014-2015. Finally, the number of students enrolled in dual VET project in 2012-2013 was 4,292, whereas in 2014-2015 there has also been an increase up to 16,129 students.

The Spanish University Dual System

In comparison with the existing situation in other European countries (for instance France and specially Germany), the experience of Dual Systems in the Spanish Tertiary Education sector is not very much developed, with the existence of a very limited number of experiences (ACUP, 2014).

In this sense, the most significant experience in Spain is given by the Engineering School of the Institute of Machine Tool Elgoibar) "Instituto Máquina Herramienta", IMH), currently attached member of the University of the Basque Country (EHU-UPV). In this sense, the IMH initiated in the academic year 2012-2013 the so-called University Degree in Innovation Engineering in Processes and Products (“Grado de Ingeniería en Innovación de Procesos y Productos” in Spanish), to be developed in dual system and with the authorisation of the Spanish and Basque Government. So far, this is the only University degree in dual modality currently recognised by the National Agency of Quality and Accreditation Evaluation (“Agencia Nacional de Evaluación de la Calidad y Acreditación”, ANECA in Spanish). This example is explained in further detail in next sections.

In addition to the experience of IMH, there are some isolated experiences of Dual University Education, although not so much developed as the IMH case. Examples include, for instance, an experience developed by the University of Lleida (Catalonia) in the Primary Education Degree or a pilot project initiated by the University of Burgos in collaboration with the German “Benteler” company and intended to support a dual path for a selected number of six students in Engineering and 2 students in Administration.

2.6 Summary of conclusions from VET system and Lifelong Learning policy

Though in the past the VET systems were quite distinct, recently there occurred changes by adapting certain forms of VET provision, like the “entrance” of the dual system typical for Germany since decades into Spanish contexts. Overall, there seems to be a shift towards work-based learning or the stronger integration of practice into VET learning.

But still there are differences, one is the degree of permeable pathways from secondary VET programmes via post-secondary and short-cycle programmes towards tertiary professional education; in Latvia e.g. towards a doctor’s degree.

3. Partnerships for Lifelong Learning

3.1 Definitions

The project relates to two different models of cooperation between actors in vocational and higher education (institutions of technical and vocational education and training, companies providing in-company training, universities or polytechnics, chambers etc.) aiming at providing consistent and permeable educational pathways from initial training up to higher educational levels. These cooperation schemes can be termed “partnerships for lifelong learning” and divided into four major groups, two of which, namely integrated learning opportunities and bridging programmes, are the subject of this chapter. In the following sub-chapters examples of LLL partnerships in the participating countries will be presented.

3.2 Example for LLL partnerships in Ireland

In order to explain how bridging programmes that can be found in Ireland operate, this chapter will illustrate one such partnership between Further and Continuing Vocational Education and Training (F/VET, including CVET and IVET) and Higher Education (HE).

This partnership example is related to the Foundation Programme in Education and Training (aka Non-Award Visitor Education and Training, NAVET) programme at Dublin City University (DCU). This learning opportunity is based on a collaboration between DCU, an institution of higher education operating at levels 7 to 10 of the Irish National Framework of Qualifications (NFQ), which correspond to EQF levels 6 to 8, and Whitehall College of Further Education, a provider of further and vocational education and training whose modules and programmes range from NFQ level 4 to 6 (EQF 3 to 5). The partnership can be regarded as a ‘bridging programme’ in which students of Whitehall College complete a full NFQ level 5 (EQF 4) award with a total of eight modules in the area of education and training. Two of the eight modules are taken at Dublin City University and have NFQ level 8 (EQF level 6). After completing the NAVET course, graduates may be admitted to the B.Sc. course in education and training at DCU and gain exemption from the two modules in question.

In DCU the existing NFQ level 8 (EQF 6) Bachelor of Science Honours Degree is a three/four-year programme. The one-year NAVET programme offers modules at QQI Level 5, including two modules, which form part of the undergraduate BSc Honours degree in Education and Training at NFQ level 8. As a graduate of the Foundation course, students may be considered for admission to the Year one of the B.Sc. in Education and Training course, and gain modular exemption and 10 ECTS reductions during their first year of study.

