



# **Study on higher Vocational Education and Training in the EU**

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# **Study on higher Vocational Education and Training in the EU**

Final Report

Directorate-General for Employment, Social Affairs and Inclusion

February, 2016

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## **Executive summary**

### **How can Higher Vocational Education and Training be defined and how is it embedded in the national qualification landscape?**

There is no consensus on the definition of higher Vocational Education and Training (VET) so far. Most countries have some forms of higher VET but the types of programmes and qualifications covered differ greatly. Furthermore, even within countries there is sometimes disagreement over what is actually understood as higher VET. This study proposed two approaches to delimitating higher VET: a broader and a narrow one. In both cases only qualifications that are aligned with national qualifications framework (NQF) levels that are equivalent to the EQF level 5 and above were considered as higher VET.

According to the broad definition of higher VET, this field covers all professional qualifications at EQF level 5 and above, including those covered by the European Higher Education Area (EHEA). This means mostly short cycle, Professional Bachelor and Master degrees as well as apprenticeships at these levels.

According to the more narrow definition, higher VET covers only those professional qualifications that are fully outside the EHEA. This concerns both qualifications from the formal education and training system but also those that are awarded outside it.

There is also no consensus about the extent to which higher education qualifications should be seen as higher VET and whether higher VET should be defined in a broad or narrow manner.

One of the challenges faced by this study is that many qualifications from outside the formal education and training system are not yet aligned with NQFs. Subsequently it is not possible to judge whether these qualifications will be located at EQF level 5 or above and therefore whether they are indeed 'higher'. The analysis of higher VET is likely to differ to this initial scoping work in several years' time when more such qualifications will be allocated to levels in NQFs.

For the moment, the study found that when higher VET qualifications are already aligned with NQF levels, they are found at levels corresponding to EQF level 5 and 6 and to a much lesser extent to levels 7 and 8.

Depending on the countries, the relationship between higher VET and the rest of education and training varies greatly:

- Some post-secondary non-tertiary higher VET programmes and qualifications are delivered by secondary schools and are designed as follow-up programmes or re-qualification programmes;
- Other higher VET qualifications are actually formally part of higher education (covered by EHEA). They follow the structure of the Bologna cycles but they have a clear professional focus and often they are also called 'Professional Bachelor' or 'Professional Master'.
- A smaller number of countries also have formal continuous VET qualifications at higher levels designed mostly for re-qualification, up-skilling and re-skilling.
- It can be expected that many countries have non-formal education and training programmes and related qualifications that could be considered as higher VET but which are not yet aligned to any NQF levels.

In a similar way, higher VET is sometimes part of legal frameworks for higher education, adult learning or it has a specific legal framework.

### **What are the main features of higher VET programmes/qualifications in the countries analysed?**

The following main characteristics of higher VET have been identified based on country-level research:

- In most cases the qualifications identified are awarded by education and training providers. This is mostly the case for those qualifications that are part of the higher education area. Other types of qualifications can be awarded by a ministry (some formal CVET qualifications) or representatives of employers or of sectors (for example Master craftsperson qualifications);
- Higher VET programmes in nearly all cases analysed receive public funding. However, many are also privately co-funded by individuals or to a lesser extent by companies;
- Most of the non-higher education higher VET programmes follow an accreditation scheme. A minority of cases analysed follow other quality assurance arrangements. In all programmes analysed some form of quality assurance exists;
- Many institutions providing higher VET also provide other types of education and training programmes. Therefore, higher VET does not have a shared identity with a certain type of providers;
- The training programmes/qualifications are in most cases designed by the providers, often in close cooperation with business representatives. The programmes are linked to occupational profiles for those qualifications that are outside higher education;
- The main purpose of the programmes/qualifications analysed is preparation for entry to employment (entry qualifications) together with upskilling and re-skilling (top-up qualifications);
- Many of the programmes analysed are also offered as part-time studies. The majority integrate work-based learning;
- Teachers and trainers are more often required to have professional experience than in other programmes at these levels. In particular, the teaching is more often delivered by practitioners than in higher education.

The main types of higher VET programmes/qualifications are:

- If taking the **narrow understanding** of higher VET:
  - Post-secondary programmes outside higher education (EHEA) at ISCED2011 levels 4 or 5. These qualifications or programmes have various names and durations but they are very clearly VET focused and they are often aimed at upper-secondary graduates as first vocational qualification or an additional vocational qualification;
  - Qualifications acquired based on the recognition of non-formal and informal learning (competence tests) which can also, in some cases, be prepared through a programme. This is typically the case of the Master craftsperson qualifications but also other continuous VET qualifications;
  - Various CVET programmes/qualifications outside the formal system.
- If taking the **broad understanding** of higher VET, in addition to those mentioned above:
  - Short cycle higher education;
  - Professional Bachelor and Professional Master degrees;
  - Dual studies (apprenticeships or alternance) at Bachelor or Master level (or even at Doctoral level)

**What are the main trends related to demand, pathways, prevailing sectors, and outcomes of higher VET?**

In 2013, there were over 4.8 million students enrolled in vocationally or professionally oriented programmes according to the ICSED 2011 classification at ISCED levels 4, 5, 6 and 7. In reality, there are likely to be even more learners in this field because:

- ICSED only covers part of programmes and qualifications that can be considered as higher VET;
- Some countries which have binary higher education programmes have decided not to differentiate the data by programme orientation;
- A few others have designated Professional Bachelor degrees as academic.

According to the national statistics on enrolment in identified programmes higher VET is:

- Growing in Austria, Belgium-FR and Belgium-NL; Denmark, Germany, Spain, France, Ireland, Italy, Luxembourg, Malta, Netherlands, Romania;
- Stable in Czech Republic, Greece, Finland, Lithuania, Latvia, United Kingdom; and
- Decreasing in Bulgaria, Estonia, Croatia, Hungary, Portugal, Poland, Sweden, Slovenia, Slovakia.

Most students in vocational and professional programmes at higher levels are enrolled in fields of business and administration and health care. However there is a variety of sectors covered by higher VET and again there are important national differences.

Higher VET attracts a significant share of students who are older than 25 years (25% at ISCED level 4 and 31% at ISCED level 5). The share of students who are above 35 years old is also quite high. In some countries, mature students are the majority of participants. This means that many higher VET programmes attract people who seek a re-qualification or to increase their qualifications.

There is little evidence about the outcomes of higher VET programmes but where these exist, the studies show positive results. Most countries have very little hard data on this field of education and training. In particular there is very little data on the programmes and qualifications outside the higher education area and formal post-secondary VET.

The main trends influencing the evolution of higher VET are:

- Clarification of the position of higher VET in the rest of the education system. The development of NQFs led to discussions about the relationship between higher VET and other qualifications, in particular those from higher education;
- Growing demand from the side of learners and employers linked to mostly positive employment prospects though the trend here is not unanimous;
- Development of work-based learning programmes at higher levels. This is linked to the growing recognition of the benefits of work-based learning for employability but also the development of professional identity.

The main challenges for further development of higher VET are:

- A certain form of competition for learners who could choose to enter higher education or higher VET which means that higher VET is sometimes seen as a second choice. However many higher VET programmes actually serve a population that is not otherwise attracted to academic education. For example many of these programmes target groups that are under-represented in higher education;

- Linked to the above, lack of clear positioning and profiling of higher VET programmes. This is linked to the fact that higher VET is often offered by providers that also offer other types of programmes (initial VET or higher education). Depending on the country and the tradition, it is not always clear to the learners how the programmes differ;
- Lack of recognition of higher VET qualifications for exemption from higher education. While this is improving regarding the recognition of for example Professional Bachelors, there is improvement to be made to recognise short cycle programmes and post-secondary non-tertiary programmes for progression.

## **Conclusions and recommendations**

<b>Conclusions</b>	<b>Recommendations</b>
<p>Higher VET is much more developed in some countries than in others. The main reasons for growth are linked to:</p> <ul style="list-style-type: none"> <li>• Growing numbers of young people who after secondary education wish to continue further studies;</li> <li>• Relatively good employment opportunities of higher VET graduates in many countries;</li> <li>• Demand from the side of the labour market stimulating the development of these shorter programmes that are more professionally oriented.</li> </ul> <p>Higher VET programmes are often developed by the providers who are also responsible for the assessment of learners and awarding of qualifications. Higher VET programmes are usually developed in cooperation with employers, frequently involve some form of work-based learning and teachers are often required to have prior professional experience in the field.</p>	<p>Member States and the European Commission should develop the policy agenda aiming to strengthen higher VET. Higher VET programmes and qualifications offer an opportunity to upgrade ones' skills and competence and to achieve work-relevant qualifications for a varied target group. There is a need for countries to diversify the offer of education and training opportunities at higher levels and to ensure its labour market relevance.</p>
<p>There is no consensus on the definition of higher VET. Higher VET does not correspond exactly to any of the segments of education and training.</p> <p>Higher VET is also not a homogeneous area. There is great diversity within this field. It could be questioned whether it is meaningful to analyse this field as a single group of qualifications when in reality it encompasses very different types of programmes and qualifications.</p>	<p>Use the term professional education at higher levels rather than the term vocational education and training at higher levels.</p> <p>Reflect on whether this field should be referred to as a discrete sector.</p>
<p>One important difficulty in delimitating higher VET is that most national qualifications frameworks do not yet involve qualifications awarded outside</p>	<p>Further research would be needed to better understand the extent to which the qualifications not covered by this study could be seen as higher VET.</p>

formal education and training. There are many qualifications and qualifications types, mostly vocational or professional, outside formal education and training. However as these are not aligned with NQFs it is not possible to judge whether they are 'higher'.	Support cooperation among countries on how to integrate higher qualifications that are outside the formal system into NQFs and how to position them in the education and training systems.
There is little evidence about the outcomes of higher VET programmes but where these exist the studies show positive results. Most countries have very little hard data on this field of education and training. In particular there is very little data on the programmes and qualifications outside higher education area and formal post-secondary VET.	Develop activities to improve the evidence base about the different groups of qualifications and programmes that fall under higher VET. In particular those sub-groups that are outside the higher education area. Such further work could contribute to develop an identity within the sector.
	Improve data collection on higher VET. Beyond participation data, improve the availability of evidence about employment outcomes of higher VET.
The main trends shaping higher VET are: the evolving relationship with the rest of the education system, growing demand that is in many countries linked to good employment outcomes, strengthening of work-based learning programmes. The challenges are linked to these trends as well and concern mostly the ambiguous relationship with higher education when it comes to competition for students, absence of clear positioning and limited recognition of higher VET in higher education.	Support mutual learning on issues that are commonly recognised by several countries. Promote innovative models of higher VET by peer-learning or study visits. Ensure these exchanges are based on an evidence-based review of the example being discussed.

## Résumé analytique

### **Comment l'enseignement professionnel supérieur est-il défini et comment s'inscrit-il dans le paysage national de certification ?**

Jusqu'à présent, il n'y a pas de consensus autour de la définition de l'enseignement professionnel supérieur (EFP). La plupart des pays ont certaines formes d'EFP supérieur mais les types de programmes et de qualifications couverts varient énormément. De plus, il y a parfois des divergences au sein même de certains pays sur ce qu'est réellement l'EFP supérieur. Cette étude a proposé deux approches pour délimiter l'EFP supérieur: l'une plus large et l'autre plus étroite. Dans les deux cas, seules les qualifications alignées sur les niveaux du CNC équivalents au niveau 5 ou plus du CEC ont été considérées comme de l'EFP supérieur.

Selon la définition large de l'EFP supérieur, ce terme recouvre toutes les qualifications professionnelles de niveau 5 et plus du CEC, y compris ceux couverts par l'Espace européen de l'enseignement supérieur. Il s'agit donc principalement des cycles courts, des diplômes de Licence et de Master professionnels, ainsi que de l'apprentissage à ces niveaux.

Selon la définition la plus étroite, l'EFP supérieur recouvre seulement les qualifications professionnelles qui sont totalement en-dehors de l'Espace européen de l'enseignement supérieur (EEES). Cela concerne à la fois les qualifications du système formel d'éducation et de formation, mais aussi celles qui sont délivrées hors de ce système.

Il n'y a pas non plus de consensus autour de la mesure dans laquelle les qualifications de l'enseignement supérieur devraient être considérées comme de l'EFP supérieur, et sur la question de savoir si l'EFP supérieur devrait être défini de façon large ou plus étroite.

Un des enjeux de cette étude vient du fait que de nombreuses qualifications en-dehors du système formel d'enseignement et de qualification ne sont pas encore alignées avec les Cadres nationaux des certifications. Par conséquent il n'est pas possible de juger si ces qualifications doivent être placées au niveau 5 du CEC ou au-delà, et donc si elles sont bien 'supérieures'. L'analyse de l'EFP supérieur risque d'être différente de cette étude exploratoire dans quelques années, lorsque davantage de ce type de qualifications seront alignées sur les niveaux du CNC.

Pour le moment l'étude a montré que lorsque les qualifications d'EFP supérieur sont déjà alignées sur les niveaux du CNC, elles se situent à des niveaux correspondant aux niveaux 5 et 6 du CEC et, dans une mesure bien moindre, au niveau 7 et 8.

Selon les pays concernés, la relation entre l'EFP supérieur et le reste du système d'éducation et de formation varie énormément :

- Certains programmes et qualifications d'EFP supérieur post-secondaires et non-tertiaires sont délivrés par des écoles de niveau secondaire et sont conçus comme des programmes de suivi ou de requalification.
- D'autres qualifications d'EFP supérieur sont en réalité parties prenantes formelles de l'enseignement supérieur (couvert par l'EEES). Elles suivent la structure des cycles de Bologne mais elles ont une orientation professionnelle affirmée et elles sont aussi souvent appelées 'licences professionnelles' ou 'masters professionnels'.
- Un plus petit nombre de pays ont aussi des qualifications formelles d'enseignement et de formation professionnels continus aux niveaux supérieurs, qui sont conçues principalement pour la requalification, le recyclage professionnel et le perfectionnement des compétences.
- On peut s'attendre au fait que de nombreux pays aient des programmes d'éducation et de formation non formels, ainsi que des qualifications

correspondantes, qui pourraient être considérés comme de l'EFP supérieur mais qui ne sont encore alignés sur aucun niveau du CNC.

De façon similaire, l'EFP supérieur fait parfois partie des cadres légaux de l'enseignement supérieur ou de la formation des adultes, ou bien il a un cadre légal spécifique.

### **Quels sont les principaux éléments des programmes/certifications de l'EFP supérieur dans les pays analysés ?**

Les caractéristiques principales suivantes de l'EFP supérieur ont été identifiées sur la base de la recherche au niveau national :

- Dans la plupart des cas, les certifications identifiées sont délivrées par les fournisseurs d'éducation et de formation. C'est principalement le cas pour ces certifications qui font partie du domaine de l'enseignement supérieur. D'autres types de certifications peuvent être délivrés par un ministère (quelques certifications formelles d'enseignement et de formation professionnels continus) ou par des représentants d'employeurs ou de secteurs (par exemple les certifications de Maîtres d'Art) ;
- Les programmes d'EFP supérieur sont bénéficiaires de fonds publics dans presque tous les cas analysés. Néanmoins, beaucoup sont aussi bénéficiaires de co-financements privés des individus ou, dans une moindre mesure, des entreprises ;
- La plupart des programmes d'EFP supérieur ne relevant pas de l'enseignement supérieur suivent un système d'accréditation. Une minorité des cas analysés suivent d'autres dispositifs d'assurance qualité. Dans tous les programmes analysés, il existe des formes d'assurance qualité ;
- De nombreuses institutions qui proposent de l'EFP supérieur fournissent également d'autres types de programmes d'éducation et de formation. Ainsi, l'EFP supérieur n'a pas une identité partagée avec un seul type de fournisseurs ;
- Les programmes de formation/certifications sont, dans la plupart des cas, conçus par les fournisseurs, souvent en collaboration étroite avec les représentants du monde professionnel. Les programmes sont liés aux profils professionnels pour ces certifications qui sont en dehors de l'enseignement supérieur ;
- L'objectif principal des programmes/certifications analysés est la préparation pour rentrer sur le marché du travail (qualifications d'entrée requises), ainsi que le recyclage professionnel et le perfectionnement des compétences (qualifications complémentaires) ;
- Parmi les programmes analysés, nombreux sont ceux qui sont proposés à temps partiel. La majorité d'entre eux intègre l'apprentissage sur le lieu de travail ;
- Plus souvent que dans d'autres programmes à ces niveaux, il est requis que les enseignants et formateurs aient une expérience professionnelle. En particulier, l'enseignement est plus souvent délivré par des professionnels que dans l'enseignement supérieur.

Les principaux types de programmes/certifications d'EFP supérieur sont les suivants :

- Considérant l'**interprétation étroite** de l'EFP supérieur :
  - Des programmes post-secondaires en dehors de l'enseignement supérieur (EEES) aux niveaux 4 et 5 selon le classement 2011 du CITE. Ces certifications ou programmes ont des dénominations et des durées différentes, mais ils ont une orientation en EFP très claire et ils visent

souvent les diplômés de l'enseignement secondaire en tant que première certification professionnelle ou en tant que certification professionnelle additionnelle ;

- Des certifications acquises sur la base de la reconnaissance de l'apprentissage non formel et informel (tests de compétences) et qui peuvent également, dans certains cas, être préparées via un programme. Il s'agit notamment des certifications de Maîtres d'Art mais aussi d'autres certifications d'enseignement et de formation professionnels continus ;
  - Divers programmes/certifications d'enseignement et de formation professionnels continus en dehors du système formel.
- Considérant l'**interprétation large** de l'EFP supérieur, en plus de ce qui a été décrit ci-dessus :
    - L'enseignement supérieur de type court ;
    - Les diplômes universitaires professionnels de Licence et de Master ;
    - La formation en alternance (apprentissage ou alternance) au niveau de la Licence ou du Master (ou même au niveau du Doctorat).

### **Quelles sont les principales tendances liées à la demande, aux parcours, aux secteurs dominants et aux résultats de l'EFP supérieur ?**

En 2013, plus de 4.8 million d'étudiants étaient inscrits dans des programmes d'orientation professionnelle ou de formation continue aux niveaux 4, 5, 6 et 7 du CITE (classification 2011 du CITE). En réalité il est probable qu'il y ait encore plus d'apprenants dans ce secteur car :

- Le CITE couvre seulement certaines parties des programmes et certifications qui peuvent être considérés comme de l'EFP supérieur ;
- Certains pays avec des programmes d'enseignement supérieur binaires ont décidé de ne pas différencier les données selon l'orientation des programmes ;
- Quelques autres ont qualifié d'académiques des licences professionnelles.

D'après les statistiques nationales, l'EFP supérieur est :

- En croissance en Autriche, Belgique-FR et Belgique-NL, Danemark, Allemagne, Espagne, France, Irlande, Italie, Luxembourg, Malte, Pays-Bas, Roumanie ;
- Stable en République tchèque, Grèce, Finlande, Lituanie, Lettonie, Royaume-Uni ; et
- En baisse en Bulgarie, Estonie, Croatie, Hongrie, Portugal, Pologne, Suède, Slovaquie.