Employment opportunities are to be found in the adult and further education and training sector as well as the growing community sector, Trade unions and voluntary bodies which are involved in Education and Training. The BSc Honours degree in Education and Training is recognised by the Teaching Council of Ireland as a Teacher Education qualification for those wishing to register as FE (VET) teachers in Ireland. It is the only degree of its kind in Ireland as it is a concurrent teacher education qualification.

The partnership enabled the programmed to allow progression on three levels:

- Access: learners who have achieved certain learning outcomes are formally eligible for entry into the new learning opportunity concerned and these are based upon agreed learning outcomes in a module format representing 10 ECTS in total;
- Admission: learners with certain learning outcomes are eligible if combined with their host F/VET partners institution modules results at distinctions in 5 names NFQ level 5 (EQF 4) modules related to the QQI (Formerly FETAC) qualification:
- Exemption: learners who meet the first two criteria are allowed into year one of the DCU degree programme with modular exemptions up to 10 ECTS.

The actors involved are contextualised in a local scenario. Both partners are geographically close to each other, which allows the partnership to be seen as community engagement from the University perspective. DCU and Whitehall College have often stated publicly that they believe this kind of partnerships does indeed contribute to society's overall needs. It offers learners a second-chance at access to higher education. The Irish government's paper in 2000 'Learning for Life' stated that there should be a 'systematic approach requiring that educational policies be designed to embrace the lifecycle, (and) reflect the multiplicity of sites, both formal and informal, in which learning can take place.

The unique arrangement allows for the host organisation (DCU) to receive a set of learner from the partner organisation (Whitehall College of Further Education) studying a range of NFQ Level 5 (EQF 4) modules to access the institution a weekly basis to participate and study 2 NFQ level 8 (EQF 6) modules on DCU's main campus. Though the primary venue of study is Whitehall College of Further Education. The partnership is autonomous and there is no legislative or regulatory body responsible for this arrangement. Accountability rests with the respective governing bodies and academic councils within each institution.

In order for applicants to gain entry to the Whitehall College of Further Education/ DCU NAVET programme, both institutions are represented at a set of interviews where

consideration is also given to RPL purely for entry purposes. No Accreditation of Prior Learning (APL) is offered or given.

The primary outcome and benefit for the learners is that of choice of pathways. Those learners who successfully complete the course gain automatic entry into the HEI (DCU). In their first year of fulltime study in the BSc in Education & Training (the link Programme) those NAVET students only attend and complete 50 ECTS of study rather than the normal 60 ECTS as exemptions are granted for the 2 x 5 ECTS modules attained within the NAVET programme the previous year. The learners suggest that the benefit is the 'soft-landing' in to higher education jumping from a NQF level 5 (EQF 4) to a level 8 degree.

3.3 Examples for LLL partnerships in Germany

In the following both types of LLL partnerships that can be found in Germany will be presented. We begin with programmes offering 'integrated learning opportunities', labelled as *Dual Study Programmes*.

Dual study programmes, combining vocational education and training on the one hand and a tertiary education on the other are becoming more and more popular in Germany.

According to the BIBB database Ausbildungplus (www.ausbildungplus.de) Germany has counted more than 2000 offers listed as Dual Study Programmes in 2015.

These offers can be split up into

- Study programmes with integrated vocational education and training (933 offers)
- Study programmes with integrated practical phases (like internships) (764 offers)
- Study programmes for further qualification full-time or part-time (i.e. extra-occupational) (757 offers)

There was a considerable increase in the number of study programmes of all kinds, with regard to double qualifying programmes (study programmes with integrated vocational education and training as listed under 1)) the number of offers has doubled within the past two years. Study programmes including integrated practical phases but not leading to a double qualification have also considerably increased with a number of 508 offers in 2013 to a total of 764 in 2015.

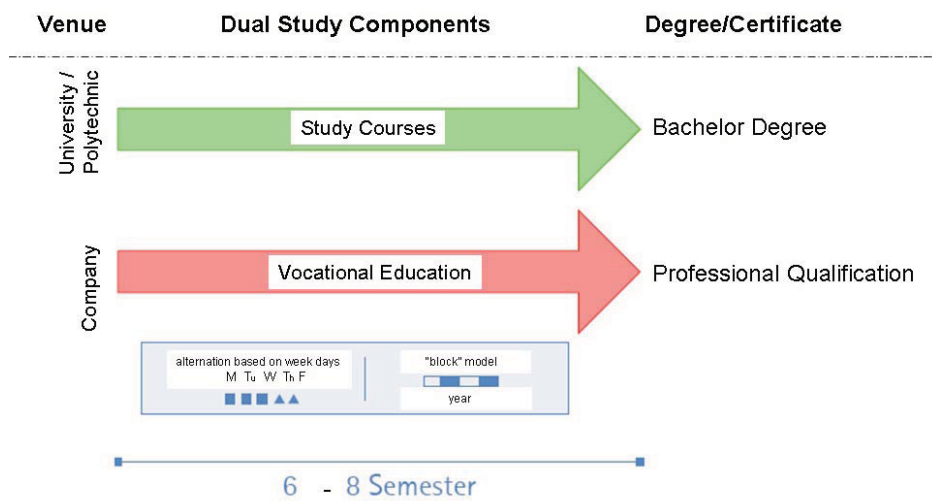
Most of these programmes were offered at Universities of Applied Sciences („Fachhochschulen“), or at the “Duale Hochschule Baden-Württemberg”, but also so-called vocational academies („Berufsakademien“) and some universities play a role.

With regard to the involvement of practical training providers (companies offering in-company training or internships within a dual study programme) the number of companies involved in such programmes have as well increased. According to the AusbildungsPlus database, a total of 41.466 cooperation partners were listed as practical training providers. Compared to the data provided for the year 2004, this is an increase of about 130%.

Based on the information provided at the ausbildungplus database (Ausbildungsplus 2014), the biggest number of dual study programmes have been developed in the followings subjects:

- Economics: 487 programmes
- Machine construction and process engineering: 232 programmes
- Information technology: 182 programmes
- Health care, social studies and education: 158 programmes
- Electro technology: 127 programmes

As for the programme structure, there is no uniform pattern. The following fig. illustrates the two major components of an integrated dual VET and study programme leading to a Bachelor degree and a vocational qualification. The vocational part of the course can be offered in a block model or alternates based on week days.



based on DIHK: Duales Studium. Ein Wegweiser. <http://www.dihk.de/themenfelder/aus-und-weiterbildung/schule-hochschule/dual/duales-studium/aufbau> (accessed 11.12.2015)

Fig. 2: Components of dual study programmes leading to a double qualification

'Bridging programmes'

Recognition of prior learning is a prerequisite for bridging programmes, where – for example – access to a further study programme can be provided at an advanced level. In the context of courses which are run in cooperation or with regard to training and degree programmes, which build upon each other directly (i.e. in health care or social sciences) a mutual recognition of prior learning (in form of credit points) is already being practiced. Whereas in the vast majority, recognition and credit transfer is rather based on individual review processes. "Blanket" recognition and credit transfer remains the exemption. All in all, it still seems to be evident, that notably in the domain of engineering only very few universities follow a systematic and transparent system to recognise prior learning. On the contrary it may rather be the case that informal mechanisms are used in practice.

The most important steps taken by the Federal Ministry of Education and Research (BMBF) in order to support the introduction of recognition and validation mechanisms were to launch projects supported under the umbrella of the so-called ANKOM and the DECVET initiatives.

Within the two phases of the German ANKOM, 2005 – 2008 and 2011 – 2014 validation and recognition mechanisms of learning outcomes from vocational to higher education have been developed. In the first phase 11 projects on recognition and validation prior vocational qualifications were launched, 4 of which were in the domain of engineering or information technology. In the second phase the twenty participating projects were developing information and counselling concepts, comprehensive mentoring and coaching offers as well as part-time and job-integrated study programmes for vocationally qualified learners/students.