La plupart des étudiants des programmes d'enseignement et de formation professionnels aux niveaux supérieurs sont inscrits dans les domaines de la gestion d'entreprise et des soins de santé. Cependant, l'EFP supérieur recouvre une large variété de secteurs, et il y a d'importantes différences au niveau national.

L'EFP supérieur attire une part importante d'étudiants de plus de 25 ans (25% au niveau 4 et 31% au niveau 5 du classement du CITE). La part d'étudiants de plus de 35 ans est également relativement importante. Dans certains pays, les étudiants d'âge mûr constituent la majorité des participants. Cela signifie que de nombreux programmes d'EFP supérieur attirent des personnes en recherche d'un renouvellement ou d'une extension de leurs qualifications.

Il y a peu de preuves sur les résultats des programmes d'EFP supérieur mais, lorsqu'elles existent, les études montrent des résultats positifs. La plupart des pays ont très peu de données statistiques sur ce secteur d'éducation et de formation. Plus particulièrement, il y a très peu de données sur les programmes et certifications en dehors du domaine de l'enseignement supérieur et de l'EFP formel post-secondaire.

Les principales tendances qui influent sur l'évolution de l'EFP supérieur sont les suivantes:

- Clarification de la position de l'EFP supérieur dans le reste du système éducatif. Le développement des CNC a conduit à des discussions sur la relation entre l'EFP supérieur et les autres certifications, en particulier celles de l'enseignement supérieur ;
- Demande croissante, de la part des apprenants et des employeurs, qui est liée à des opportunités d'emploi relativement positives, bien que cette tendance ne fasse pas ici l'unanimité ;
- Développement de programmes d'apprentissage en situation de travail aux niveaux supérieurs. Cela est lié à la reconnaissance croissante des bénéfices de l'apprentissage en situation de travail pour l'employabilité mais aussi le développement d'une identité professionnelle.

Les principaux défis pour le développement futur de l'EFP supérieur sont les suivants:

- Une certaine forme de compétition pour les apprenants de l'enseignement supérieur, ce qui signifie que l'EFP supérieur est parfois considéré comme un second choix. Néanmoins, de nombreux programmes d'EFP supérieur servent en fait une population qui n'est de toute façon pas attirée par l'enseignement académique. Ainsi, nombreux parmi ces programmes sont ceux qui ciblent des groupes qui sont sous-représentés dans l'enseignement supérieur ;
- En lien avec le point précédent, le manque de positionnement et de profilage clairs des programmes d'EFP supérieur. Ceci est lié au fait que l'EFP supérieur est souvent proposé par des fournisseurs qui proposent également d'autres types de programmes (EFP initial ou enseignement supérieur). Selon le pays et la tradition il n'est pas toujours clair pour les apprenants de comprendre comment les programmes diffèrent ;
- Le manque de reconnaissance des qualifications d'EFP supérieur pour être exempté de l'enseignement supérieur. Tandis que cela s'améliore pour la reconnaissance des licences professionnelles par exemple, il y a encore des améliorations à faire pour reconnaître les programmes de cycle court et les programmes d'avancement post-secondaires non-tertiaires.

## **Conclusions et recommandations**

<b>Conclusions</b>	<b>Recommandations</b>
<p>L'EFP supérieur est bien plus développé dans certains pays que dans d'autres. Les principales raisons de la croissance de l'EFP supérieur dans certains pays sont les suivantes :</p> <ul style="list-style-type: none"><li>• Nombre grandissant de jeunes qui, suite à des études secondaires, souhaitent poursuivre leurs études ;</li><li>• Perspectives d'emploi relativement bonnes pour les diplômés de l'EFP supérieur dans de nombreux pays ;</li><li>• Demande de la part du marché du travail qui stimule le développement de ces programmes courts avec une forte</li></ul>	<p>Les Etats Membres et la Commission européenne devraient développer un agenda politique visant à renforcer l'EFP supérieur. Les programmes et les certifications d'EFP supérieur offrent des opportunités d'améliorer ses aptitudes et compétences et de posséder des qualifications professionnelles pertinentes pour un groupe cible varié. Il est nécessaire pour les pays concernés de diversifier l'offre d'opportunités d'éducation et de formation aux niveaux supérieurs et de s'assurer de sa pertinence pour le marché du travail.</p>

orientation professionnelle.

Les programmes d'EFP supérieur sont souvent développés par les fournisseurs qui sont aussi responsables de l'évaluation des apprenants et de la délivrance des certifications. Les programmes d'EFP supérieur sont généralement développés en coopération avec les employeurs, incluent fréquemment un certain type d'apprentissage sur le lieu de travail, et dont les professeurs doivent souvent avoir une expérience professionnelle antérieure dans le domaine.

Il n'y a pas de consensus sur la définition de l'EFP supérieur. L'EFP supérieur ne correspond pas parfaitement à l'un des segments de l'éducation ou de la formation.

L'EFP supérieur n'est pas un domaine homogène. Il y a beaucoup de diversité dans ce secteur. On peut donc se demander si cela fait sens d'analyser ce secteur comme un groupe unique de qualifications, alors qu'en réalité il recouvre tous les types de programmes et de qualifications différents.

Une difficulté importante pour délimiter l'EFP supérieur est que la plupart des cadres de certifications nationaux ne recouvrent pas encore les qualifications obtenues hors du système formel d'éducation et de formation. Il y a beaucoup de qualifications et de types de qualifications, pour la plupart techniques ou professionnelles, hors de l'éducation et de la formation formelles. Cependant, comme elles ne sont pas alignées avec les CNC, il n'est pas possible d'évaluer si elles sont 'supérieures'.

Il y a peu de preuves sur les résultats des programmes d'EFP supérieur mais, lorsqu'elles existent, les études montrent des résultats positifs. La plupart des pays ont très peu de données chiffrées sur ce domaine de l'éducation et de la formation. Plus particulièrement, il y a très peu de données sur les programmes et certifications en dehors du domaine de l'enseignement supérieur et d'EFP formels post-secondaires.

Utiliser le terme éducation professionnelle aux niveaux supérieurs plutôt que le terme éducation et formation professionnels aux niveaux supérieurs.

Réfléchir à la question de savoir si ce secteur doit être traité comme un secteur isolé.

Des recherches plus poussées devraient être menées pour mieux comprendre la mesure dans laquelle les qualifications qui ne sont pas couvertes par cette étude peuvent être considérées comme de l'EFP supérieur.

Soutenir la coopération entre pays sur la façon d'intégrer dans les CNC les qualifications qui sont en-dehors du système formel et de les positionner dans les systèmes d'éducation et de formation.

Mener des activités pour améliorer la base de données factuelles sur les divers groupes de qualifications et de programmes qui relèvent de l'EFP supérieur. Plus particulièrement ces sous-groupes qui sont en-dehors du domaine de l'enseignement supérieur. Ce travail plus poussé pourrait contribuer à développer une identité au sein du secteur.

Améliorer la collecte de données sur l'EFP supérieur. Au-delà des données sur la participation, améliorer l'accessibilité des données sur les perspectives d'emploi de

l'EFP supérieur.	
Les principales tendances qui façonnent l'EFP supérieur sont les suivantes: relation changeante avec le reste du système éducatif, demande croissante qui est dans de nombreux pays liée aux bonnes perspectives d'emploi, renforcement des programmes d'apprentissage en milieu professionnel. Des défis sont également liés à ces tendances et concernent principalement les relations ambiguës avec l'enseignement supérieur lorsqu'il s'agit de rivaliser pour les étudiants, de l'absence d'un positionnement clair et de la reconnaissance limitée de l'EFP supérieur dans l'enseignement supérieur.	Renforcer l'apprentissage mutuel sur des questions fréquemment reconnues par plusieurs pays. Promouvoir des modèles innovants d'EFP supérieur via l'enseignement mutuel ou des visites d'études. Faire en sorte que ces échanges soient basés sur des analyses factuelles sur les exemples discutés.

## **Zusammenfassung**

### **Wie lässt sich die höhere Berufsbildung definieren und wie ist sie in die nationale Qualifikationslandschaft eingebettet?**

Bis jetzt besteht keine Einigung darüber, wie die höhere Berufsbildung zu definieren ist. In fast allen Ländern gibt es zwar irgendeine Form der höheren Berufsbildung, doch die jeweiligen Programme und Qualifikationen weisen beträchtliche Unterschiede auf. Und selbst innerhalb eines Landes besteht oftmals Uneinigkeit bezüglich dessen, was höhere Berufsbildung eigentlich bedeutet. In dieser Studie werden zwei verschiedene Definitionen zur Eingrenzung der höheren Berufsbildung vorgeschlagen: eine breitere und eine engere Definition. In beiden Fällen wurden lediglich diejenigen Qualifikationen als höhere Berufsbildung gewertet, die in nationalen Qualifikationsrahmen zu Niveaus zugeordnet sind, die dem Niveau 5 oder höheren Niveaus des Europäischen Qualifikationsrahmens (EQR) entsprechen.

Gemäß der breiteren Definition zählen zur höheren Berufsbildung alle berufsorientierten Qualifikationen des EQR-Niveaus 5 und höher. Dies umfasst auch Qualifikationen, die vom Europäischen Hochschulraum (EHR) abgedeckt werden, also in erster Linie Abschlüsse von Kurzstudiengängen, Bachelor- und Master-Abschlüsse sowie Lehrlingsausbildungen auf dieser Ebene.

Gemäß der engeren Definition deckt die höhere Berufsbildung nur jene beruflichen Qualifikationen ab, die gänzlich außerhalb des Europäischen Hochschulraums erworben werden. Dazu gehören sowohl Qualifikationen des formalen Bildungs- und Ausbildungssystems als auch Qualifikationen, die außerhalb dieses Systems erworben werden.

Zudem herrscht keine Einigung darüber, inwieweit die Qualifikationen des Hochschulbereichs als höhere Berufsbildung betrachtet werden können und ob eine höhere Berufsbildung eher breiter oder enger definiert werden sollte.

Eine der Herausforderungen, die sich im Rahmen dieser Studie präsentierten, besteht darin, dass zahlreiche, außerhalb der formalen Bildungs- und Ausbildungssysteme erworbene Qualifikationen noch nicht einem nationalen Qualifikationsrahmen zugeordnet wurden. Folglich kann nicht beurteilt werden, ob diese Qualifikationen dem Niveau 5 des EQR bzw. einem höheren Niveau entsprechen und es sich somit tatsächlich um „höhere“ Qualifikationen handelt. In einigen Jahren, wenn weitere dieser Qualifikationen einem Niveau eines nationalen Qualifikationsrahmens zugeordnet wurden, wird die Analyse der höheren Berufsbildung wahrscheinlich ganz anders ausfallen als bei dieser ersten Studie.

Im Moment, so stellten die Autorinnen der Studie fest, entsprechen höhere berufsbildende Qualifikationen, die bereits einem Niveau eines nationalen Qualifikationsrahmens zugeordnet wurden, meist den Niveaus 5 und 6 des EQR und in wesentlich geringerem Maße auch dem Niveau 7 und 8.

Je nach Land wurden beträchtliche Unterschiede zwischen der höheren Berufsbildung und der restlichen Aus- und Weiterbildung konstatiert:

- Einige postsekundäre, nicht tertiäre höhere Berufsbildungsprogramme werden von Sekundarschulen angeboten und sind als Folgeprogramme oder Requalifizierungsprogramme gedacht.
- Andere höhere Berufsbildungsqualifikationen sind dagegen ein formaler Bestandteil der höheren Bildung (durch den EHR abgedeckt). Sie haben dieselbe Struktur wie die Bologna-Zyklen, jedoch mit eindeutigem beruflichem Schwerpunkt und werden häufig auch als „Professional Bachelor“ oder „Professional Master“ bezeichnet.

- In einer geringeren Zahl von Ländern gibt es auch formale Weiterbildungsqualifikationen auf höherer Ebene, die in erster Linie der Requalifizierung sowie der Verbesserung bestehender und dem Erwerb neuer Kompetenzen dienen.
- In zahlreichen Ländern wird es auch nicht formale Bildungs- und Ausbildungsprogramme mit entsprechenden Qualifikationen geben, die als höhere Berufsbildung gewertet werden könnten, aber noch keinem Niveau des NQR (Nationaler Qualifikationsrahmen) zugeordnet wurden.

Parallel dazu fällt die höhere Berufsbildung manchmal unter die Rechtsvorschriften der hochschulischen oder der Erwachsenenbildung, und manchmal basiert sie auf einem eigenen rechtlichen Rahmen.

### **Welche sind die wichtigsten Merkmale der höheren Berufsbildungsprogramme und -qualifikationen in den untersuchten Ländern?**

Die Forschung auf Länderebene ergab die folgenden Hauptmerkmale der höheren Berufsbildung:

- In den meisten Fällen werden die Qualifikationen, die im Rahmen der Studie ermittelt wurden, von den Bildungs- und Ausbildungsanbietern vergeben und dies ist hauptsächlich bei Qualifikationen der Fall, die Teil des Hochschulraums sind. Einige Qualifikationen können aber auch von einem Ministerium (wie beispielsweise einige formale Weiterbildungsqualifikationen) oder Vertretern von Arbeitgebern oder Branchen (wie beispielsweise der Meisterbrief) zuerkannt werden.
- Die im Bereich der höheren Berufsbildung analysierten Programme erhalten fast immer finanzielle Unterstützung aus öffentlichen Mitteln. Viele werden aber auch privat von Einzelpersonen oder weniger häufig von Unternehmen kofinanziert.
- Die meisten der höheren Berufsbildungsprogramme, die nicht zur hochschulischen Bildung gehören, folgen einem Akkreditierungsprogramm. Für eine geringe Zahl der analysierten Fälle gelten andere Qualitätssicherungsverfahren. Irgendeine Form der Qualitätssicherung existiert jedoch für alle analysierten Programme.
- Viele Institutionen, die höhere Berufsbildungsprogramme durchführen, bieten auch andere Arten von Bildungs- und Ausbildungsprogrammen an. Die höhere Berufsbildung ist daher nicht auf eine bestimmte Art von Anbieter begrenzt.
- In den meisten Fällen werden die Ausbildungsprogramme/Qualifikationen von den Anbietern in enger Zusammenarbeit mit Unternehmensvertretern gestaltet. Im Fall von Qualifikationen, die außerhalb des hochschulischen Bereichs vergeben werden, orientieren sich die Programme am jeweiligen Berufsprofil.
- Wichtigstes Ziel der analysierten Programme/Qualifikationen ist die Vorbereitung auf den Berufseinstieg (Einstiegsqualifikation) sowie die Verbesserung bestehender oder der Erwerb zusätzlicher Kompetenzen.
- Viele der untersuchten Programme werden auch in Teilzeitform angeboten und die Mehrzahl beinhaltet praktisches Lernen am Arbeitsplatz.
- Von den Lehrenden und Auszubildenden wird dabei häufiger als bei anderen Programmen dieses Niveaus verlangt, dass sie über praktische Erfahrung verfügen, und der Unterricht wird häufiger von Praktikern geleitet, als dies im Bereich der hochschulischen Bildung der Fall ist.

Es folgt eine Liste der wichtigsten Typen höherer Berufsbildungsprogramme/Qualifikationen.

- Nimmt man die **engere Definition** für höhere Berufsbildung als Grundlage:

- Postsekundäre Programme außerhalb der hochschulischen Bildung (EHR) auf ISCED-Stufen 4 oder 5 (ISCED 2011). Diese Qualifikationen bzw. Programme tragen unterschiedliche Bezeichnungen und sind von unterschiedlicher Dauer, legen den Schwerpunkt aber eindeutig auf die berufliche Ausbildung und verstehen sich häufig als eine erste oder eine zusätzliche berufliche Qualifikation für Lernende mit einem Abschluss der Sekundarstufe II.
- Qualifikationen, die durch Anerkennung von nicht formalem und informellem Lernen erworben wurden (Kompetenztests) und in einigen Fällen auch im Rahmen eines Programms vorbereitet werden können. Dies ist in der Regel bei Meisterbriefen, aber auch bei anderen Qualifikationen im Bereich der beruflichen Weiterbildung der Fall.
- Verschiedene berufliche Weiterbildungsprogramme/Qualifikationen außerhalb des formalen Systems.
- Nimmt man die **breitere Definition** für höhere Berufsbildung als Grundlage:
  - Abschlüsse von Kurzstudiengängen
  - „Professional Bachelor“- und „Professional Master“-Abschlüsse
  - Duale oder alternierende Ausbildung auf Ebene des Bachelors oder Masters (oder sogar auf Doktoranden-Ebene)

**Welche sind die wichtigsten Trends im Hinblick auf Nachfrage, Bildungswege, Sektoren und Ergebnisse der höheren Berufsbildung?**

2013 waren mehr als 4,8 Millionen Lernende in berufsbildenden Programmen der Stufe 4, 5, 6 und 7 nach ISCED 2011 eingeschrieben. In der Realität wird es in diesem Bereich wahrscheinlich noch mehr Lernende geben, weil:

- ISCED nur einen Teil der Programme und Qualifikationen abdeckt, die als höhere Berufsbildung eingestuft werden können;
- in einigen Ländern, die binäre höhere Bildungsprogramme anbieten, beschlossen wurde, die erhobenen Daten nicht nach Programmorientierung zu differenzieren;
- in einigen anderen Ländern „Professional Bachelor“-Abschlüsse als akademisch eingestuft wurden.

Den nationalen Statistiken zufolge zeichnen sich die folgenden Trends im Bereich der höheren Berufsbildung ab:

- steigend in Österreich, Belgien-FR und Belgien-NL, Dänemark, Deutschland, Spanien, Frankreich, Irland, Italien, Luxemburg, Malta, Niederlande, Rumänien
- unverändert in der Tschechischen Republik, in Griechenland, Finnland, Litauen, Lettland, im Vereinigten Königreich
- rückläufig in Bulgarien, Estland, Kroatien, Ungarn, Portugal, Polen, Schweden, Slowenien, der Slowakei

Die meisten Teilnehmenden an berufsbildenden Programmen auf höherer Ebene sind in den Bereichen Betriebswirtschaft und Verwaltung und Gesundheitspflege eingeschrieben. Die höhere Berufsbildung deckt jedoch verschiedene Sektoren ab und auch hier gibt es deutliche Unterschiede zwischen den Ländern.

Die höhere Berufsbildung verzeichnet einen beträchtlichen Prozentsatz von Lernenden, die älter als 25 Jahre sind (25 % auf ISCED-Stufe 4 und 31 % auf ISCED-Stufe 5). Der Anteil der über 35-Jährigen ist ebenfalls recht hoch. In einigen Ländern stellen ältere Lernende die Mehrheit der Teilnehmenden. Dies bedeutet, dass viele höhere Berufsbildungsprogramme für diejenigen interessant sind, die zusätzliche Qualifikationen erwerben oder ihre bestehenden Qualifikationen verbessern möchten.

Es gibt nur wenige Daten dazu, welche Erfolge höhere Berufsbildungsprogramme erzielen. Sofern solche Daten existieren, sind die Ergebnisse jedoch positiv. Die meisten Länder besitzen nur sehr wenige ‚harte Daten‘ zu diesem Bildungs- und Ausbildungsbereich, insbesondere was Programme und Qualifikationen außerhalb des Hochschulraums und der formalen postsekundären Berufsbildung betrifft.