The documentation of material elaborated within the frame of the ANKOM projects provides a valuable source of information and guidance. It offers among others a quality guideline for measures to validate vocational qualifications for higher education in detailed steps (description of learning results, equivalence tests, and the design of recognition procedures). The elaborated guidelines not only include blanket recognition but also methods for the individual recognition of informally acquired competencies.

3.4 Examples for LLL partnerships in Greece

Because of the lack of evidence in the Greek bibliography about the specific two core types of partnership, namely integrated learning opportunities and bridging programmes, this section about LLL partnerships, their management structures and the general performance is not describing practical examples. But rather, in accordance with the P4LLL project's understanding of the term 'partnership' this sub-chapter on Greek cases refers to the cooperation of education and training stakeholders such as VET providers, higher education institutions and enterprises with a view to offering new or alternative learning pathway from initial training up to higher education.

In Greece, Hellenic Open University, the only higher educational institution in the country offering both undergraduate and postgraduate educational programmes, uses validation mechanisms, such as e-Jobs Observatory through the European research projects eVirtue and the ProInterNet (Pin). But the aim of this project is to study the organisational models of integrated learning opportunities and bridging programmes and not the validation mechanisms. In Greek bibliography there are barely relevant publications, policy documents, reports or statistics about such partnerships.

More specifically, there is a lot of evidence about the LLL policy and activities presented, which are implemented by the following actors:

- General Secretariat for Lifelong Learning (GSLL) which acts as the executive authority for Lifelong Learning in Greece.
- Regional LLL department units (Attica, Central Greece, Central Macedonia, East Macedonia and Thrace, Western Greece, Western Macedonia, Epirus, Thessaly, Ionian Islands, Crete, Peloponnese).
- Municipal LLL department units (KDVM), which prepares, within the context of its local development programme, the local lifelong learning programme, on the basis

of the National Lifelong Learning Programme. The local lifelong learning programme especially includes, investments, programmes or various general adult education activities and more generally actions for implementing the lifelong learning public policy at a local level, such as:

- (i) The activities for connecting the schools to society;
 - (ii) The activities for training adults, especially in the sectors of public health, culture, sports, the environment, the social integration of immigrants and the activities for training the new generation and the elderly, as well as the creation of schools for parents; and
 - (iii) The activities for promoting enterprise and innovation through the connection with the local economy.
- Programmes in post-secondary VET private schools (IEK) like AKMI, DELTA, XINI, VERGI which cooperate with a network of enterprises from the labour market and which give the opportunity to their students to fulfil their undergraduate studies to a foreign University, mainly in Great Britain, since these private IEKs cooperate with specific foreign University for this specific reason. But there is almost no evidence about this kind of bridging programme in greek bibliography. The forthcoming guided interviews with experts and practitioners may enlighten this kind of cooperation.
 - Ministry of Tourism cooperates with IEK of Peloponnese and the Higher School of Pedagogical and Technological Education (ASPETE), which provides concurrent technological and pedagogical education and training at tertiary level.
 - National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP) operates under the supervision of the Minister of Education & Religious Affairs, Culture & Sports and is seated in Athens. It has derived from the amalgamation of three national bodies, all under the supervision of the same Ministry: the National Centre for the Accreditation of Lifelong Learning Providers (EKEPIS), the National Organisation for the Certification of Qualifications (EOPP) & the National Centre for Vocational Guidance (EKEP). Its mission is geared towards linking VET with labour market needs, upgrading people's occupational qualifications, reinforcing their employment perspectives and strengthening social cohesion. In this direction, EOPPEP accredits and licenses providers of non-formal education encompassing initial and continuing vocational training upon legislated criteria for infrastructure, trainers & curricula, as well as enacted specifications for the organisation and operation of the provider, employed staff and provided services.

3.5 Examples for LLL partnerships in Latvia

According to the Latvian concept, lifelong learning comprises informal learning and formal education. In this report we will focus more on formal education because of legal recognition of education documents and permeability possibilities.