Die wichtigsten Trends, die die Entwicklung der höheren Berufsbildung beeinflussen, sind:

- die Klarstellung der Positionierung der höheren Berufsbildung im restlichen Bildungssystem. Die Erarbeitung der nationalen Qualifikationsrahmen hatte Diskussionen über die Beziehung zwischen der höheren Berufsbildung und anderen Qualifikationen, insbesondere denjenigen im Bereich der hochschulischen Bildung, zur Folge;
- die wachsende Nachfrage seitens der Lernenden und der Arbeitgeber aufgrund der meist positiven Beschäftigungsaussichten – dieser Trend ist jedoch nicht überall zu erkennen;
- die Einführung arbeitsplatzbasierter Lernprogramme auf höherer Ebene. Dies beruht auf der wachsenden Erkenntnis, welche Vorteile arbeitsplatzbasiertes Lernen für die Beschäftigungsfähigkeit, aber auch die Weiterentwicklung der beruflichen Identität haben kann.

Die wichtigsten Herausforderungen bei der Weiterentwicklung der höheren Berufsbildung sind:

- ein gewisser Wettbewerb mit Lernenden im Bereich der hochschulischen Bildung, was bedeutet, dass höhere Berufsbildung manchmal als zweite Wahl betrachtet wird. Viele höhere Berufsbildungsprogramme wenden sich jedoch an eine Bevölkerungsgruppe, die kein großes Interesse an akademischer Bildung zeigt. So zielen viele dieser Programme auf Gruppen ab, die im Bereich der höheren Bildung unterrepräsentiert sind;
- in Zusammenhang mit dem oben Genannten fehlt höheren Berufsbildungsprogrammen eine eindeutige Identität und Positionierung, da höhere Berufsbildung oftmals von Einrichtungen angeboten wird, die auch andere Programme anbieten (berufliche Erstausbildung oder hochschulische Bildung). Je nach Land und dessen Tradition sind die Unterschiede zwischen den Programmen für die Lernenden nicht immer ohne Weiteres ersichtlich;
- eine mangelnde Anerkennung höherer berufsbildender Qualifikationen als Ersatz für hochschulische Bildung. So sind beispielsweise im Hinblick auf den „Professional Bachelor“ zwar Fortschritte zu erkennen, doch die Anerkennung von Kurzstudien und postsekundären, nicht tertiären Programmen als Aufstiegsqualifizierung ist noch verbesserungsbedürftig.

### **Schlussfolgerungen und Empfehlungen**

<b>Schlussfolgerungen</b>	<b>Empfehlungen</b>
Höhere Berufsbildung ist manchen Mitgliedstaaten und die Europäische Ländern deutlich stärker entwickelt als Kommission sollten eine Agenda zur in anderen. Die Hauptgründe für die Stärkung der höheren Berufsbildung Ausbreitung höherer Berufsbildung in entwickeln. Qualifikationen und Programme einigen Ländern stehen im der höheren Berufsbildung bieten die Zusammenhang mit: Möglichkeit der Weiterentwicklung von Fertigkeiten und Kompetenzen und des Erwerbs berufsrelevanter Qualifikationen für eine vielfältige Zielgruppe. In den Ländern besteht Bedarf nach einer Diversifikation des Angebots an höheren	
<ul style="list-style-type: none"><li>• einer steigenden Anzahl junger Menschen, welche nach Abschluss ihrer Sekundarbildung eine weiterführende Ausbildung</li></ul>	

<p>absolvieren möchten;</p> <ul style="list-style-type: none"> <li>• vergleichsweise guten Beschäftigungsaussichten für AbsolventInnen von höherer Berufsbildung in zahlreichen Ländern;</li> <li>• Nachfrage seitens des Arbeitsmarktes, welche die Entwicklung kürzerer und stärker beruflich orientierter Ausbildungen stimuliert.</li> </ul> <p>Höhere Berufsbildungsprogramme werden oft direkt von Bildungsträgern entwickelt, welche auch für die Beurteilung der Lernenden und die Verleihung von Qualifikationen zuständig sind. Höhere Berufsbildungsprogramme werden regelmäßig in Zusammenarbeit mit ArbeitgeberInnen entwickelt; sie inkludieren häufig Elemente arbeitsplatzbasierten Lernens (Work-based Learning) und Lehrende müssen oftmals über Berufserfahrung im jeweiligen Fachbereich verfügen.</p>	<p>Ausbildungen und der Sicherstellung seiner Arbeitsmarktrelevanz.</p>
<p>Es gibt keinen Konsens bezüglich einer genauen Definition der höheren Berufsbildung – es gibt keine exakte Entsprechung mit einem anderen Bildungs- und Ausbildungssegment.</p> <p>Die höhere Berufsbildung ist zudem kein homogener, sondern ein sehr vielfältiger Bereich. Möglicherweise ist es nicht sinnvoll, diesen Bereich als eine separate Gruppe von Qualifikationen zu analysieren, wenn er in der Realität alle verschiedenen Arten von Programmen und Qualifikationen umfasst.</p>	<p>Verwendung des Begriffs „höhere Berufsbildung“ („professional education at higher levels“) anstelle von „berufliche Bildung und Ausbildung auf höherer Ebene“.</p> <p>Es ist zu überdenken, ob dieser Bereich als eigenständiger Sektor betrachtet werden sollte.</p>
<p>Die Eingrenzung der höheren Berufsbildung ist vor allem deshalb problematisch, weil die meisten nationalen Qualifikationsrahmen bisher noch keine außerhalb der formalen Bildung und Ausbildung verliehenen Qualifikationen berücksichtigen. Es gibt viele Qualifikationen, meist berufsbildender Art, außerhalb der formalen Systeme. Da sie jedoch nicht in den nationalen Qualifikationsrahmen vertreten sind, kann nicht beurteilt werden, ob sie in die Sparte der „höheren Berufsbildung“ fallen.</p>	<p>Um besser zu verstehen, inwieweit die nicht von dieser Studie berücksichtigten Qualifikationen als höhere Berufsbildung eingestuft werden könnten, müsste die Forschung noch vertieft werden.</p> <p>Unterstützung der Kooperation zwischen den Ländern bezüglich der Integration höherer, außerhalb des formalen Systems erworbener Qualifikationen in die nationalen Qualifikationsrahmen sowie im Hinblick auf ihre Positionierung in den Bildungs- und Ausbildungssystemen.</p>
<p>Es gibt nur wenige Daten, die über die Erfolge</p>	<p>Verbesserung der Datengrundlage zu den verschiedenen Arten von Qualifikationen</p>

<p>Berufsbildungsprogramme geben. Sofern solche Daten existieren, zeigt deren Analyse jedoch positive Ergebnisse. Die meisten Länder besitzen nur sehr wenige „harte Daten“ zu diesem Bildungs- und Ausbildungsbereich, insbesondere was Programme und Qualifikationen außerhalb des Hochschulraums und der formalen postsekundären Berufsbildung betrifft.</p>	<p>und Programmen, die in die Sparte der höheren Berufsbildung fallen, insbesondere zu den Untergruppen, die außerhalb des Hochschulraums angesiedelt sind. Dies könnte zur Entwicklung einer Identität innerhalb des Sektors beitragen.</p> <p>Verbesserung der Datenerhebung zur höheren Berufsbildung. Daten, die nicht nur aus Teilnehmendenzahlen bestehen, verbessern die Informationen, die über den Beschäftigungserfolg der höheren Berufsbildung zur Verfügung stehen.</p>
<p>Die wichtigsten Trends, die Einfluss auf die höhere Berufsbildung nehmen, sind: die sich entwickelnde Beziehung zum restlichen Bildungssystem; eine wachsende, in vielen Ländern durch gute Beschäftigungserfolge ausgelöste Nachfrage; die Stärkung arbeitsplatzbasierter Lernprogramme. Auch die Herausforderungen sind durch diese Trends bedingt und beziehen sich in erster Linie auf die unklare Beziehung zur hochschulischen Bildung im Hinblick auf den Wettbewerb mit Studierenden, das Fehlen einer eindeutigen Positionierung und die begrenzte Anerkennung der höheren Berufsbildung im Bereich der hochschulischen Bildung.</p>	<p>Unterstützung des gegenseitigen Lernens bei Problemen, die in mehreren Ländern existieren. Förderung innovativer Modelle der höheren Berufsbildung durch Peer-Lernen oder Studienbesuche. Gewährleistung, dass dieser Wissensaustausch auf einer evidenzbasierten Beurteilung des jeweils erörterten Fallbeispiels beruht.</p>

## **1 Introduction**

In 2010 EU Member States and the Commission have agreed on five headline targets to be reached by 2020. Two of these targets relate to education and training. One specifically concerns education achievement at higher level: by 2020 at least 40% of 30-34 years old should have completed tertiary education. This target does not refer exclusively to higher education but covers also other forms of studies at higher levels.

The 2015 Riga conclusions<sup>1</sup> on a new set of medium-term deliverables for Vocational Education and Training (VET) recall the relatively low level of attention given to the topic of excellence in VET. This issue has already been underlined in the European Commission 2012 Communication on Re-thinking Education<sup>2</sup>. It called on countries to promote excellence in the sector of VET including by developing the VET offer at higher levels. In 2010, the Bruges Communiqué<sup>3</sup> on enhanced European Cooperation in Vocational Education and Training for the period 2011-2020<sup>4</sup> explicitly called on Member States to:

- 'develop or maintain post-secondary or higher VET at EQF level 5 or higher, as appropriate, and contribute to achieving the EU headline target of 40% with tertiary or equivalent education', and to;
- 'promote flexible pathways between VET, general education and higher education, and enhance permeability by strengthening the links between them. To achieve this aim, as well as greater participation in lifelong learning, participating countries should accelerate the establishment and implementation of comprehensive national qualifications frameworks based on learning outcomes'.

There are several reasons why VET at higher levels can be expected to play an important role in education and training but also employment and economic policies in the years ahead:

- The 'massification' of higher education continues. The EU benchmark for tertiary educational attainment aims to increase the proportion of persons having completed tertiary education to at least 40% of the EU28 population in this age group by 2020. Several EU countries have already reached the EU2020 target and some have significantly higher attainment rates (e.g. Ireland, Cyprus or Luxembourg). Several countries have seen very steep changes in attainment rates (annual change being above 10% in Czech Republic and Slovakia and above 5% in another eight countries)<sup>5</sup>.
- As participation in higher levels of education becomes more and more widespread, there is a need for the offer at tertiary level to diversify in particular if it is to result in good employment opportunities. Indeed the unemployment of higher education graduates is a growing challenge<sup>6</sup>. It can be linked to the lack of vocational focus of certain HE programmes.
- Furthermore, not everyone who aspires to a qualification at tertiary level is willing and/or ready to embark on a relatively long programme. The drop-out rates in higher education in some countries are rather high<sup>7</sup>. A number of people wish to pursue studies of a shorter duration.

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<sup>1</sup> Ministers in Charge of Vocational Education and Training (2015) *Riga Conclusions*.

<sup>2</sup> European Commission (2012a) *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions. Rethinking education: Investing in skills for better socio-economic outcomes*.

<sup>3</sup> Ministers in Charge of Vocational Education and Training (2010) *Bruges Communiqué on enhanced European Cooperation in Vocational Education and Training*.

<sup>4</sup> Ministers in Charge of Vocational Education and Training (2010) *Bruges Communiqué on enhanced European Cooperation in Vocational Education and Training*.

<sup>5</sup> European Commission (2012c) *EU2020 fiche on tertiary education*.

<sup>6</sup> EU Skills Panorama (2014) *Employability and skills of higher education graduates Analytical Highlight*.

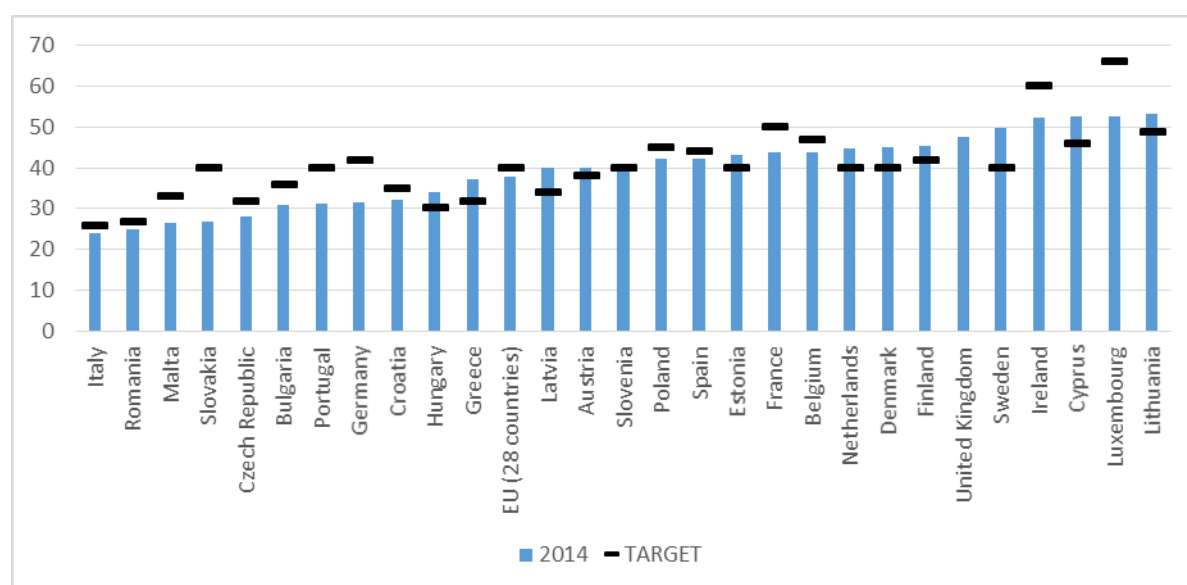
<sup>7</sup> European Commission (2012c) *EU2020 fiche on tertiary education*.

- Finally, considering the shift in demand for skills towards higher levels of qualifications<sup>8</sup>, there will be a need to upgrade the VET provision to higher levels in some professions.

Tertiary education has experienced a rather dynamic development in recent years, with many countries introducing or expanding educational programmes that contain both vocational and academic elements.

Up until now the share of persons aged 30 to 34 in the EU28 who have completed tertiary education has experienced a steady increase in the last decade, from 24% in 2002 to 37% in 2013. Eleven EU28 countries have already met or exceeded their ET 2020 national targets: Denmark, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, the Netherlands, Slovenia, Finland and Sweden. This steady increase in higher education attainment is accompanied by a general growth in tertiary education, which is partly due to the expansion of higher VET. In Germany and Austria, the national ET 2020 targets include post-secondary non-tertiary education.

Figure 1. Proportion of the population aged 30 to 34 having a tertiary educational attainment, 2014 (%)<sup>9</sup>



Legend: There is no national target for the UK. The targets for Germany and Austria include post-secondary non-tertiary education (ISCED level 4 according to ISCED 1997)

Source: Eurostat

As pointed out by Cedefop (2010)<sup>10</sup> the issue in Europe is not so much that there are not enough people who would have high level skills but rather that their skills are not always the ones that are in demand by labour market:

*Although forecasted skill levels may be broadly in line, in 2020 the European labour market is likely to have a surplus of some skills and a shortage of others. People may have academic qualifications while employers may want vocational ones. Europe's challenge is not just to improve skills, but to match the people with the right skills to the jobs available.*

Technical skills continue to be in demand but they are required at higher levels. The introduction of new technologies (such as Key Enabling Technologies, KETs) calls for

<sup>8</sup> CEDEFOP (2012a) *Future skills supply and demand in Europe*.

<sup>9</sup> Eurostat (2015) *Educational attainment statistics*.

<sup>10</sup> CEDEFOP (2010) *Skill mismatch in Europe: Europe's challenge is not just to improve skill levels, but to match people with the right skills to the right jobs*.

people with new type of skills at all levels – not only at the level of researchers and engineers who develop new materials and tools but also at the level of those who produce and maintain these. This area of mid-level technical skills creates a relatively new potential for the expansion of VET at higher levels. However, VET at higher levels cannot be confined to technical skills, jobs in the service sector also require occupation-specific skills that can be developed through higher VET.

In this context, there is growing interest among policy makers and education specialists in the area of VET at higher levels. This study should fill a gap regarding:

- the understanding of the extent to which higher VET is developed across all EU28 countries; and
- the drivers and obstacles for development of this form of education.

### **1.1 Objectives of the study**

This study was designed to shed light on the characteristics of higher VET (vocational education and training) across the EU-28 and the main trends and outcomes of this form of education. Recently higher VET started to figure on the agenda at EU level and in many countries. When it is emphasised in policy documents it is often because higher VET is expected to provide learners with good labour market outcomes and training closely linked to the labour market and its demands. However, there is very little information available regarding the extent to which these expectations are actually met.

Through this assignment, the European Commission requested an overview ('mapping') of higher VET in all EU Member States, i.e. all forms of VET beyond upper secondary level, without particular focus on one particular area or one level only. This study was designed to fill a gap which existed because available studies focused on a selection of countries and/or a certain level (such as EQF level 5 or short-cycle higher education (SCHE)).

Furthermore, this research is expected to shed light on the definition of higher VET, and on what is understood by higher VET across the EU-28. Special emphasis was placed on identifying and understanding the main characteristics and distinctive features of higher VET. The study also analysed the 'grey zones' of higher VET, i.e. programmes or qualifications classified as higher VET in some countries but not in others.

In addition, this study reviewed the main trends and developments in the field of higher VET, and their main drivers and barriers. The study also provides insights into the permeability of higher VET, i.e. the opportunities for progression it provides, as well as its labour market outcomes.

The study was structured around three main research questions:

- RQ 1: How can higher VET be defined and how is it embedded in the national qualification landscape?
- RQ 2: What are the main features of higher VET programmes/qualifications in each of the countries analysed?
- RQ 3: What are the main trends related to demand, pathways, prevailing sectors, and outcomes of higher VET?

### **1.2 Navigating this report**

The structure of the report is as follows:

- Section 2 presents our approach to this assignment and the methodology followed;
- Section 3 shows the results regarding the definition and understanding of what constitutes higher VET;

- Section 4 discusses the key features and main types of higher VET;
- Section 5 shows the results of the analysis of international and national statistics on higher VET;
- Section 6 presents the main trends and challenges identified.

## 2 Approach and methodology

The methodology for this assignment combined:

- Collection and compilation of national information in the form of country templates;
- The country templates were supported by programme templates for selected types of higher VET programmes/qualifications;
- Case studies on selected types of programmes/qualifications;
- Interviews with stakeholders at EU level; and
- Analysis of international and national statistics.

The national data was collected through a combination of desk research and interviews.

At the final stage of the study an expert workshop was held to discuss the key findings of the study.

### 2.1 Understanding higher VET – starting point of the study

There is no clear, generally acknowledged definition of what is considered higher VET. The term covers a variety of different systems and levels, which presents a challenge for cross-country comparison and analysis. There are significant differences across countries as to what is considered VET at higher levels. It adds to the complexity of the subject that the borderlines between VET and HE are increasingly blurred and indistinct.<sup>11</sup> Different scenarios have been described for the future development of the relationship between these two segments<sup>12</sup>:

- academic and vocational tracks retaining their main characteristics and separate responsibilities;
- qualitative differences between these two tracks will be reduced ('unification');
- or a new intermediate sector offering dual qualifications will evolve ('hybridisation').