Partnerships for *integrated learning opportunities* can be found in work based learning when in collaboration with companies theoretical and practical training are provided in the real work environment. In work based learning individual plans according to curricula are made for each student (or group) according company's possibilities to provide theoretical training and practical training within the company. Work based learning is provided in initial vocational education (Latvian professional qualification level 2 and 3) in all economic spheres and provides chances to continue their education (see more information on vocational education, vocational secondary education, and inter alia, short-cycle programs).

In 2015 56 modular vocational education programs are established by defining curricula into modules which could facilitate to allocate parts of curricula to company and to ensure more and higher quality partnerships of work based learning. The main organizer of work based learning is VET school in collaboration with companies. In case of building new curriculum sector association is involved by setting requirements for qualification within occupational standards.

The second type of partnerships (*bridging programmes*) can be found *in higher education level* because of legislation which allows bridging the higher education programs. On 10 January 2012, the CoM approved Regulations No.36 "Regulations of recognizing the learning outcomes acquired in the previous education and professional experience" that were issued in accordance with the Law on Higher Education Institutions (1995, amendments in force since 01.08.2011). These Regulations determine the procedures for the assessment and recognition of learning outcomes obtained during the previous education or professional experience, as well as criteria for recognition. In the case of recognition, the Commission of Learning Outcomes Recognition established at the relevant higher education institution or college awards a certain volume of credit points to the applicant. The learning outcomes acquired in the previous education may be recognized if they correspond to higher education stage and have been achieved through: a continuing vocational education programme, which leads to the Latvian professional qualification level 4 or 5; an individual course of a study programme or study module, which an applicant has acquired as a listener; a part of a study programme; or other types of education mastered outside formal education, except study programmes preparing for the regulated professions. In most cases it means that colleges have cooperation agreements with universities that students can continue their studies at next level (Latvian qualification 4 can access qualification level 5) or students have a chance to move between the universities in related qualifications within the same level.

Besides the integrated and bridging programmes there are various partnership programmes implemented in Latvia which are intended to contribute to training and thus lifelong learning. ESF Program Support for training organized in partnerships is administered by the Investment and Development Agency of Latvia (LIAA). Financial grants are available within the EU Structural Funds program, "Support for employees' training in partnership" (2010-2015). Training is organized in partnerships with the sector

associations. Employers contact the corresponding industry associations to register for available trainings and to arrange customized training. There are 15 participating industry associations, also, Association of Mechanical Engineering and Metalworking Industries of Latvia, The association of Latvian chemical and pharmaceutical industry, Association of Textile and Clothing industry and others.

On 28 December 2010 an agreement Nr. L-APA-10-0027 was signed between Association of Mechanical Engineering and Metalworking Industries of Latvia and Latvian Investment and Development Agency on implementation of project "Training of specialists in metalworking sector". The project was implemented till 01.06.2015. The general aim of the project is to improve qualification and facilitate life-long learning of the human resources in various fields that are important for metalworking and mechanical engineering sector. The project is open for new participants. Over 50 companies have joined the project and implementing training programs in such areas as welding, CNC machining and other special fields, as well as disciplines like project management, IT and languages.

3.6 Examples for LLL partnerships in Spain

In Spain there are both types of partnerships being implemented – integrated and bridging programmes. In the following two selected examples are presented.

The so-called University Degree in “Innovation Engineering in Processes and Products” is an *integrated learning programme* and is offered since year 2012 by the Engineering University School of the Institute of Machine Tool Elgoibar (IMH), currently attached member of the University of the Basque Country (EHU-UPV). This degree is fully adapted to the requirements of the Spanish University degrees system, so it is a recognised degree both by the Spanish and the Basque Government. Also, and as already explained, this is the only University degree in dual modality currently recognised by the National Agency of Quality and Accreditation Evaluation (“Agencia Nacional de Evaluación de la Calidad y Acreditación”, ANECA in Spanish).