The main objective of the study was to explore how higher VET is understood in European countries and to identify key features of higher VET schemes. The sections below discuss the initial definition that the study used to delimitate the scope of the work. Two dimensions can be used for limiting the scope of higher VET: the 'level' dimension and the 'VET' dimension. Discussing the definition of what is higher VET was one of the topics at the expert workshop held. After the expert workshop the study team adopted the definition that came from the discussion and this is presented in section 3.1.

#### 2.1.1 Working definition for this study

This study defined higher VET as vocational education and training provided beyond upper secondary level.

Firstly the study used a pragmatic approach to explore how higher VET is defined at national level and what is seen as falling under higher VET. The researchers were given a long list of programmes identified based on desk research which were programmes at higher levels and which have a vocational focus (either because they are part of VET or CVET or because they are called Professional Bachelor or

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<sup>11</sup> Dunkel, T., Le Mouillour, I. (2009) Through the looking-glass. Diversification and differentiation in vocational education and training and higher education. In CEDEFOP, *Modernising vocational education and training. Fourth report on vocational training research in Europe: background report*. Vol 2., pp. 239-292, Luxembourg: Office for Official Publications of the European Communities.

<sup>12</sup> Raffe, D. (2003) Bringing Academic Education and Vocational Training Closer Together. In J.Oelkers (ed). *Futures of Education 11: Essays from an Interdisciplinary Symposium*, pp.49-65, New York: Peter Bern Lang.

Professional Master). They were asked to verify the scope of what is perceived as higher VET in the given country through interviews. Therefore, the final selection of types of programmes and qualifications analysed in greater depth in this study was based on a reflection of what national stakeholders perceived as higher VET.

While this approach resulted in a country profile which was based on the national perceptions, it meant that when looking at the countries jointly there were some important inconsistencies. In particular the extent to which short cycle, Professional Bachelor or Professional Master are considered higher VET varied across countries. In some countries these qualifications could be considered as higher VET while in other countries the same types of programmes or qualifications are considered as higher education, because of their close integration into the higher education area. This was underlined during the expert workshop held as part of the study.

Consequently in the final stage of the assignment and based on the feedback of the expert workshop, the research team included a distinction between:

- Higher professional and vocational types of programmes that fall under the European Higher Education Area – in particular short cycle and Professional Bachelor and Master degrees<sup>13</sup>; and
- Other types of vocational types of programmes and qualifications that are fully outside the European higher education area.<sup>14</sup>

Both types were included in the study. However, for the first type, the research team only collected in-depth information on short cycles, Professional Bachelor and Master degrees if in the given country these were considered as higher VET by the stakeholders interviewed.

### **2.1.2 'Grey zones' of higher VET**

Since there is no clear definition of higher VET that applies to all countries accordingly, the application of the working definition led to the identification of certain 'grey zones' of higher VET, i.e. types of programmes/qualifications that are considered higher VET in some countries but not in others. As explained above initially the study adopted a pragmatic approach focusing on what is considered as higher VET in the given country. This meant that the following 'grey zones' were identified:

- Programmes/qualifications offered by traditional academic universities but which are other than the academic bachelor, masters and doctoral degrees;
- Programmes/qualifications provided by universities of applied sciences or similar institutions as these are sometimes considered as higher education and in other countries as higher VET (or professional education);
- Also considered as part of this 'grey zone' can be programmes and qualifications for which it cannot be clearly determined whether they are above upper-secondary level. One example might be CVET (continuing vocational education and training) programmes that have not been linked to the NQF (National Qualifications Framework) and that have not been classified according to ISCED. The study predominantly focused on qualifications classified to ISCED and/or included in the NQF. However, if other programmes/qualifications are clearly also considered as higher VET in a given country they were covered in this study.

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<sup>13</sup> Also referred to as 'overlapping zone' in this document. Please note that in this figure only those bachelor and master degrees are presented that are specifically called 'professional'; in other countries professionally oriented programmes within the first and second cycle of higher education of the Bologna framework are also offered (sometimes by a specific type of institution) but without specifying this in the title of the degree.

<sup>14</sup> Only programmes with a duration of at least six months were considered within scope of the study.

## **2.2 Methodology**

The assignment was mostly based on collection of descriptive information that was analysed in a comparative manner. In addition to the descriptions of programmes, the researchers were also asked to capture recent trends based on discussions with interviewees.

The analysis was discussed during a one day expert workshop. The experts provided valuable comments to the findings and these are reflected in the report.

### **2.2.1 Country templates**

The researchers compiled 29 (2 for Belgium-FR and Belgium-NL) country templates on higher VET for this study. The country templates had the same structure, following these main topics:

- Understanding of higher VET in the country (definition and key features; scope; grey zones);
- Context features (HE system; institutional framework; progress of NQF development and implementation);
- Range of types of higher VET programmes/qualifications (a summary of the information contained in each 'programme template');
- Main trends, drivers and barriers to higher VET; and
- Statistical data, including participation rates, completion and graduation rates, progression to other educational programmes and labour market insertion.

The length of the country templates varied from country to country, depending on the level of development and variety of higher VET programmes. However in general the templates were approximately 10 pages long.

To complete the templates the researchers reviewed international studies of relevance, national strategies and legislative documents as well as key research reports. The information was complemented with data from national interviews.

Overall, 100 interviews were carried out to compile the country templates and programme templates. The majority of interviewees (67) were officials and policy experts from ministries or national VET agencies. The second largest group of interviewees were providers in charge of some selected higher VET programmes (23). The third group were representatives of employers or other experts (10). The number of interviews carried out per country varied depending on the extent to which sufficient information was found through desk research and the complexity of the sector of higher VET. In general there were between 3 to 4 interviews carried out in each country but in some countries it was less and in others more.

Annex 4 gives an overview of the number of interviews carried out per country and per interviewee profile.

### **2.2.2 Programme or qualification templates**

The country templates were accompanied by 81 types of programme/qualification templates for specific programmes or qualifications (programme template in the text). Each programme template focused on a specific type of higher VET programme and provided a more in-depth description of a number of arrangements for the given programme.

The types of programmes for which a programme template was developed were selected in the following manner:

- First a long list of 179 programmes was drawn up based on desk research by reviewing national EQF Referencing Reports, ReferNet VET in Europe Country Reports and Cedefop's Spotlight on VET Reports;

- Types of programmes for more in-depth review were then selected using this approach:
  - In countries where less than three relevant types of programmes were identified, all were included in the research;
  - In countries where more than three types of programmes were found, the research team selected primarily those for which there was sufficient information confirming the programmes fit the definition and were considered rather mainstream in the country.
  - For some countries Cedefop Spotlight Reports were available and these present the types of programmes/qualifications considered as higher VET. The selection of higher VET programmes for review under this study was cross-checked with this publication.

The selection was double checked to verify whether it ensured good country coverage (2-3 programmes per country).

The programme templates covered:

- Governance arrangements;
- Types of providers offering these programmes;
- Quality assurance measures;
- Funding;
- Programme design;
- Focus of these programmes;
- Target groups;
- Content and types of learning outcomes expected;
- Modes of delivery;
- Programme duration (typical);
- Assessment and certification arrangements;
- Teachers and trainers in these programmes;
- Partnership;
- Sectoral focus;
- Trends

The templates combined a set of closed-ended questions based on categories corresponding to each of the above headings. The templates also had open fields for descriptions. The number of programme templates per country varied between one and seven. In most countries two to three programme templates were completed. The researchers selected the main programmes per country based on the working definition presented above. Based on the 'national perception' of what could be considered as higher VET in a country (based on stakeholder interviews), 63 programmes/qualifications were selected for the analysis presented in section 4.2.

The list of programmes covered is shown in Annex 1.

### **2.2.3 Case studies**

The assignment also looked in greater depth at 10 higher VET programmes or qualifications through case studies. In terms of levels, the cases studied focused on either one EQF level – EQF 5 (Finland, Italy, Portugal) or EQF 6 (Austria, Bulgaria and Germany) – or covered several levels: EQF 5-6 (Sweden), EQF 5-7 (France), EQF 6-7 (Poland) and EQF 5-8 (United Kingdom, Northern Ireland).

Table 1 below gives an overview of the 10 case studies. Annex 2 provides short summaries of these case studies.

The case studies were based on desk research and interviews. They covered the following topics:

- General information;
- Context;
- Key characteristics (including partnership and labour market outcomes);
- Work-based learning;
- Quality assurance;
- Information and feedback loops;
- Flexibility and permeability;
- Key competences;
- Teachers and trainers;
- Conclusions.

In total the researchers carried out 71 interviews for the 10 case studies. The biggest group of interviewees were representatives of higher VET providers (31). In addition to them, the researchers spoke to 15 stakeholder representatives, 13 students and 12 policy makers, agencies including quality assurance bodies. The number of interviews per case varied between 6 and 8. In one case it was less (5 interviewees) and in another, more (11 interviewees).

Table 1. Overview of case studies<sup>15</sup>

Country	Title	Rationale for selection and focus of the case study	EQF level(s)
Austria	Dual programmes at universities of applied sciences	New type of programme Hybrid programmes combining academic and vocational education and training provision Stakeholder involvement in design of curricula and delivery	EQF 6
Bulgaria	Professional Bachelor for disadvantaged learners: Massage therapist with visual impairments	Focus on disadvantaged learners (visually impaired)	EQF 6
Finland	The role of guidance services in completing Specialist Vocational Qualifications – Case of TAKK	Guidance services in support to higher VET Competence-based Qualifications	EQF (4 [VFQ]) 5-6 (VSQ)
France	The role of Chambers of Commerce	Chambers of Commerce as stakeholder and of provider	EQF 5-7

<sup>15</sup> EQF levels for AT, FI, PL, SE are preliminary.

	Commerce and Industry in the delivery of higher VET		
Germany	Dual study programmes at universities of co-operative education	Hybrid programmes combining academic and vocational education and training provision  Considered differently depending on the type of provider (HE in universities and universities of applied science; VET in vocational academies and universities of co-operative education)  Stakeholders (labour market) involvement  Increasing popularity in Germany	EQF 6
Italy	<i>Istruzione Tecnica Superiore</i> (ITS): Programme delivered by Higher Technical Institutes	New type of programme  Recently piloted and evaluated  Issue related to the local/national dimension of the programmes	EQF 5
Poland	First and second cycle studies provided at State Higher Vocational Schools	New introduction of dual training  Stakeholders' involvement: regional authorities  Driven by local labour market demand  Focus on disadvantaged learners (economic and geographical)	EQF 6-7
Portugal	Higher Professional Education Technical Courses	New type of short cycle programme  Stakeholders' involvement	EQF 5
Sweden	Higher vocational education and training / The adaptation of higher VET studies to labour market needs	New type of programme  Driven by labour market needs (training courses are offered in specific fields where there is an explicit demand for competence)  Focus on approaches and methods used to identify (regional) labour market needs  Stakeholders' involvement	EQF 5-6
United Kingdom (Northern Ireland)	2014 Apprenticeship Strategy 'Securing our Success'	Strategy rather than type of programme  Piloted the use of apprenticeships at highest EQF levels	EQF 7-8

#### 2.2.4 Expert workshop

In order to discuss the preliminary findings of the assignment and to develop these further, an expert workshop was organised as part of the study. The workshop brought together 20 experts from 14 countries and three stakeholder and international organisations. The workshop took one day and focused on discussions concerning: definition of higher VET, key characteristics of higher VET, trends and drivers and strengths and weaknesses. The main messages from the workshop are incorporated in the final report and in particular in the sections on definition of higher VET and the section on trends.

### **2.2.5 Analysis of international and national statistics**

The research team analysed the statistics on participation in post-secondary education according to ISCED 2011 as available from Eurostat UOE database. The research team also collected national statistics on participation in higher VET, graduation from higher VET and labour market insertion where available. The national data was presented in a descriptive manner as due to lack of comparability it does not allow for making cross-country conclusions.

### 3 How can higher VET be defined and how is it embedded in the national qualification landscape?

The study aimed to shed light on the understanding of 'higher VET', and on what is understood by 'higher VET' across the EU-28. Special emphasis was placed on identifying and understanding the scope of higher VET and how it is embedded in the national landscape and to identify types of qualifications or programmes that are considered to be part of this field. Furthermore, the research aimed at identifying any 'grey zones' of higher VET, i.e. types of programmes or qualifications classified as higher VET in some countries but not in others or where contradictory views exist in the national context.

The analysis on what could be considered as higher VET in the EU Member States presented in this chapter is based on the results of the country templates and discussions from the expert workshop. The country templates were developed based on desk research and interviews with relevant stakeholders. Stakeholders interviewed were asked to describe how higher VET is understood in their country. However, since it was only possible to talk to a limited number of stakeholders, the decision on whether types or programmes that fit the study working definition could be considered as part of higher VET often depends on the background of stakeholders interviewed. The fact that there is very rarely a commonly agreed definition for higher VET in a national context provides room for personal interpretation as to what it might cover or not. This needs to be taken into account in particular when reading this chapter but also for the overall study.

#### 3.1 Understanding of higher VET

##### 3.1.1 Working definition for this study

Figure 2 illustrates the definition of higher VET as used later in this study. In localising the 'area' of higher VET, two 'strands' of qualifications across EQF levels 5 to 8 have been identified:

- Higher education qualifications covered by the European Higher Education Area (EHEA).
- Vocationally or professionally oriented education and training at EQF levels 5-8.

These two 'strands' overlap to a certain extent, creating an 'overlapping zone', which may be of different size and composition in each country. It includes higher professional and vocational types of programmes or qualifications, which are covered by the EHEA; this will in particular include short-cycle (SCHE) and professional bachelor and master degrees.

For the scope of higher VET, this gives rise to two options for the definition of the term:

- 'Narrow' definition of higher VET: higher VET is understood as higher professional and vocational education and training outside the European Higher Education Area. This would *exclude* SCHE and Professional Bachelor/Master degrees or other professionally oriented qualifications offered within the first and second cycle higher education of the Bologna framework.

Based on the programmes and qualifications analysed for this study, the following main types of higher VET will fit into this category:

- Post-secondary level VET, offered outside higher education: this does not directly refer to the definition used in ISCED but to qualifications offered at post-secondary level which are not part of the higher education segment (in terms of governance or inclusion in the qualifications framework for higher education);

- Continuing Vocational Education and Training (CVET) offered in the formal education system (usually after entry into working life). These qualifications give access to nationally recognised qualifications but are targeting adult learners;
- Higher-level CVET provided outside the formal education system.
- 'Broad' definition of higher VET: higher VET is understood as higher professional and vocational types of programmes or qualifications, *including* those covered by the EHEA.

In addition to the higher VET types listed above ('narrow definition'), the 'broad' definition of higher VET thus includes the following main types of programmes/qualifications (i.e. they also broadly reflect the 'overlapping zone' in Figure 2):

- Short-cycle higher education;
- Professional Bachelor and Professional Master degrees;
- Dual studies (apprenticeship or 'alternance' types) at Bachelor, Master or Doctoral level.

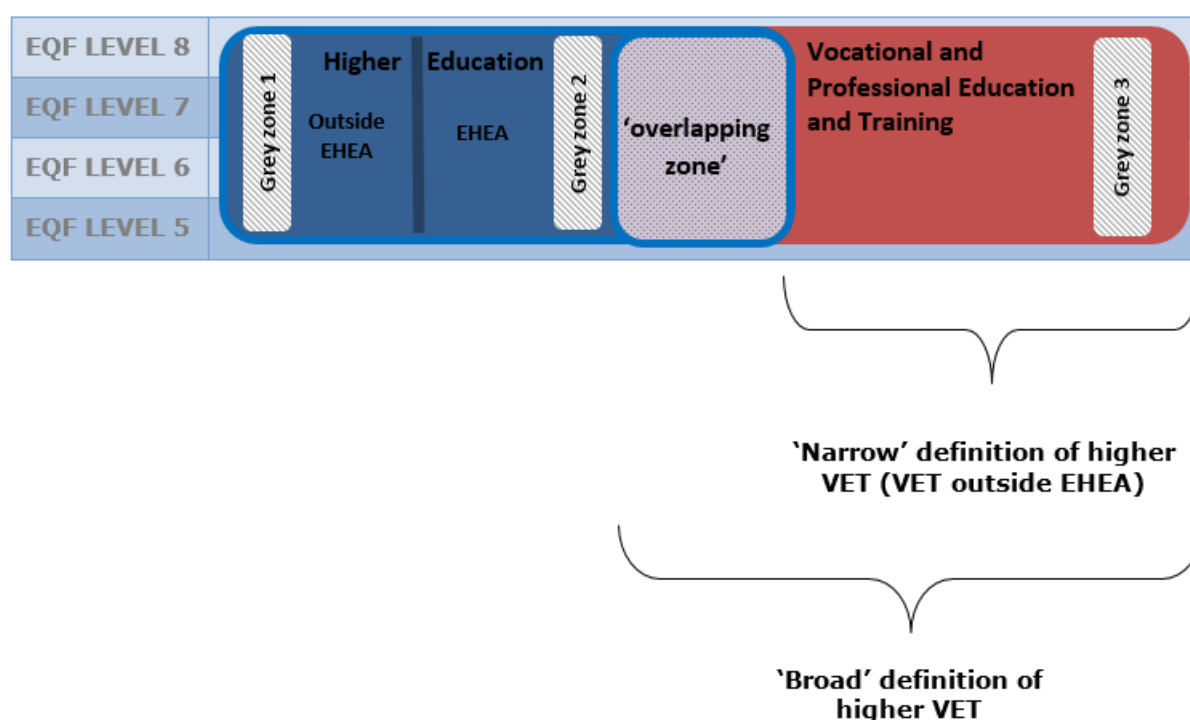
For the moment, there is no consensus as to whether the 'overlapping zone' (higher professional and vocational types of programmes or qualifications covered by the EHEA) should be considered as part of higher VET or not. Nevertheless, it is included in this study. Furthermore, there are also other programmes and qualifications that are not clearly covered by any of the definitions above but might also be considered as higher VET. This 'grey zone' is discussed in section 3.3.4.

As pointed out earlier, in the absence of a clear definition of higher VET that applies to all countries accordingly, there are certain 'grey zones', i.e. types of programmes/qualifications which may be considered higher VET in some countries but not in others. Keeping in mind that it is not possible to clearly define the scope or contents of these 'grey zones', the following examples can be identified.

- Grey zone 1: One example would be CVET programmes/qualifications, provided by higher education institutions, but which are not considered qualifications covered by the EHEA (e.g. CVET university courses in Austria).
- Grey zone 2: This area may include professional-type higher education programmes/qualifications offered by traditional academic universities other than short-cycle degrees, Professional Bachelor or Professional Master Degrees. This may include certain programmes/qualifications related to teacher training, medical studies or engineering.
- This area may furthermore include higher education programmes/qualifications provided by universities of applied sciences (or polytechnics, or similar institutions), which are considered as higher VET in some countries, but not in others.
- Grey zone 3: This area in particular may include programmes and qualifications for which it cannot be clearly determined whether they are above upper-secondary level (or above EQF level 4). This can in particular include CVET programmes, often provided outside the formal system of education and training, which have not been linked to an NQF level and that have not been classified according to ISCED.

Further examples of higher VET types which can be considered as part of the 'grey zones' are listed in section 3.3.4.

Figure 2. Localisation of higher VET – working definition



Source: ICF analysis

The following two dimensions are used to delimitate the scope of the area of higher VET: the 'VET' dimension and the 'level' dimension.

### 'VET' dimension

For clarifying the VET dimension we refer to the following definitions:

- Without particular reference to its level, Cedefop defines vocational education and training as 'education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market'<sup>16</sup>.
- The Cedefop study on 'VET at higher qualification levels'<sup>17</sup> describes professional education as 'preparation for a profession that requires specialised knowledge within a profession or vocation. Very often leads directly to an exact profession or work'.
- For its 'Skills beyond school' reviews, OECD defines the VET dimension of post-secondary vocational education and training as follows: 'programmes... that prepare for direct entry to the labour market in a specific profession, are of one year or more in length (full-time equivalent), are provided beyond upper secondary level (ISCED 4, 5), and lead to recognised qualifications'<sup>18</sup>.
- The HAPHE<sup>19</sup> project refers to the following characteristics of the VET dimension in their definition of professional higher education programmes (PHE): 'Professional higher education is a form of higher education that offers a particularly intense

<sup>16</sup> CEDEFOP (2014) *Terminology of European Education and Training Policy. Second edition. A Selection of 130 Key Terms*. Luxembourg: Publications Office of the European Union.

<sup>17</sup> CEDEFOP (2011) *Vocational education and training at higher qualification levels*. Luxembourg: Office for Official Publications of the European Communities.

<sup>18</sup> OECD (2012) *Post-Secondary Vocational Education and Training: Pathways and Partnerships, Higher Education in Regional and City Development*, Paris: OECD.

<sup>19</sup> HAPHE (Harmonising Approaches to Professional Higher Education in Europe).

integration with the world of work in all its aspects, including teaching, learning, research and governance...'<sup>20</sup>

From these definitions it can be concluded that higher VET programmes or qualifications – whether offered outside higher education or belonging to the 'overlapping zone' – are characterised by a high degree of vocational or professional orientation. Higher VET often contains aspects of both professionally oriented and academically oriented aspects, but with a dominance of professionally oriented aspects (in terms of profile and content of a programme or qualification). These programmes/qualifications are often characterised by intense integration with the world of work in several aspects (e.g. representatives of enterprises are involved in teaching activities, applied research is carried out in close cooperation with companies, and labour market representatives can be involved in all phases, from the design of a programme or qualification to the certification and review processes). The vocational or professional orientation of higher VET programmes or qualifications is also expressed by a high degree of work based learning, i.e. where to a certain extent, learning takes place in companies or in close to 'real life' working environments created in VET schools (including on-site labs, workshops, kitchens, restaurants, junior or practice firms, simulations or real business/industry project assignments). The higher VET qualifications awarded may have different purposes - they may primarily prepare for direct entry to the labour market in a certain field or area, or, in some cases, may even provide access to a certain profession. However, they may also be valued as both labour market entry qualifications and at the same time represent currency for entry or progression to education and training programmes at higher levels. The latter can in particular be expected in relation to qualifications belonging to the 'overlapping zone' but can also be observed as a purpose of qualifications resulting from higher professional and VET outside higher education.

### **'Level' dimension**

For defining the level dimension, both ISCED (International Standard Classification of Education) and EQF (European Qualifications Framework) are used. Both are important tools for the discussion of the scope of higher VET, but they also have their limitations. ISCED is first and foremost a statistical framework developed for assembling, compiling and presenting education-related statistics. For the purpose of defining the 'level' dimension, the EQF would technically seem more suitable. However, for some countries the allocation of qualifications to the NQFs is still pending or work in progress. Many countries start by allocating formal qualifications to their NQFs, leaving non-formal qualifications for a later stage. It is however in particular the area of non-formal qualifications, where a significant share of higher VET qualifications are expected to be found across countries. Moreover, the EQF is currently not used for statistical purposes (for example for comparing numbers of holders of qualifications allocated at specific levels).

#### *European Qualifications Framework (EQF)*

In terms of EQF levels, higher VET may refer to EQF levels 5 to 8. Of particular importance in this context is the area surrounding level 5 of the EQF, as it is in a number of countries the interface between vocational and higher education. There is a broad variety regarding the use of EQF level 5 in European countries: National levels linked to EQF level 5 include qualifications belonging to different sub-sectors (VET, HE, CVET and general education). Many of these qualifications have a clear hybrid character: they have a 'hub function' since they are valued as labour market entry qualifications by employers and at the same time have currency for entry to higher education.<sup>21</sup> Thus, the EQF level 5 is sometimes considered as the zone of 'overlap'

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<sup>20</sup> Camilleri, A. F. et al. (2014) *Professional Higher Education in Europe. Characteristics, Practice Examples and National Differences. Final report of the HAPHE project*, Malta: Knowledge Innovation Centre.

<sup>21</sup> CEDEFOP (2014) *Qualifications at level 5: progressing in a career or to higher education*. Research paper, pp. 102-103, Luxembourg: Publications Office of the European Union.

between VET and HE, although, all levels of the EQF (i.e. also levels 6 to 8) are supposed to be open to qualifications acquired outside the HE context. In this role of 'zone of overlap', the level 5 can provide a 'missing link' between secondary and higher education<sup>22</sup>.

But not only EQF level 5, EQF levels 6 to 8 also include a particularly heterogeneous mix of qualifications, including professional Bachelor and Master degrees, 'Master' craftsperson qualifications, diploma in technological specialisations, and professional qualifications outside initial, formal education and training to name but a few.

The focus of this study is on qualifications from the formal system. However, qualifications from outside the formal system are taken into account where they are included (or discussed to be included) in the NQF.

#### *ISCED classification*

The level dimension refers to programmes beyond IVET at upper secondary level. In terms of ISCED 1997, this refers to 'post-secondary non-tertiary education' and 'tertiary education'. The following table provides an overview of the ISCED levels covered in this study.

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<sup>22</sup> EURASHE (2011) *Short Cycle Higher Education in Europe Level 5: the Missing Link*.

Table 2. ISCED 1997 levels<sup>23</sup>

ISCED 4	<p><i>Post-secondary non-tertiary education</i></p> <p>Programmes that straddle the boundary between upper secondary and post-secondary education from an international point of view, even though they might clearly be considered as upper-secondary or post-secondary programmes in a national context. Level 4 programmes cannot be regarded as tertiary programmes.</p>	<p>4A programmes prepare for entry to ISCED 5</p> <p><i>Example:</i> VET colleges in Austria</p> <p>4B programmes not giving access to level 5 (primarily designed for direct labour market entry).</p> <p><i>Example:</i> Schools of the healthcare sector in Austria</p>
ISCED 5	<p><i>First stage of tertiary education</i> (not leading directly to an advanced research qualification)</p> <p>Tertiary programmes having an educational content more advanced than those offered at levels 3 and 4. Entry to these programmes normally requires the successful completion of ISCED level 3A or 3B or a similar qualification at ISCED level 4A.</p>	<p>5A programmes are tertiary programmes that are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and profession with high skills requirements.</p> <p><i>Example:</i> 'Fachhochschule' degree programmes at universities of applied sciences in Austria, Germany, Finland;</p> <p>5B programmes are typically shorter than those in 5A and focus on occupationally specific skills geared for entry into the labour market, although some theoretical foundations may be covered in the respective programme.</p> <p><i>Examples:</i> Brevet de technicien supérieur (BTS) courses in France; Higher Certificate in Ireland; Schools for master craftspeople in Austria; Ciclos Formativos de Grado Superior (specific vocational training – advanced level) in Spain; professional higher education programmes in Estonia.</p>
ISCED 6	<p><i>Second stage of tertiary education</i> (leading to an advanced research qualification)</p> <p>Typically requires the submission of a thesis or dissertation of publishable quality which is the product of original research and represents a significant contribution to knowledge.</p>	

Source: UIS UNESCO and OECD

<sup>23</sup> UNESCO (2015) *ISCED Mapping*.

UNESCO (2006) *International Standard Classification of Education*, Re-edition, Montreal: UNESCO-UIS.

OECD (2012), *Post-Secondary Vocational Education and Training: Pathways and Partnerships, Higher Education in Regional and City Development*, OECD Publishing.

In 2011, a revision to ISCED was formally adopted. At the time of preparing country templates and writing the report, most of the statistics available referred to ISCED 1997, but new ones have started to be published by using ISCED 2011. One of the central changes is the diversification of tertiary levels, from two in ISCED 1997 to four in ISCED 2011. In total, ISCED 2011 has nine levels (0-8), compared to seven levels in ISCED 1997 (0-6).

Table 3. Correspondence of ISCED 1997 and 2011 levels at post-secondary and tertiary level

ISCED 1997	ISCED 2011
Level 4: Post-secondary non-tertiary	Level 4: Post-secondary non-tertiary (slightly modified content)
Level 5: First stage of tertiary	Level 5: Short-cycle tertiary
	Level 6: Bachelor or equivalent
	Level 7: Master or equivalent
Level 6: Second stage of tertiary	Level 8: Doctoral or equivalent

Source: ISCED 1997 and 2011<sup>24</sup>

Although a distinction exists, the vocational or professional orientation of higher education programmes is not always clearly visible in statistical data based on ISCED 1997. For example, in Finland, 'polytechnics' (universities of applied sciences, UAS) were introduced in the early 1990s and are designed as a vocationally oriented higher education pathway parallel to traditional universities. Phases of practical training are an integral component of these programmes and can take various different shapes and forms. Although generally considered as vocational or professional education and training, they are assigned to ISCED (1997) level 5A.<sup>25</sup> The orientation of a programme (vocational or general) is also introduced as a category at ISCED 2011 levels 2 to 5. At ISCED levels 6 to 8, the terms 'academic' and 'professional' will be used instead, however, no definitions have been provided so far for these dimensions.

### Segment of education and training

From the discussion on the 'level' and 'VET' dimensions presented above it is obvious that higher VET can probably not be located in one specific segment of European education and training systems. The study aimed to explore to which segment of education and training the types of programmes and qualifications that are or could be considered as part of higher VET belong to (in terms of governance and legislation).

#### Initial VET (IVET)

Based on Cedefop<sup>26</sup>, IVET can be understood as VET carried out in the initial education and training system, usually before entering working life. Moreover, IVET can be carried out at any level and in various forms (full-time school-based or alternance training or apprenticeship pathways). However, since in most countries IVET is linked to upper-secondary education, it is usually not considered as higher VET. For example, in some cases, types of programmes classified at ISCED 1997/2011 level 4 are very closely linked to upper-secondary education and are therefore not seen as higher VET.

#### Continuing vocational education and training (CVET)

<sup>24</sup> UNESCO (2012) International Standard Classification of Education 2011, Montreal: UNESCO-UIS.

UNESCO (2006) International Standard Classification of Education, Re-edition, Montreal: UNESCO-UIS.

<sup>25</sup> Hippach-Schneider, U. (2014) *Academisation or vocational drift?: International developments in the tertiary sector of education*, pp. 1-7, In: BIBB (ed.). Bonn.

<sup>26</sup> CEDEFOP (2014) *Terminology of European Education and Training Policy. Second edition. A Selection of 130 Key Terms*. Luxembourg: Publications Office of the European Union.

CVET can be understood as VET 'after initial education and training – or and training after entry into working life aimed at helping individuals to: - improve or update their knowledge and/or skills; - acquire new skills for a career move or retraining; - continue their personal or professional development'<sup>27</sup>. The CVET landscape differs across countries. It operates in specific contexts, it is intrinsically linked to the labour market and it is delivered by a wide range of stakeholders and institutions, in formal education and training as well as outside. A significant part of CVET is organised in the private sector by multiple providers. According to the Adult education Survey 2011, only 9.8% of non-formal education and training activities in the EU Member States are provided by formal education institutions.<sup>28</sup>

#### *Post-secondary non tertiary, tertiary and higher education*

At European level, the specific meaning of the terms post-secondary education, tertiary education and higher education is not always clear and these terms are often used interchangeably. Existing definitions and classifications are developed for different purposes, for example:

- *Definitions and classifications used in relation to ISCED (see above):* They are used for statistical purposes. However, it can be observed, for example, that the organisational structure of tertiary education programmes (also at the same levels) varies greatly across countries. For example, whereas in some countries, only (academic and professionally oriented) Bachelor programmes might be classified at ISCED (2011) level 6, in other countries also other types of programmes (that could also belong to CVET) might be classified at this level (an example is Germany, with the 'Master Craftsmen programmes at trade and technical schools').
- *Classifications used in national contexts and at European level:* In many national contexts the term 'tertiary education' is not used (except in relation to ISCED) and the term 'higher education' is commonly used instead (in policies and in relation to governance structures). This is also reflected at European level. While 'tertiary' education seems to be the more encompassing term (and can also include CVET offered outside higher education institutions), higher education policy at European level mainly refers to the programmes covered by the Bologna process (or EHEA<sup>29</sup>). Qualifications offered in higher education are understood as 'any degree, diploma or other certificate issued by a competent authority attesting that particular learning outcomes have been achieved, normally following the successful completion of a recognised higher education programme of study.'<sup>30</sup> Countries involved in the Bologna Process usually have a system of higher education which is a segment of their education and training system that is more or less distinguished from other segments. The elements of this system are often formally defined, in terms of its legal basis, governance structures, types of providers (higher education institutions), stakeholders involved (such as staff, learners, social partners). Across Europe, the common understanding and comparability of higher education qualifications is strengthened with the implementation of the Framework for Qualifications of the EHEA.

#### *Outside the formal education system*

For the purpose of this study, this segment is defined in contrast to the traditional formal education system which is usually regulated by law and considered as

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<sup>27</sup> CEDEFOP (2014) *Terminology of European Education and Training Policy. Second edition. A Selection of 130 Key Terms*. Luxembourg: Publications Office of the European Union.

<sup>28</sup> CEDEFOP (2014) *Policy handbook: access to and participation in continuous vocational education and training (CVET) in Europe*. Luxembourg: Publications Office. Cedefop (forthcoming). *Job-related learning and continuing vocational training in Europe: a statistical picture*, Luxembourg: Publications Office.

<sup>29</sup> European Higher Education Area (<http://www.ehea.info/>).

<sup>30</sup> Ministry of Science, Technology and Innovation (2015) *A Framework for Qualifications of the European Higher Education Area*, p30, Copenhagen: The National IT and Telecom Agency.

'mainstream education'. Outside the formal system, programmes and qualifications can be offered by private providers, companies, Public Employment Services etc.

### **3.1.2 Use of the term 'higher VET' and definitions in the countries analysed**

The aim of the study was not to redefine existing classifications, structures or segments/sub-systems of education and training by applying the working definition presented above. The study was of an explorative nature and aimed at exploring national perceptions.

The research focussed at exploring whether the term 'higher VET' is used in the national context and – if yes – how it is understood and defined and how this differs from the scope agreed on for this study. In countries where the term is not used at all, it was explored whether any types of programmes or qualifications exist that could be considered as higher VET. Researchers were asked to take into account the dimensions included in the working definition (the 'broad' and the 'narrow' definition as well as any 'grey zones'), but in particular to present the perspectives of key stakeholders interviewed in the course of the study ('national perception').

In most countries, the term 'higher VET' is not used at all in official documents or discussions. In some national contexts, however, this term or similar ones are used for a specific type of programme or a specific segment of the education system. These types or segments are either considered as being located in the post-secondary area or located in this 'overlapping zone' between higher education and VET at higher levels. This term is usually not officially used for referring to VET at higher levels offered outside higher education. Of course, one needs to be aware of the language and translation issue in this context.

Definitions referring to the 'overlapping zone' - examples:

- Latvia: The Vocational Education Law (Section 1, Article 5) defines 'higher vocational education' as 'higher level vocational education which provides a possibility to acquire a fourth or fifth level vocational qualification.'<sup>31</sup> The fourth and the fifth levels, relating to higher VET are defined as follows:
  - the fourth qualification level – theoretical and practical training, which provides an opportunity to perform complicated artisan work, as well as to organise and manage the work of other specialists (article 4); and
  - the fifth qualification level – higher qualification of a specific sector, which provides an opportunity to plan and also perform scientific research work in the relevant sector (article 5).
- Netherlands: The term 'Hoger Beroepsonderwijs (HBO)' is used (for qualifications offered at universities of applied sciences, linked to EQF levels 5-7) which can be translated as 'higher professional education'.
- Spain: The official term used is 'Higher level cycles of Professional Training', which refers to programmes under the VET system (however, they are allocated to level 1 of the qualifications framework for higher education and are linked to EQF level 5).
- Definitions referring to vocational or professional education and training offered outside higher education - examples: Slovakia: The term 'higher VET' is explicitly used in the School Act. It is also used in the statistics provided by the Institute for Information and Prognosis in Education. It refers to 'Post-Maturita Specialising Studies' leading to qualifications called 'Certified Specialist – DiS' which were expected to be linked to EQF level 5 at the time of writing this report.

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<sup>31</sup> Vocational Education Law, entered in force on 14 July 1999.

- Sweden: The term used for a specific type of education is 'Higher Vocational Education (HVE)'. The qualifications will probably be linked to EQF levels 5 and 6<sup>32</sup>.

In some other countries the term higher VET or similar ones are also used for specific types of programmes or qualifications but there are also other types that could be considered as higher VET according to the working definition used in this study. Thus, these definitions do not cover the whole area of higher VET in the country. Examples include:

- Belgium-NL: The term 'higher professional education' is used for one type of programmes or qualifications ('HBO5', linked to EQF level 5; belongs to the 'overlapping zone') but other professional qualifications offered outside higher education linked to EQF levels 5-7 could also be considered as part of higher VET.
- Czech Republic: The term 'higher vocational education and training' is used for a certain type of education ('Higher Vocational Qualifications', linked to EQF level 6); however, it does not include another type of qualification that could also be considered within the scope of higher VET (Vocational Qualifications linked to EQF levels 5 to 7). Both types are offered outside higher education.
- Italy: The term 'Higher Technical Education and Training' is used for specific types of programmes (linked to EQF levels 4 and 5; the latter one belongs to the 'overlapping zone'); but other types could also be considered as part of higher VET.
- Poland: The term higher VET is not used for describing a sector of education but some providers are called 'State Higher Vocational Schools' (offering qualifications linked to EQF levels 6 and 7). However, other types of programmes/qualifications could also be considered as part of higher VET (those offered by colleges offering qualifications for teachers and social work and linked to EQF levels 5 or 6<sup>33</sup>). Both types can be considered as belonging to the 'overlapping zone'.