Basically, this University Degree combines academic classroom-based education in the Engineering School with work experience in a company. In this sense, the IMH Dual Engineering course enables students to gain first-hand experience of the day-to-day working of a company, and to channel their studies to meet their company’s specific needs. This methodology facilitates the development of professionals who are combine theoretical competences in technical and management areas with a thorough knowledge of the daily working of enterprises and their requirements.

Some additional characteristics of the University Degree:

- The course lasts 4 years, and it is offered to 50 students yearly.
- The typical training path includes 2 days a week at the IMH and the other 3 days in the company, although the company’s working calendar determines the student’s timetable.

- Students receive a salary in compensation for their part-time work in the company.
- The Engineering University School searches for participating companies in a personalised manner, in accordance with the student's profile and background.
- The Engineering University School has collaborated so far with more than 100 companies, including companies in different sectors (machine tool, machine tool ancillary, ancillary, automotive, aeronautic, renewable energies, etc).
- The curriculum of the students admitted is sent to different companies according to the profile that has been asked for. Subsequently, the candidates are interviewed by the companies. The process finishes when the student and the company sign a student-company agreement.
- The terms of this student-company agreement can have two different modalities:
 - For students accessing from High-School: During the first two years of dual training, the contract will be "part-time contract linked to training", provided that the legal conditions for the realization of this type of contract. From the third year, the contract will have to be negotiated with the company.
 - For students accessing from Vocational Curriculum Training: During the first two years of dual training, the contract will be "part-time practice", provided that the legal conditions for the realization of this type of contract. From the third year, the contract will have to be negotiated with the company.
 - In both cases: During the first year collaboration agreement between the company and the university; afterwards labour contract will be specified.
- The teaching team is made up mainly by external teachers and specialists from the companies. Each student has his/her own tutor both in the company and at the IMH.
- Vehicular languages employed are Basque, Spanish and English.
- The third year of IMH Dual Engineering includes a work experience period lasting between 10 and 12 weeks in a foreign company abroad. Through this stage, they acquire labour and cultural experience in a different environment.

The most relevant example of *bridging programmes* in Spain is given by the so-called National System of Qualifications and Vocational Education and Training (Sistema Nacional de Cualificaciones y Formación Profesional).

In this sense, the Law 5/2002 of 19th June of Qualifications and Vocational and Education Training sets up the so-called National System for Qualifications and Vocational Educational and Training (“Sistema Nacional de Cualificaciones y Formación Profesional” in Spanish, SNCFP). This National System can be defined as the set of rules and procedures to:

- Promote and develop the integration of vocational training offers.

- Promote the evaluation and accreditation of the relevant professional skills, to promote professional and social development of individuals and the needs of the productive system.
- Regulate and organise what a qualification is, how it is identified and defined, how it is acquired and how it is evaluated, recognized and accredited.

As it can be seen, this SNCFP plays an essential role in the general organisation of the Spanish VET system, in the sense that it facilitates, amongst other elements, the mutual recognition of learning outcomes amongst different agents, facilitating at the same time the matching of supply and demand in the labour market and the extension of lifelong learning beyond the traditional educational period.

The main tool of this SNCFP is the so-called National Catalogue of Professional Qualifications and its corresponding Modular Catalogue of Vocational Education and Training. In this sense, and to start with the National Catalogue of Professional Qualifications, this Catalogue comprises so far 664 professional qualifications in the 26 professional branches identified for Spain. Each professional qualification is a set of professional competences that can be acquired through vocational modules as well as through work experience. Every professional qualification consists of competence units (“Unidad de Competencia”, UC in Spanish), where a competence unit (UC) is the minimum set of professional competences which can be partially recognized and accredited. Every competence unit (UC) is linked to a learning module (“Módulo Formativo” –MF in Spanish) which describes the necessary learning to acquire that competence unit (UC), and has a standardized structure which includes the identification and specifications of that particular learning process.

Subsequently, the Spanish VET Modular Catalogue consists of all the learning modules, where each module is associated with one of the competence units which form a professional qualification.