In some cases where definitions are also provided; in general they are consistent with the working definition for the study, at least as far as the 'VET dimension' is concerned:

- Czech Republic: A definition of higher VET at the national level is found in the substantial legal norm that regulates the system of education except tertiary university education in the Czech Republic (Law no. 561/2004 on Pre-School, Primary and Secondary Education, higher VET and Other Forms of Education – School Act). The School Act stipulates the following: 'Higher vocational education and training develops and deepens students' knowledge and skills obtained in the secondary level of education, and provides general and vocational education and practical training for carrying out specialised work activities.'<sup>34</sup>
- Netherlands: The 1992 Dutch law on Higher Education and Scientific Research defines HBO as 'education aimed at transferring theoretical knowledge and the development of competences in close connection to the professional practice.'
- Slovakia: According to the School Act (Law no. 245/2008), higher VET is 'an education programme of duration of at least two years and at most three years, provided by a secondary VET school that is finished through an absolutorium

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<sup>32</sup> NQF/EQF level has not yet been decided; the qualifications might be linked to EQF levels 5 and 6 based on the information presented in the Cedefop report 'Sweden - European inventory on NQF 2014' – however, this has not yet officially been approved.

<sup>33</sup> Preliminary assignment; the qualification level for a college diploma is not yet determined in the Referencing report referencing the Polish qualifications framework for lifelong learning to the European Qualifications Framework (2013), but in the literature on the subject, college studies are assigned to level 5. However, in the NQF monitoring report, they are linked to level 6 (p9: Poland - European inventory on NQF 2014).

<sup>34</sup> School Act no. 561/2004, Section 6, Head 1, Paragraph 92, Article 1.

exam. The graduation documents are: leaving certificate from a successful final exam and an absolutorium diploma that entitles the graduate to use the degree title 'Certified Specialist' ('diplomovaný špecialista') in the abbreviation 'DiS' used after the name.'

- United Kingdom – England: Higher Vocational Education is defined as 'education and training provision which is focused on employer needs at level 4 through to 8 on the QCF (Qualifications and Credit Framework) [equivalent to level 5 and above on the EQF], and is being delivered by providers across the further education and higher education sectors'.

### **3.2 The place of higher VET in national qualification landscapes and its scope**

In order to identify the scope of what could be understood as 'higher VET' in national contexts, country researchers discussed the working definition ('narrow' and 'broad' definition) with national stakeholders. However, it needs to be noted that, since 'higher VET' is often not used or defined in national contexts, interviewees probably interpreted the meaning of the term in different ways. Furthermore, interviewees in some countries stated that only programmes offered in higher education can be called 'higher'. Additionally, language and translation issues need to be taken into account.

Overall, results from the research show that there is no common agreement across countries regarding the scope of higher VET. A certain share of countries seem to locate this area at EQF level 5; other countries seem to offer types of higher VET programmes or qualifications in a broader area ranging across different levels and expanding across different sub-sectors of education. Taking into consideration the type of provider offering higher VET programmes or qualifications, does not help clarify the scope of this area. Across the countries analysed, higher VET provision is not limited to a certain type of providers - higher VET can be delivered by different types of providers and sometimes in cooperation between them.

The way higher VET is understood varies from a country to another and highly depends on the country context. Since there is no common agreement across countries regarding a definition or the scope of higher VET it is not surprising that the 'grey zone' of what might or might not be considered as higher VET is rather broad. In particular regarding types of programmes or qualifications from the higher education sector ('overlapping zone') there are contradictions and divergent views among experts. The decision on whether they could be considered as part of higher VET often depends on the background of stakeholders interviewed. The fact that there is very rarely a commonly agreed definition for higher VET in a national context provides room for personal interpretation as to what it might cover or not. Often 'VET' is associated with secondary level education and 'higher' with higher education.

Furthermore, excluding types of programmes or qualifications offered in the higher education sector from those that could be considered as higher VET is often based on the perception that higher VET is considered an inferior option to proceeding along a more traditional or academic higher education route. Thus, it is sometimes suggested using the term 'professional (tertiary) education' rather than higher VET, in order to underline its complementarity to 'academic tertiary education'.

In order to provide an overview of the place of higher VET in the national qualification landscapes, we present the ISCED classification of programmes identified as part of higher VET as well as the EQF levels covered by the types of qualifications considered as higher VET. A particular focus is on the relationship to higher education ('overlapping zone').

#### **3.2.1 ISCED levels covered**

Not all types of programmes that could be considered as belonging to higher VET are classified in ISCED. For example, some vocational or occupational qualifications are

not classified according to ISCED but are allocated to EQF levels. Of the types of programmes studied here, the majority are classified in ISCED are classified as ISCED 2011 level 5 but in some cases also ISCED 2011 levels 4, 6 and 7 can be identified.

Tables 4 and 5 pick up on the distinction between the 'narrow' and 'broad' definition of higher VET (see Figure 2), with the narrow definition being higher professional and VET outside higher education covered by the EHEA. The 'broad' definition would additionally include the 'overlapping' zones, i.e. in particular SCHE and Professional Bachelor/Master degrees or other professionally oriented qualifications offered within the first and second cycle higher education covered by the EHEA.

Table 4. ISCED 1997 classification

	Level 4	Level 5	Level 6
VET outside EHEA ('narrow' definition of higher VET as per Figure 2)	AT, BG, DK, EL, FI, FR, HU, IE, IT, LU, RO, SE	AT, CZ, DE, DK, EE, ES, IE, NL, SK, SE, UK	
'Overlapping zone' (as per Figure 2)		AT, BE-fr, BE-nl, BG, CZ, DE, DK, EE, ES, FR, FI, HR, HU, IE, LT, IT, LU, LV, MT, NL, PL, PT, SE, SI, UK	

Source: Country templates CY, not included

Table 5. ISCED 2011 classification

	Level 4	Level 5	Level 6	Level 7	Level 8
VET outside EHEA ('narrow' definition of higher VET as per Figure 2)	AT, BG, DK, EL, FI, FR, HU, IE, IT, SE, UK	AT, CZ, EL, DE, DK, EE, SK, NL			
'Overlapping zone' (as per figure 2)		BE-fr, BE-nl, DK, ES, FR, HU, IE, IT, LV, NL, PT, SE, SI, UK	AT, BE-fr, BE-nl, BG, CZ, DE, EE, FR, HR, HU, IE, IT, LU, LV, NL, PL, SI	AT, BE-fr, EE, IE, LV, SI	

Source: Country templates (CY not included)

### 3.2.2 EQF levels covered

Although not all countries have already implemented their NQF and referenced their national qualifications levels to EQF levels, research clearly shows that most countries link qualifications in the area of higher VET to EQF level 5. However there are also higher VET qualifications linked to EQF levels 6 up to 8.

The table below presents which countries have higher VET qualifications linked to EQF levels 5-8, picking up on the distinction between the 'narrow' (programmes and qualifications offered outside higher education covered by the EHEA and 'broad' (including those covered by the EHEA) definition of higher VET.

Table 6. EQF levels of types of higher VET qualifications<sup>35</sup>

	Level 5	Level 6	Level 7	Level 8
VET outside HE (as per figure 2)	AT, BE-nl, BG, CZ, EE, EL, ES, DE, EE, FI, FI, FR, HR, HU, NL, SE, IE, LU, NL, RO, SK, SE, UK	AT, BE-nl, CZ, BE-nl, CZ, EE	EE	
'Overlapping zone' (as per figure 2)	BE-fr, BE-nl, CY, AT, BE-fr, BE-nl, BG, CZ, EE, FI, HR, DK, ES, FR, HR, nl, BG, CZ, EE, FI, HR, HU, IE, IT, LU, DK, EE, FI, HU, IE, IT, LV, MT, NL, PT, FR, IT, HR, LU, LV, NL, SE, UK, HU, IE, LT, PL, PT, SI, LU, LV, MT, NL, PL, PT, SI	AT, BE-fr, DE	IT	

Source: Country templates

It can be observed that in most of the countries where higher VET seems to be located at EQF level 5, only the levels above (6, 7 and 8) seem to be 'reserved' for higher education, i.e. no qualifications from outside higher education are linked to these higher levels. This is also the case in some of the other countries where types of higher VET qualifications are not only linked to EQF level 5, i.e. the qualifications linked to the levels above are part of higher education covered by the EHEA ('overlapping zone'). In the remaining countries (more than one third of countries analysed) the EQF levels 6, 7 and 8 are in principle open to all types of qualifications (AT, BE-fr, CZ, DE, EE, FI, IE, IT, NL, PL, UK<sup>36</sup>).

It is also interesting to see that some types of qualifications are linked to EQF level 4 (in Ireland and Italy, not depicted in Table 6). According to the working definition, EQF level 4 is out of scope. However, the programmes leading to these qualifications are classified as ISCED 4 and are therefore considered within scope.

### 3.2.3 Link to higher education ('broad' definition of higher VET)

Following the 'broad' definition of higher VET, in the majority of countries, at least some types of higher VET programmes or qualifications are part of higher education and are covered by the EHEA. Short Cycle Higher Education (SCHE) is offered in 18 countries. It has to be noted, however, that there is no overall agreement that this 'overlapping zone' (see Figure 2) is part of higher VET.

<sup>35</sup> EQF levels for AT, PL, SE, FI, SK are preliminary. In the case of ES the EQF level is based on the level in the Spanish Qualifications Framework for Higher Education, since the four higher levels of the NQF will be linked to the levels in the higher education framework.

<sup>36</sup> In theory, the intention is that 'Higher Apprenticeships' will be offered also at higher levels in the UK. However, currently they are mainly offered at EQF level 5.

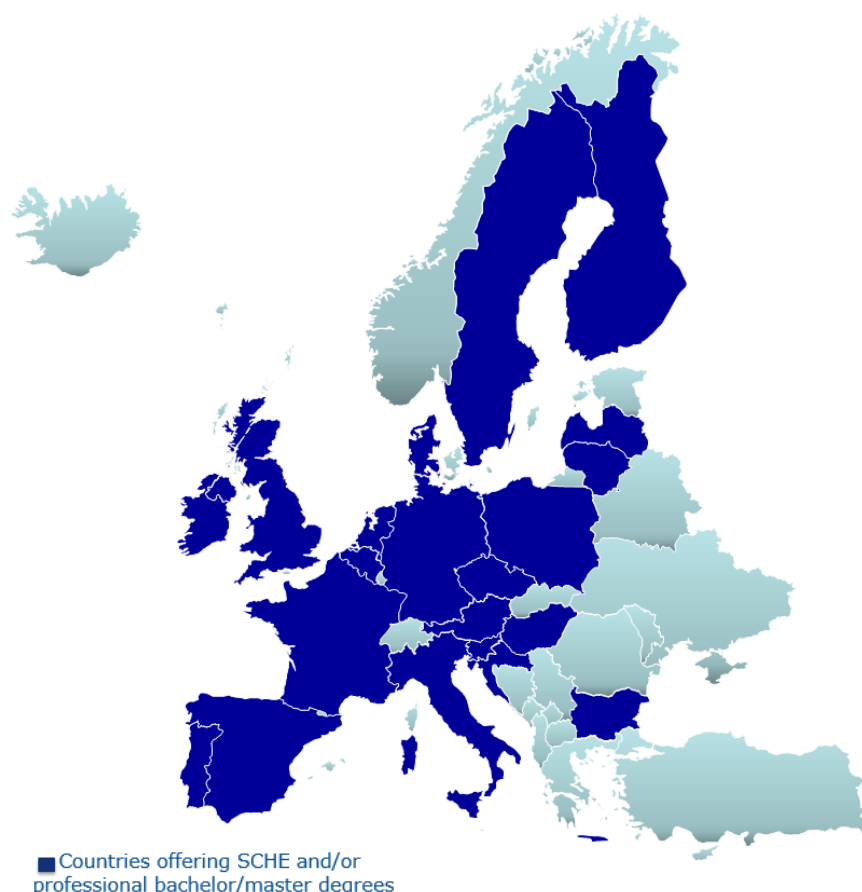
Table 7. Relationship to higher education

	Countries	Number
At least one type of higher VET programme/qualification belongs to higher education (EHEA)	AT, BE-fr, BE-nl, BG, CY, CZ, DE, DK, EE, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, SE, SI, UK	26
At least one type of higher VET programme/qualification is considered as SCHE	AT <sup>37</sup> , BE-fr, BE-nl, CY, DK, ES <sup>38</sup> , FR, HR, HU, IE, IT, LU, LV, MT, NL, SE, SI, UK	18
None of the types of higher VET programme/qualification belong to higher education (EHEA)	EL, RO, SK	3

Source: Country templates<sup>39</sup>

Figure 3 below identifies those countries which offer SCHE and/or professionally oriented Bachelor/Master degrees.<sup>40</sup>

Figure 3. Countries offering SCHE and/or professionally oriented Bachelor/Master degrees



<sup>37</sup> SCHE only offered at two Universities of Applied Sciences.

<sup>38</sup> 'Higher level cycles of Professional Training' are not officially called SCHE but they are at level 1 of the qualifications framework for higher education (linked to EQF level 5).

<sup>39</sup> Additional sources: Bologna Implementation Report 2015; Eurashe (2011) Short Cycle Higher Education in Europe Level 5: the Missing Link.

<sup>40</sup> It has to be noted, however, that not all countries use the term 'professional' in the title of their professionally oriented Bachelor or Master degrees.

### 3.3 Scope of higher VET – ‘national perception’

While there seems to be a common understanding across countries regarding the vocational dimension, there are diverging views regarding the level dimension and the potential scope of this area. The general notion that can be observed is that countries consider *post-secondary level* education (access requirements usually include completion of upper secondary education) as key characteristic of higher VET. However, there are different terms and concepts used for describing the area of higher VET and also for delimiting the scope of this area. For the purpose of this study, the following segments are distinguished:

- Higher professional and VET offered outside higher education covered by the EHEA (‘narrow definition’):
  - Post-secondary level VET, offered outside higher education: This does not directly refer to the definition used in ISCED but to qualifications offered at post-secondary level which are not part of the higher education segment (in terms of governance or inclusion in the qualifications framework for higher education);
  - Continuing Vocational Education and Training (CVET) offered in the formal education system (usually after entry into working life). These qualifications give access to nationally recognised qualifications but are targeting adult learners ;
  - CVET programmes/qualifications outside the formal education system.
- Higher professional and vocational types of programmes or qualifications covered by the EHEA (‘**Overlapping zone**’):
  - SCHE and professionally oriented Bachelor and Master programmes offered in higher education and covered by the EHEA;

The information presented below is based on the ‘national perception’ of what could be considered as higher VET in a country based on stakeholder interviews. Thus, in some countries a broader understanding is used (also including higher education qualifications, i.e. the ‘overlapping zone’) whereas in others a narrower definition is used (focussing on VET at higher levels outside higher education only).

The following table provides an overview of the EQF levels and educational segments covered by higher VET qualifications based on ‘national perceptions’. Further details (including reference to the types of programmes or qualifications considered as higher VET in each country) are presented below.

Table 8. Scope of higher VET – 'national perception'<sup>41</sup>

		EQF level 5	EQF level 6	EQF level 7	EQF level 8
HE ('overlapping zone')		AT, BE-nl, DK, AT, BG, DE, AT, IT, IT ES, FR, HR, HU, DK, EE, FR, IT, LU, LV, IE, IT, LU, LV, LU, LV, MT, NL, NL, PL MT, NL, PL, PT, PL, SI SI, UK <sup>42</sup>			
Higher professional and VET offered outside EHEA ('narrow' definition of higher VET)	Post-secondary	AT, BG, CY, EE, DE, IT, SE <sup>44</sup> EL, ES, HU, IE, IT, RO, SK, SE <sup>43</sup> , UK		CZ, IT	IT
	CVET	BE-nl, CZ, DK, FI, AT, BE-nl, CZ, BE-nl, FR, HR, IE, LU, DE, DK, FI, NL NL		CZ, DK	
	Outside the formal system	EE	EE	EE	EE

Source: Country templates

Based on the national perception of the scope of higher VET presented in Table 8, the following three broad groups of countries can be identified:

- Group A: Countries, where types or programmes considered as higher VET are located in an area **between upper-secondary level education and Bachelor or equivalent level, thus focussing on EQF level 5 only**. This is the case for Cyprus, Greece, Hungary, Portugal, Romania, Slovakia, Spain, and the UK.
- Group B: Countries, where the scope of what could be considered as higher VET can also be **clearly defined (i.e. it refers to one or two specific types of programmes or qualifications only)** but it refers either to **other segments** or in some cases also to **other EQF levels** as those mentioned above. This can be observed in Finland, Latvia, Malta, Poland, Slovenia, and Sweden.
- Group C: In the remaining countries, the types of programmes or qualifications that could be considered as part of higher VET belong to **different educational segments** and/or are allocated to **different EQF levels** and the **scope of this area is broader**. This is the case in Austria, Belgium-NL, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Ireland, Italy, Luxembourg, and the Netherlands.
- It must be noted that a comparison across countries or clustering of approaches is generally quite difficult because of different national traditions for defining educational sub-sectors or for defining and establishing borders between formal and non-formal education.

The section below lists examples of higher VET identified in the countries studied. It uses the structure presented in Figure 2 ('narrow' definition of higher VET + 'overlapping zone' = 'broad' definition of higher VET).

<sup>41</sup> EQF levels for AT, FI, PL, SE, SK are preliminary. Higher VET qualifications linked to EQF level 4 (and classified at ISCED level 4) or not yet linked to EQF levels (e.g. in AT and BE-fr) are not included in this table.

<sup>42</sup> Higher level Apprenticeships (Modern, Technical and Professional Apprenticeships in Scotland) can be offered at EQF levels 5-8 but are currently mainly offered at EQF level 5.

<sup>43</sup> In Sweden, this is considered as 'non-academic tertiary VET'.

<sup>44</sup> Idem.

### 3.3.1 'Narrow' definition of higher VET: higher professional and vocational education and training offered *outside* higher education covered by the EHEA

The following examples are from countries where types of higher VET identified in the study relate to the 'narrow definition' of higher VET only (cf. Figure 2) only.

*Higher VET as post-secondary level education (outside EHEA)*

*EQF level 5*

- Cyprus: Post-secondary certificates and diplomas (two years) offered at Post-secondary Institutes of Vocational Education and Training and Post-secondary diplomas (with different specialisations and durations) offered at Schools of Tertiary Education;
- Greece: Professional Specialisation Diploma Level 4<sup>45</sup> (ISCED 1997 4 and ISCED 2011 5) offered at Vocational Schools/Lyceums (EPAL), Vocational training diploma (initial vocational training at post-secondary level - ISCED 1997 4C and ISCED 2011 4) offered at Vocational Training Institutes (IEK), Post Upper Secondary and not Higher Education diploma or 'degree' (ISCED 1997 4 and ISCED 2011 4) offered at Higher Professional Schools (these schools are run by Ministries other than Education, such as Ministry of Culture and Ministry of Tourism);
- Romania: Post-high schools (*scoli post-liceale*) and foreman schools (*scoli de maistri*) are both located at post-secondary non tertiary level by the Law on Education (ISCED 1997 4 and ISCED 2011 4);
- Slovakia: Post-maturita specialising programmes (PMMS; previously known as Higher Professional Programmes) are finished with the absolutorium exam and constitute a higher level of qualification called 'Certified Specialist' (diplomovaný špecialista, DiS) (ISCED 1997 5B and ISCED 2011 5).

*EQF levels 5 and 6*

- Finland: Specialist Vocational Qualifications (ISCED 1997 4 and ISCED 2011 4) are offered in the formal CVET system (competence-based qualification system) and were expected to be linked to EQF level 5 at time of writing this report and in some cases to EQF level 6.
- Higher Vocational Education (HVE) in Sweden is considered as *non-academic tertiary VET*<sup>46</sup> (ISCED 1997 4B and 5B and ISCED 2011 4 and 5). The qualifications were expected to be linked to EQF levels 5 and 6.

*EQF levels 5-7*

- In the Czech Republic, two types can be distinguished:
  - First, higher VET as understood by the School Act is a distinctive type of education offered at post secondary level – a separate category of VET provided by specialised institutions, the Tertiary Professional Schools (further referred to as TPSs; vyšší odborné školy; sometimes in literature also translated as Higher Technical Schools). This type of education leads to a particular type of degree awarded by TPSs only: DiS (diplomovaný specialista; Certified Specialist; ISCED 1997 5B and ISCED 2011 5, EQF level 6).

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<sup>45</sup> Apprenticeship year of Vocational Schools/Lyceums (EPALs).

<sup>46</sup> NQF/EQF level has not yet been decided; the qualifications might be linked to EQF levels 5 and 6 based on the information presented in the Cedefop report 'Sweden - European inventory on NQF 2014' – however, this has not yet officially been approved.

- Another type is also within scope of the working definition and is considered as part of CVET: 'Vocational Qualifications' linked to EQF levels 5-7.

#### *Outside the formal education and training system*

In one country, there is only one type of programmes or qualification that could be considered as higher VET and this is offered outside the formal system:

- Belgium-FR: Entrepreneurial training course and additional courses / Formation chef d'entreprise are offered in the non-formal education system under the supervision of the Ministry of Employment of either Brussels Region or Walloon Region (provided by IFAPME in Wallonia and EFP in Brussels). Entrepreneurial training courses are part of the dual education system organised by SMEs (via apprenticeship centres) and subsidised by Regional authorities. They mainly offer VET at tertiary levels as well as VET at secondary level. Programmes are based on the dual education system; apprenticeships constitute the main form of training. Learners acquire both job related skills as well as entrepreneurial skills (i.e. how to manage a business). Programmes vary between 1 to 3 years and target adults who wish to set up their own business and acquiring specific professional qualifications. They are open to any person age 18+ who have completed their upper secondary leaving certificate. Requirement entrance for some programmes can be stricter (e.g. real-estate)<sup>47</sup>. However, these qualifications are not included in the NQF and thus not linked to the EQF.

### **3.3.2 Higher professional and vocational types of programmes or qualifications covered by the EHEA ('overlapping zone')**

The following examples are from countries where types of higher VET identified in the study relate to the 'overlapping zone' (cf. Figure 2) only.

#### *EQF level 5 only*

One country focuses on EQF level 5 but the only type of programme/qualification that can be considered as higher VET is part of *higher education* ('overlapping zone'):

- Portugal: 'Higher Professional Education Technical Programmes' (ISCED 1997 5 and ISCED 2011 5) are provided by higher education institutions and are part of the polytechnic system.

#### *EQF levels 5 and 6*

- In Malta, the 'VET Higher Diploma' (ISCED 1997 5B and ISCED 2011 6, EQF level 5; full-time and part-time pathways) as well as the Bachelor Degrees (ISCED 1997 6 and ISCED 2011 6, EQF level 6) that can be obtained at the two main VET providers (Malta College of Arts, Science and Technology - MCAST and Institute for Tourism Studies - ITS) belong to higher education.
- In Slovenia, short-cycle higher VET programmes (višje strokovno izobraževanje, ISCED 1997 5B and ISCED 2011 5, EQF level 5) offered by public and private higher vocational schools (višje strokovne šole) and long-cycle higher VET programmes or professional programmes in the first Bologna cycle (ISCED 1997 5B and ISCED 2011 6, EQF level 6) offered by higher education institutions belong to higher education. However, the latter ones do not always have a high degree of vocational or professional orientation.

#### *EQF levels 6 and 7*

- In Poland, higher VET is provided by a specific group of vocational institutions with practical educational profiles: State Higher Vocational Schools (Państwowe Wyższe Szkoły Zawodowe) offer first cycle studies (ISCED 1997 5A and ISCED 2011 6, EQF level 6) as well as second cycle studies (ISCED 1997 5A and ISCED

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<sup>47</sup> Refernet (2013) *VET in Europe, Belgium, Country report*.

2011 7, EQF level 7). Teacher Training Colleges (kolegia nauczycielskie), Foreign Language Teacher Training Colleges (nauczycielskie kolegia języków obcych) and Colleges of Social Work (kolegia pracowników służb społecznych) offer College diploma or first cycle vocational titles (ISCED 1997 5B and ISCED 2011 5/648). These qualifications will be linked to EQF level 5 or 6.<sup>49</sup>

#### *EQF levels 5, 6 and 7*

- In Latvia, 'higher VET' is considered as VET and at the same time treated as an integrated part of the higher education sector (qualifications are linked to EQF levels 5, 6 and 7). This is also reflected in the fact that both Vocational Education Law and the Law on Institutions of Higher Education regulate the field.<sup>50</sup> The Vocational Education Law regulates such issues as the organisation of the vocational education system and procedures for establishment, reorganisation and liquidation of vocational education institutions, levels of vocational education and of qualification, vocational qualification documents, requirements for teachers and students of vocational education institutions, the State vocational education standards, types of vocational education programmes, licensing, accreditation and registration of vocational education programmes and financing of vocational education. The Law on Institutions of Higher Education, more generally, regulates all higher education institutions, their autonomy, tasks, foundation, registration, accreditation, self-governance structures, type of staff, students' rights and obligations, etc. This Law applies to all higher education institutions, those providing academic and vocational qualifications, including colleges.

### **3.3.3 Higher professional and vocational education and training offered outside higher education and within higher education covered by the EHEA ('broad definition' of higher VET)**

Within this group of countries, which typically display a broader scope of higher VET, several different patterns can be identified, most of them combining the 'overlapping zone' (qualifications covered by the EHEA) with higher VET types belonging to one or several of the following segments: post-secondary non-HE + CVET/adult education + non-formal programmes qualifications.

Some countries have certain types of programmes or qualifications that could be considered as part of higher VET which belong to *higher education covered by the EHEA ('overlapping zone')* and other types that belong to *post-secondary level, outside higher education*:

#### *EQF level 5*

- Hungary: Two types of EQF level 5 qualifications can be identified as part of higher VET: one of them (called 'VET grades') belongs to post-secondary non-tertiary level (ISCED 1997 4C and ISCED 2011 4) whereas the other one to higher education and can be considered as SCHE ('Higher education VET programmes' – ISCED 1997 5B and ISCED 2011 5: they have been running since 1998 and were previously titled 'advanced VET'; from the 2013/2014 school year onwards only higher education institutions can launch these programmes)<sup>51</sup>.

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<sup>48</sup> Optionally – awarded by the HEI providing teaching-didactic oversight at the college (Referencing report referencing the Polish qualifications framework for lifelong learning to the European qualifications framework, 2013).

<sup>49</sup> Preliminary assignment; the qualification level for a college diploma is not yet determined in the 'Referencing report referencing the Polish qualifications framework for lifelong learning to the European qualifications framework' (2013), but in the literature on the subject, college studies are assigned to level 5. However, in the NQF monitoring report, they are linked to level 6 (Cedefop, 2015f, p9).

<sup>50</sup> This integration is also illustrated by the fact that HE institutions that are traditionally seen as mostly providing academic education are also offering *some* programmes leading to vocational qualifications (for example, the University of Latvia has a Faculty of Computing offering vocational qualifications of college, bachelor's, master's and doctoral level and vice versa [for instance, the Riga Technical University also has a Faculty of E-Learning Technologies and Humanities, including the Institute of Humanities, offering a range of humanities, social and business management subjects]).

<sup>51</sup> The third type of programmes/qualifications that could be considered as higher VET in Hungary is offered by adult education training providers. There are no unified regulations for these types of training.

- Spain: Higher Technical Certificates obtained in Higher Level Cycles of Professional Training are not called SCHE but are allocated to level 1 of the qualifications framework for higher education (ISCED 1997 5B and ISCED 2011 5). Specialisation Courses (within the system of Professional Training) which are currently being introduced and are linked to the same level but are offered outside higher education.
- United Kingdom: higher VET is considered in terms of broader VET policy in each country, rather than being treated as a sector on its own. In the case of England, Wales and Northern Ireland, higher VET is considered to include qualifications which are at level 4 and above on the Qualifications and Credit Framework (QCF) (equivalent to level 5 and above on the EQF). In Scotland, the relevant qualifications are those that are at level 7 and above on the Scottish Credit and Qualifications Framework (SCQF; also equivalent to level 5 and above on the EQF). The main types of higher VET programmes/qualifications that are in place across the countries of the United Kingdom are the Higher National Certificates (EQF level 5; included in the Framework for Higher Education Qualifications in England, Wales and Northern Ireland - FHEQ) and the Higher National Diplomas and the Foundation Degrees (SCHE, EQF level 5; the latter one is not offered in Scotland) which are part of higher education. Higher level Apprenticeships (Modern, Technical and Professional Apprenticeships in Scotland; EQF levels 5-8<sup>52</sup>) can lead to further academic qualifications such as a Honours Degree or to working towards professional qualifications specific to an industry.

#### *EQF levels 5 and 6*

- Bulgaria: The IV degree vocational qualification (ISCED 1997 4C and ISCED 2011 4, EQF level 5) belongs to VET and is a *post-secondary non-tertiary* programme. It was introduced in 1996 and is regulated by the Vocational Education and Training Act. IV degree vocational qualification is the highest level of VET that can be acquired; it refers to the professional competences for practicing professions. The second type of higher VET programme, the professional bachelor (ISCED 1997 5B and ISCED 2011 6, EQF 6), belongs to *higher education* is regulated by the Higher Education Act.

#### *EQF levels 4-8*

- Italy: The following types of programmes can be considered as part of higher VET: The Higher level technical education (ITS, SCHE; ISCED 1997 5B and ISCED 2011 5, EQF level 5) and the Higher technical education and training pathways (IFTS; ISCED 1997 4B and ISCED 2011 4, EQF level 4) and Higher education and research apprenticeship programmes which can lead to qualifications at different levels: an upper secondary diploma, a master degree, an IFTS certificate, an ITS diploma or a PhD even (and can be linked to EQF levels 4 up to 8). However, a reform currently under discussion may restrict the Higher education and research apprenticeship programme to post-secondary and tertiary qualifications only.

Some countries have certain types of programmes or qualifications that could be considered as part of higher VET which belong to *higher education* and other types that belong to *CVET/adult education* (and are offered to learners with professional work experience):

#### *EQF level 5*

- Croatia: Short Cycle Professional Studies (ISCED 1997 5B and ISCED 2011 5, EQF level 5) are part of higher education; and Master Craftsperson Qualifications (EQF level 5) are offered in CVET.

#### *EQF levels 5 and 6*

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<sup>52</sup> They are currently mainly offered at EQF level 5.

- France: The following three types of programmes are part of higher education: Advanced technician certificate (BTS - Brevet de technicien supérieur) – 2-year programmes at ISCED 1997 5B and ISCED 2011 5, EQF level 5; Vocational bachelor (Licence professionnelle) – 3-year programmes at ISCED 1997 5B and ISCED 2011 6, EQF level 6; Technological university diploma (DUT) – 3-year programmes at ISCED 1997 5B and ISCED 2011 5, EQF level 6. The Master's qualifications (Brevets de maîtrise) are issued by the Chambers of Trade (chambre des métiers) (EQF level 5) and offered in CVET.

#### *EQF levels 5, 6 and 7*

- Belgium-NL: HBO5 are considered as SCHE (ISCED 1997 5B and ISCED 2011 5, EQF level 5) and Professional qualifications (EQF levels 5-7) are closely linked to the professional world and can be obtained based on the recognition of competences and prior learning (including work experience).
- Denmark: Programmes leading to Professional Bachelors (Professionsbachelor – ISCED 1997 5A and ISCED 2011 6, EQF level 6) and Academy professions (Kort videregående uddannelse or erhvervsakademigrad, SCHE – ISCED 1997 5B and ISCED 2011 5, EQF level 5) are part of higher education. The vocational and adult education system includes further adult education (Videregående voksenuddannelse or Akademiuddannelse – ISCED 1997 4B and ISCED 2011 4, EQF level 5), Diploma degrees (Diplomuddannelse – ISCED 1997 5B and ISCED 2011 6, EQF level 6 and Master degrees (Masteruddannelse – ISCED 1997 5A and ISCED 2011 7, EQF level 7).
- Luxembourg: The Advanced Technician Diploma (Brevet de Technicien Supérieur – BTS; SCHE – ISCED 1997 5 and ISCED 2011 5, EQF level 5) and the Professional Bachelor/Master Degrees (Licences/Master Professionnels; ISCED 1997 5 and ISCED 2011 6 and 7, EQF levels 6 and 7) are part of higher education and the Master craftsperson diploma (ISCED 1997 4C and ISCED 2011 4, EQF level 5) are offered in CVET.
- Netherlands: Associate degrees (SCHE; ISCED 1997 5B and ISCED 2011 5, EQF level 5), Bachelor degrees (ISCED 1997 5A and ISCED 2011 6, EQF level 6) and Master degrees (ISCED 1997 5A and ISCED 2011 7, EQF level 7) are offered at universities of applied sciences and belong to higher education. Additionally, outside of these publicly funded degrees, companies and sector organisations may set up their own professional training (ISCED 1997 5A and ISCED 2011 6, EQF levels 5 and 6). For adult education, this is rather common in the Netherlands and has led to a large offering of accredited and non-accredited, short and long programmes.

Some countries have certain types of programmes or qualifications that could be considered as part of higher VET which belong to *post-secondary level, outside higher education*, other types that belong to *CVET* and others to *higher education*:

#### *EQF level 5*

In the Irish case, there is a common understanding of the levels of the education system that cover VET at higher level even though the term is not being used to define that exact educational provision:

- Post-secondary level in Ireland:
  - a) Apprenticeship (up to 4 years, ISCED 1997 4C and ISCED 2011 4, EQF level 4-5,)
  - b) Traineeship (up to 2 years, ISCED 1997 3C and ISCED 2011 4, EQF levels 4-5,)
  - c) Both provide officially recognised vocational qualifications, while the post-leaving certificate course (ISCED 1997 4C and ISCED 2011 4, EQF levels 4-5)

usually takes between one and two years and is quite often attained by graduates of upper secondary education in passing from secondary to higher education. The post-leaving certificate course provides more tracks and adds points required for admission to the undergraduate programmes at tertiary level of education.

- Irish Second Chance and Adult Learning programmes also provide qualifications up to the level of EQF 5 (ISCED 1997 4A/B and ISCED 2011 4). Most of these have been installed into the system in order to support unemployment through up-skilling and re-skilling, as well as to reach early school leavers.
- At tertiary level in Ireland, the main programme that offers VET-related content is the Higher Certificate programme (ISCED 1997 5B and ISCED 2011 5, EQF level 5), which runs up to two years. A Higher certificate is taken either immediately after upper secondary general programmes, or after one of the three post-secondary further education programmes. Another programme at this level is the Undergraduate degree which takes three years (ISCED 1997 5B and ISCED 2011 5, EQF level 5).

#### *EQF level 6*

'Higher VET' in Germany comprises post-secondary non-tertiary, tertiary and further/continuous vocational education, which can only be accessed after completing a form of (upper) secondary education (IVET), in some cases with at least a certificate that entitles the holder to attend a University of Applied Sciences (UAS) or in others additionally after a specific number of years of work experience. Two sub-sectors could be distinguished: one focussing mainly on learners with a vocational background and the other one focussing on learners who consider a university education but want to start a more vocational oriented career by choosing a dual study programme, which leads to a Bachelor title. Dual study programmes directly allow graduates to enrol for a Master's degree. For the purposes of this study, the following rather clear-cut cases can be considered as within the scope of higher VET:

- CVET: advanced vocational examinations (e.g. Meisterprüfungen [master craftsperson exams] and exams for IT-Professionals; ISCED 1997 5B and ISCED 2011 6, EQF level 6),
- Post-secondary level: continuous training courses at trade and technical schools and master's schools ('Fachschulen'; ISCED 1997 5B and ISCED 2011 6, EQF level 6),
- Higher education: dual study programmes offered by vocational academies/universities of co-operative education (Berufsakademien, Duale Hochschulen), which award the title 'Bachelor' not as an academic degree but as a 'state-certified qualification' (staatliche Abschlussbezeichnung; ISCED 1997 5B and ISCED 2011 6, EQF level 6).

In one country (EE), one type of programme or qualification that could be considered as part of higher VET is offered in *post-secondary level VET outside higher education*, one in *higher education* and others are offered *outside the formal education system*:

#### *EQF levels 5-8*

Higher VET in Estonia comprises the following types:

- the VET certificate level 5 (ISCED 2011 4, EQF level 5) is located at post-secondary non tertiary level,
- the professional higher education programmes are part of higher education (ISCED 1997 5B and ISCED 2011 6, EQF level 6) and
- occupational qualifications can be acquired via an educational programme as well as through validation of non-formal and informal learning (i.e. outside the formal system). In general, for receiving an occupational qualification at higher EQF

levels (5-8), the acquisition of the corresponding educational qualification is a precondition. In addition to the educational qualification further non-formal training and work experience is usually also a requirement in order to apply for an occupational qualification.

One country (AT) has some types of programmes or qualifications that could be considered as part of higher VET which belong to *post-secondary level outside higher education*, some to *CVET*, some to *higher education* and others are *offered outside the formal system*:

#### EQF levels 5-7

Higher VET in Austria could include the following types of qualifications:

- Post-secondary level outside higher education (school-based pathways; ISCED 1997 3A/4A and ISCED 2011 3/4/5, EQF level 5<sup>53</sup>): This includes qualifications obtained at VET colleges<sup>54</sup>, in post-secondary VET courses and schools for healthcare and nursing;
- Higher education pathways (ISCED 1997 5A/5B and ISCED 2011 5/6/7, EQF levels 6 and 7<sup>55</sup>): These include qualifications obtained at higher education institutions, in particular universities of applied sciences. Moreover, a number of higher education institutions (also academic universities and universities of education) provide continuing education courses (university courses for non HE-graduates and postgraduates). Recently, two forms of continuing education at higher education institutions have been introduced, based on the regulations for continuing education at tertiary institutions: Short cycle programmes were introduced at a few universities of applied sciences and the pilot phase of a *Berufsakademie* (*college of advanced vocational studies*) as a model of a 'third pillar' of tertiary education started in 2014. Access requirements include completed vocational training, at least two years of professional experience, for the two-semester course leading to the title 'Akademische/r...' and at least one year in a leadership experience or a higher education diploma and one year of professional experience for the additional two-semester course leading to a Master (Msc) degree<sup>56</sup>.
- Post-secondary pathways outside the formal school and higher education institutions (ISCED 2011 5 or not defined in ISCED): These include post-secondary qualifications offered in specific school-based pathways (industrial master and building craftsperson schools), qualifications for specific occupations (e.g. Security Academy of the Federal Ministry of the Interior) and qualifications awarded by a certifying authority (master craftsperson qualification<sup>57</sup>, certified financial accountant diploma, civil engineering exam).
- Other forms of training not regulated by law (CVET): These qualifications are provided at CVET institutions, companies, higher education institutions and VET schools.