In this way, the Modular and competence structure of the Spanish VET system provides a common reference for the integration of the whole Spanish VET offer, facilitating not only the design of training but also the evaluation and accreditation of work experience and non-formal or informal learning, the mutual recognition of learning outcomes amongst different agents and, ultimately, the promotion of lifelong learning.

The Spanish National Institute of Qualifications, known in Spanish as INCUAL, is responsible for defining, drawing up and updating the National Catalogue of Professional Qualifications and the corresponding Modular Catalogue of VET.

3.7 Comparative synopsis of country examples for LLL partnerships

With Germany and Spain there are two countries represented in the project which address both fields of LLL partnerships, integrated learning programmes and bridging programmes, very similarly. The integrated learning programmes are preferably dual study programmes

while the bridging programmes focus on accreditation of prior learning (or learning in other contexts). As in many cases of bridging programmes the proceeding from vocational to tertiary education is concerned, the accreditation of experience-based learning or learning in practice is the crucial challenge to be solved. Though there are always national pathways and institutional settings that influence the modes and types of accreditation, we can find two major pathways of accreditation: individual and blanket accreditation – the latter very often supplements the former. The bridging programme reported from Latvia shows clear regulations for accrediting learning outcomes from previous (professional, continuing vocational education) experiences or programmes. And it connects vocational with higher education. The Latvian example for a partnerships for integrated learning seems to have weak links with higher education. Instead there is a strong theory-practice integration (in the given cases labelled “work-based training” preferably on VET level).

The Irish example addresses a bridging programme with elaborated pathways from further education to a Higher Education Institute (HEI). As pointed out, the advantage for the learners is to gain automatic entry into the HEI after successfully complete a NAVET course (exemption).

The given Greek examples comprise some kind of bi-lateral bridging programmes between private VET schools and foreign universities, and in the field of integrated programmes cooperations between VET schools and companies are dominating with the purpose to integrate theory and practice during the VET programmes.

The following final chapter will assess the general performance of the sketched programmes and give hints on challenges arising.

4. General challenges and prospects

In the following the challenges and prospects for partnerships in LLL will be outlined. Since the national VET systems as well as the specific priorities and measures in lifelong learning are different, the following statements are briefly presented country by country.

In *Germany* with its huge number of dual study programmes a direct comparison between (traditional) dual vocational pathways and dual study programmes with a smaller part of in-company training but leading to the same qualification may cause some difficulties as such development might lead to “1st and 2nd class certificates”. (Depending on the viewpoint of the learners enrolled in either these programmes.) Traditional apprentices, who work longer hours in a company may find their degree inferior because other learners are students and will not only receive a vocational qualification but also a Bachelor degree. Such developments might undermine dual vocational education and training and *may lead to a further decline in the number of apprentices in favour of dual study programme learners.*

A further challenge might be the very fast increase in the number of offers in dual study programmes in recent years. The creation of new and unknown study programmes which are not so easy to compare (content, aims, etc.) lead to a new “jungle” of opportunities that

both sides – at first the learners and later their potential employers – need to understand. A reduction – not in numbers of offers – but maybe in their variety might be necessary in the longer term. This depends on the perception and acceptance of the programme offers in the long run.

With regard to the question of bridging programmes, there does not seem to be an equivalent development, i.e. even though there is a political will to support bridging programmes of all kinds based on a recognition of prior learning and validation mechanisms, the efforts to be taken in this domain seem a bit more challenging. As blanket recognition models can never capture all competences, skills and knowledge of an individual, it often remains a very time consuming procedure to secure well-functioning instruments for the recognition of prior learning. Individual accreditation processes often mean extra work and time. There is a consensus among the VET stakeholders that recognition of prior learning within bridging programmes may only pay off if many applicants can be expected.

Partnerships for lifelong learning in *Ireland*, as mentioned before, predominantly relate to the progression and pathways between Further and Continuing Vocational Education and Training (F/VET) and Higher Education (HE) and/or the world of work. When considering F/VET to HE progression it turns out that stakeholders in the educational field assume that the traditional educational progression route deems that students who are in further education are students who did not achieve an adequate standard to progress directly into HE. This perception overvalues higher education, undervalues further education and training, and suggests that there is only one educational route. This perception suggests that F/VET is an unwelcome diversion in the race for highly valued HEI places. This perception validates that HE is the valid qualification in education for life. In this way it negates the value of learning that happens in F/VET.

Consequently, F/VET needs to find its own voice and not be determined by the traditional matriculation exam, the Leaving Certificate. While there is concern about the lack of transparency and permeability in accessing HE from the F/VET due to the multiplicity of individual partnerships, it is felt that any new system proposed should not disadvantage learners further. The emerging evidence is suggesting that F/VET graduates progress very well into HE because they are more mature and able to perform as well as, or better than, traditional mainstream students.

The *Spanish* VET system is characterised by a high degree of openness and flexibility so to make easier the permeability and mobility between the different existing VET subsystems (i.e. the VET Subsystem for Employment and the VET Subsystem for Education). Thus, and within the framework of lifelong training and learning, the passage from training to employment and vice-versa allows young people having dropped out of education to continue and complete their studies, and adults to pursue their lifelong learning. To give another example, a recent reform has allowed that graduates of intermediate VET degrees (with VET diplomas) can obtain the Spanish Baccalaureate to

continue further their studies in just one year (when in the past they had to spend another two years studying before obtaining the Spanish Baccalaureate).

When considering the Spanish VET system as such, there are a number of challenges that might have an impact on its future development:

- Keeping vocational schools and their staff up-to-date;
- Ensuring students sustain and develop core academic skills;
- Modernising career guidance in the general Spanish education system;
- Furthering the development of workplace learning.

The recently introduced dual VET system addresses these issues, but the challenges and potentials remain to be assessed in the future.

As *Latvia* prioritizes, among others, work-based learning as a new type of vocational education and training and by doing this dealing with the challenge of improving the linkage of skills and competence acquisition (in the VET system) with the needs of the labour market, its current and near-future VET policy focusses on implementing short-cycle programmes which will increase the number of partnerships in VET. Additionally, programmes for unemployed persons are renewed and improved on a yearly basis, therefore providing new partnerships for companies to attract new employees.

Furthermore, Latvian VET policy makers and stakeholders perceive the ESF programme “Support for training organized in partnership” (planning period till 2020) as well as the Erasmus+ programme as an opportunity to implement new types of partnerships for lifelong learning, inter alia, internationally.

Current challenges and potentials of LLL in *Greece* are strongly influenced by the ongoing double crises: debt crisis and economic recession. These crises have revealed structural weaknesses in Greek economic and social infrastructure, one of which was the divide between its education and training system and the labour market. Besides, the long-term poor image of the VET sector in the country is a fact. In particular, the greater tendency of young Greek students to pursue education that is mostly of an academic rather than of a technical orientation has been linked to the poor infrastructure of the vocational education and training stream in the country, to the fact that it is primarily school-based and, generally, to the poor employment and income prospects of graduates from technical schools. In addition, comparable data from the European Household Surveys (ECHP) showed that Greece had one of the highest “overeducation” rates amongst EU member states in the 1990s. Furthermore the relation between higher education and the labour market in Greece is identified as the “weakest link”. To improve the general economic and the particular VET situation, legislative measures and action plans to strengthen the work-based components and to better link education with work, to upgrade VET and to boost apprenticeships have been taken.

With special focus on LLL the following emerging challenges can be summarized:

- increase of the percentage of the population aged 24-65 participating in LLL;
- decrease of the percentage of 16-64 year old early education leavers;

- interministerial cooperation for the coordination on LLL matters at national level;
- validation and accreditation of LLL service providers, registry of providers in the NNLL and their connection to the LLL portal;
- consideration of complementarity and synergies among providers with view to upgrading quality and saving resources in LLL
- strategic restructuring of the LLL services in terms of their field, their content, tools, methods, procedures and their beneficiaries, in order for those services to be
 - of high quality,
 - adapted to the citizens' needs and interests,
 - easily and equally accessible to all,
 - directly connected to the labor market and to society,
 - part of the broader education and training framework, thus enabling mobility.