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<sup>53</sup> Preliminary allocation, NQF not yet operational.

<sup>54</sup> With VET colleges, the first three years are classified at ISCED (2011) level 3, whereas the last two years are classified at ISCED (2011) level 5.

<sup>55</sup> Preliminary allocation, NQF not yet operational.

<sup>56</sup> WKO (2013) *Die Berufsakademie. Berufliche Aus- und Weiterbildung auf Hochschulebene*, [https://www.wko.at/Content.Node/Interessenvertretung/Aus--und-Weiterbildung/Eckpunkte\\_und\\_politischen\\_Forderungen\\_zur\\_Berufsakademie.pdf](https://www.wko.at/Content.Node/Interessenvertretung/Aus--und-Weiterbildung/Eckpunkte_und_politischen_Forderungen_zur_Berufsakademie.pdf).

Introduced programs (Trade and Marketing):

<http://www.wifi.at/Karriere/Akademische%20Ausbildungen/Berufsakademie/Berufsakademie%20Handel/Berufsakademie%20Handel>.

<sup>57</sup> EQF level 6 - preliminary allocation, NQF not yet operational.

### **3.3.4 Higher VET Grey zones**

The term higher VET is rarely used and in several countries there is no clear definition or common understanding of what could be considered as higher VET. The types of programmes/qualifications presented above were identified during the country level research and in interviews with selected stakeholders. In several cases 'grey zones' were also identified. Types of programmes or qualifications might belong to the 'grey zones' because of the following aspects:

- They are not classified in ISCED or not linked to EQF levels;
- They are closely linked to IVET and do not provide a qualification linked to a higher level than the upper-secondary level qualification;
- There is a strong segmentation between vocational and higher education;
- They are considered as traditional academic degrees or outside 'traditional' VET sectors;
- They have ceased to exist and are not offered anymore.

More detailed information is provided below.

#### **Level dimension – missing ISCED or EQF classification**

The focus in this study is on types of programmes/qualifications classified according to ISCED (1997 or 2011) and/or included in the NQF/linked to the EQF. However, not all VET programmes/qualifications bear a clear reference to the ISCED or EQF levels. In some cases, these types of programmes/qualifications were included in the scope of research if considered part of higher VET in the respective country. However, in several cases they are considered as grey zones. For example, qualifications that are not yet allocated to NQF levels or qualifications included in NQFs not yet referenced to the EQF cannot clearly be identified as 'above EQF level 4'. In many countries, qualifications from outside the formal education system have not been included in the NQF yet. For example:

- Austria: Several types of qualifications which might fit the working definition of this study are offered outside the formal system and have not been allocated to an NQF level yet. They are also not classified according to ISCED (for example, CVET programmes and add-on courses related to various economic sectors, such as 'preparatory courses for accounting diploma', 'qualified social counsellor', 'certified media designer', 'air traffic controller'). Thus, the working definition can actually not be applied.
- Germany: Some inconsistencies regarding ISCED classifications can be observed. For example, vocational schools for the health sector are referred to as being classified either tertiary (ISCED 1997 5B) or post-secondary (ISCED 1997 4A/B) whereas in the German ReferNet Report<sup>58</sup> they are referred to as ISCED 1997 3B, leaving them outside of the scope.
- Greece: There are qualifications/diplomas offered by providers in Greece which have an unclear or continuously changing status (e.g. Colleges, Kollegia in Greek) and the Hellenic Qualifications Framework (HQF) is not formally or fully implemented yet.
- Spain: The NQF is not yet implemented and not linked to the EQF. Some stakeholders (Public Employment Service) might argue that Professional Certificates could be considered as part of higher VET because of the ISCED 2011 level 4 classification (in ISCED 1997, they did not have this level).
- Finland: Vocational Further Qualifications (VFQ) are also part of the competence-based qualification system. They will, with a few possible exceptions (about five

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<sup>58</sup> CEDEFOP ReferNet (2013).

or six qualifications), expected to be linked to EQF level 4 at time of writing this report<sup>59</sup>. Those allocated to higher levels could be considered as part of higher VET.

- France: The Certificates of Professional Qualification (CQP) are sectoral qualifications awarded by sectoral bodies and recognised within a sector. These qualifications can be registered in the National Qualifications Register. This type of qualifications covers a very broad spectrum of qualifications when it comes to the breadth and complexity of learning outcomes. For example it includes qualifications such as a window cleaner in high buildings or security agent in establishments open at night (hotel, bar) but also IT system architects or team leader for industrial projects. Most of these qualifications are not assigned a level in the NQF but in some cases this has been requested by the awarding body. Some of these qualifications could be at EQF level 5 and above.
- Poland: Further education, outside the system of higher education, is provided by certain institutions, which award qualifications that could correspond to level 5 (or 6) of the EQF, but their level is not (yet) determined (hence not covered by this study). These include continuing education centres (centrum kształcenia ustawicznego), practical education centres (centrum kształcenia praktycznego), and possibly, centres for vocational improvement (zakłady doskonalenia zawodowego) and the crafts trades qualifications system.

### **Types of programmes/qualifications that do not provide a higher level qualification**

Some types of programmes are offered to upper-secondary level VET graduates but they do not lead to a qualification linked to a higher level than the upper-secondary VET qualification.

- Slovakia: There are post-maturita re-skilling and refresher programmes. These take several months on average, and focus on renewing (refreshing) the skills previously gained in a secondary VET programme. The refresher programmes are not to be considered higher VET as they do not constitute a higher level qualification nor add any specific set of new skills and competences. Furthermore, there are post-maturita qualifying programmes. These programmes take from six months up to two years, and they lead to an additional maturita exam in a different field than the person's original maturita exam. However, these programmes cannot be considered higher VET either, as they result in the award of a second qualification of the same level that is the secondary level. This is despite the rather confusing name ('post-maturita') – the holder does not qualify higher by graduating from this type of programme, he or she obtains another secondary VET qualification.

### **Types of programmes/qualifications with close link to the IVET sector**

In some countries, VET qualifications are offered at different levels and are closely linked to each other. In some cases, it is not clear whether those offered at higher levels should actually be considered as higher VET.

- Denmark: One type of educational programme, upper secondary VET (erhvervsuddannelser), is linked to EQF levels 3-5. However, since the number of these programmes that reach EQF 5 are very few (only around five out of over 100), this type is not further analysed in this study<sup>60</sup>.

### **Strong segmentation between vocational and higher education**

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<sup>59</sup> At time of writing this study the Finnish NQF was still in the process of development and referencing.

<sup>60</sup> However, it was included in Cedefop's study on EQF level 5. Cedefop (2014). Qualifications at level 5: progressing in a career or to higher education. Working Paper No 23. Luxembourg: Publications Office of the European Union, 2014.

In some cases there is a strong separation between VET and academic or higher education in general. Types of programmes/qualifications at higher levels with vocational orientation are therefore not considered as part of higher VET.

- Greece: The actual Greek term used for 'higher education' should be translated as 'highest education'. Although there are relevant VET qualifications offered at EQF levels 6 and above, these are grouped under higher education ('highest education') and according to experts, could not be regarded as higher VET because this segment is viewed as completely separate from VET overall. Such qualifications are, for example, those offered at the Higher Technological Educational Institutes (ATEI) and the School of Pedagogical and Technological Education (ASPETE) which are at higher levels than those offered at vocational lyceums or other providers. However, qualifications above EQF level 5 are considered higher ('highest') education and can therefore not be considered as higher VET.
- Portugal: An ongoing reform clearly separates higher education and non-higher education provision by:<sup>61</sup>
  - Creating the new 'Professional Higher Education Technical Programmes' provided by higher education institutions and as part of polytechnic system (ISCED 1997 5 and ISCED 2011 551, EQF level 5).<sup>62</sup> The introduction of these new programmes has already started in 2014/2015.
  - 'Technological specialisation courses' (ISCED 1997 4B and ISCED 2011 453, EQF level 5) will only be offered by non-higher education institutions. These VET programmes are *not* considered of *higher* level. They are classified as post-secondary non-tertiary education.

In other contexts, the lines between academic and vocational education are blurred but a clear distinction is made based on the type of degrees offered. For example:

- Germany: Most interviewees do not consider programmes offered at universities of applied sciences or universities as institutions offering higher VET, as they award academic degrees (e.g. Bachelor degrees); however, since vocational academies/universities of cooperative education award a Bachelor title not as an academic degree but as a 'state-certified qualification' ('staatliche Abschlussbezeichnung'), they could be considered as part of higher VET.

Although interviewees in some countries suggested considering 'professional higher education programmes' as part of higher VET this was often discussed as a 'grey zone' or it was decided not to include them at all. The main reasons are that the same types of degrees are offered as in more academic higher education programmes or that both types clearly belong to the higher education segment (e.g. in BE-fr, BE-nl, DE, EE, FI, HR, LT, PL, PT, SI, UK). For example:

- Estonia: Professional higher education programmes are considered within scope of the working definition but their inclusion in this study is also somewhat debatable, as this type of education is by law part of the higher education system not the VET system. However, these programs are more professionally oriented (up to 30% of the programme can be practical training) than the academic Bachelor's programs.
- Finland: Qualifications offered at the universities of applied sciences (polytechnics) are not considered to be part of the Finnish discussion on higher VET.<sup>63</sup>

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<sup>61</sup> Decree-Law 43/2014 of March 18.

<sup>62</sup> It is not referred to as SCHE, but considered as 'qualification of post-secondary non-higher level with credits for the continuation of studies at higher education'.

<sup>63</sup> However, there are also other views stating that higher VET in Finland only includes qualifications provided by the polytechnics. The reason behind this perspective is the use of the term 'higher' which is seen to refer to higher education.

- Poland: First and second cycle studies (Title of *licencjat* or *inżynier / magister* or *magister inżynier*) offered at State Higher Vocational Schools are part of the higher education system, whereas VET is seen mainly as part of upper secondary education (overseen by different Ministries). Vocational education (though not 'higher') is defined only in the school system and in the craft sector.
- Portugal: Bachelor's Degree (*Licenciatura*) (EQF level 6) and Masters' Degree (EQF level 7) provided by polytechnic institutions as well as the Specialist Diploma of Polytechnic education (does not involve training, no EQF level) are not considered VET in the country (although they fit the working definition of the study). The term VET ('professional education') is closely linked to secondary level, and to levels 2, 3 and 4 of the NQF and EQF.

In some contexts, other professionally oriented qualifications are also considered as part of higher education (from the point of view of governance, legislation, financing and provision) but they are clearly distinguished from VET and are therefore not part of higher VET:

- Finland: The type of educational provision offered at Open Universities/Open Polytechnics is seen as part of higher education but one could also argue that the studies offered could be considered as part of the higher VET. Higher education institutions also offer so called specialisation studies and professional specialisation trainings (universities of applied sciences) and specialisation studies and specialisation programs in universities (*erikoistumisopinnot*). They are considered as higher education but could also fit the working definition. Furthermore, the pilot short cycle programme offered at the University of Applied Science Jyväskylä (Diploma of Higher Education) could possibly also be included.

### **Traditional academic university degrees**

According to the working definition applied for the study, traditional academic university degrees are generally considered as out of scope of higher VET, even if certain degrees within this type may display a significant share of professionally oriented education and training. However, some interviewees challenged this approach. This was the case, for example, in the Czech Republic and Romania:

- Czech Republic: According to the view expressed by an interviewee, qualifications provided by universities and colleges (i.e. Bachelor's, Master's and Doctoral programmes) that are in technical and/or vocational fields could be also considered higher VET in case we were to apply a very broad understanding of the term, and if they were not excluded from the scope of this study. Qualifications such as Architect, Machinery Engineer or Zoological Specialist (to name just three random examples) are, in the Czech context, normally referred to as 'vocational – *odborné*'.
- Romania: There are different positions and contradictory information from the side of policy-makers and that of practitioners concerning whether or not technical universities fit the study's definition of higher VET. Providers of such type of education as well as the National Authority for Qualifications expressed the view that technical universities are oriented towards academic learning outcomes rather than vocational learning and qualifications.

### **Types of programmes/qualifications offered at post-secondary non-tertiary or higher education level but outside traditional VET sectors**

In some cases, professionally oriented programmes that are offered outside more 'traditional' VET fields, for example in the areas of arts or sports, were discussed as 'grey zones'.

- Greece: Post-secondary not tertiary diploma or 'degree' in Dance and Drama are professionally oriented. However, these programmes are not considered VET. The education system classifies them as Artistic education.

- Spain: Higher education (offered by other higher education institutions than universities) also includes professional education of plastic arts and design of higher level (enseñanzas profesionales de artes plásticas y diseño de grado superior) and the sports education of higher level (enseñanzas deportivas de grado superior). The completion of these programmes (as well as of the 'higher level cycles' of VET) allows learners to obtain a High Technical certificate. However, the arts and sports programmes are not considered to be VET in the national context since they are not expected to meet the needs of productive sectors. Also, programmes do not need to be referred to the National System of Qualifications and Professional Training.

### **Programmes that are not offered anymore**

Furthermore, there are also some types of programmes that are not offered anymore and are therefore not included in the study:

- Greece: The vocational training diploma (diploma epaggelmatikis katartisis epipedou metadefterovathmias epaggelmatikis katartisis, IEK; post-secondary level) is no longer awarded after the enactment of Law 4186/2013.
- Slovenia: Before the implementation of the Bologna structure in higher education, the following three programmes were offered that could fall within the scope of higher VET but are not offered anymore: 1) Specialisation diploma following pre-Bologna professional higher education (Diploma o specializaciji). At the end of the programme students received a qualification linked to EQF level 7. 2) Pre-Bologna professional higher education diploma (Diploma o visokem strokovnem izobraževanju). At the end of the programme students received a qualification linked to EQF level 6. 3) Old short-cycle higher vocational diploma (Diploma o višješolski izobrazbi). At the end of the programme students received a qualification linked to EQF level 5.

## **4 Key features and main types of higher VET programmes/qualifications in each of the countries analysed**

### **4.1 Main types of programmes/qualifications**

With the exception of higher education qualifications covered by the Bologna Process (EHEA), there are no qualifications types commonly defined across countries. Since the scope of the area that could be considered as higher VET is quite diverse, the types of qualifications or programmes offered within this area are also quite different. Thus, the list of types presented below is by far not exhaustive and focuses only on specific forms that are offered with comparable features in several countries. The following types have been distinguished:

1. Types belonging to the 'overlapping zone' (cf. Figure 2, higher education qualifications covered by the EHEA with a strong vocational or professional focus):

- Short Cycle Higher Education (SCHE)
- First and Second Cycle Higher Education:
  - a) first cycle/Bachelor's level (EQF level 6)
  - b) second cycle/Masters' level (EQF level 7)
  - c) dual study programmes at higher education (Bachelor's and/or Master's level, EQF levels 6 and/or 7)

2. Types of vocational or professional programmes and qualifications that are fully outside the EHEA (cf. 'narrow' definition of VET (VET outside EHEA) in Figure 2:

- Separate tier of post-secondary level programmes outside higher education;
- Qualifications acquired based on professional experience and examinations (competence tests);
- Higher-level CVET programmes or qualifications outside the formal system.

#### **4.1.1 Short Cycle Higher Education (SCHE)**

**Short Cycle Higher Education** (SCHE) has been implemented as an intermediate level of the first level of higher education in several countries (linked to EQF level 5) and in some cases this type of education can be considered as part of higher VET.<sup>64</sup> The Cedefop study on EQF level 5 revealed that most EQF level 5 qualifications are clearly linked to occupations/professions. This is also the case for most SCHE awarded within higher education. They are not considered only as an intermediate step towards Bachelor degrees, but also as independent qualifications with distinct professional profile and labour market relevance.<sup>65</sup>

Examples include<sup>66</sup>:

- AT: In 2014/15, two Universities of Applied Sciences introduced short cycle programmes which lead to the title 'Akademische/r ...' ('Graduate of...'), also for individuals without a higher education entrance qualification;<sup>67</sup>
- BE-nl: HBO5;
- DK: Academy profession programmes/degrees;

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<sup>64</sup> However, this is not the case in all countries where SCHE programmes are offered (e.g. BE-fr, CY, MT).

<sup>65</sup> CEDEFOP (2014) *Qualifications at level 5: progressing in a career or to higher education*. Working Paper No 23. Luxembourg: Publications Office of the European Union.

<sup>66</sup> Not in all countries listed below there is an overall agreement between stakeholders interviewed to consider them as part of higher VET.

<sup>67</sup> Technikum Wien - [http://www.technikum-wien.at/studium/kurzstudien/social\\_media\\_management/](http://www.technikum-wien.at/studium/kurzstudien/social_media_management/).

FH Wien - <http://www.fh-vie.ac.at/Studium/Short-Cycle-Academy>.

- ES: Higher level cycles of Professional Training (or: Advanced Vocational Training cycles) leading to Higher [Technician](#) diploma;
- FR: Advanced technician certificate (BTS - Brevet de technicien supérieur);
- HR: Short Cycle Professional Studies;
- HU: Tertiary vocational programme (full-time education) (short cycle);
- IE: Higher Certificate;
- IT: Higher technical institutes (ITS) offer [short-cycle](#) non-university tertiary education and lead to the obtainment of a Diploma as Higher technician;
- LU: BTS (Advanced Technician Diploma);
- LV: Diploma on first-level professional higher education (certificate on professional qualification [profesionālās kvalifikācijas apliecība] verifying 'fourth-level professional qualification' is also granted to the graduate);
- NL: Associate degree;
- SI: Short-cycle higher VET programme;
- UK: Higher National Certificates and Higher National Diplomas;
- UK-EWNI: Foundation degree.

Some examples are presented in the box below:

### **Hungary**

*Tertiary vocational programmes (short cycle)* have been running since 1998. From the 2013/2014 school year onwards only higher education institutions (colleges or universities) can launch these programmes. They can apply for delivering these programmes at the Educational Authority (the background institution of the Ministry of Human Resources). The accreditation entails official opinion submitted on the HEIs' request to start an HE VET programme by the Hungarian Chamber of Commerce and Industry / relevant employer associations / the Hungarian HE Accreditation Committee. A higher education institution can only deliver HE VET programmes which are linked to Ba/Bsc programmes already run by the HEI. HE VET programme provision is regulated by the Higher Education Act of 2011. The main objective of the programmes is to offer shorter modular training to help secondary school leavers to enter the labour market by obtaining a higher level qualification. These programmes predominantly train for high quality professional work and at the same time help transition from VET to tertiary level education. Graduates can transfer up to 75% of all the credits gained (between 30-90 credits) to a bachelor (BA/BSc) programme in the same field.

### **Netherlands**

*Associate degree programmes* are a rather new concept (first pilots in 2005/2006) and form the basis to 'close the gap' between upper-secondary vocational education and higher vocational education. These degrees take two years to obtain rather than four years for a regular bachelor degree and exist based on the needs of the labour market (sector driven). They are taught through universities of applied sciences and undergo regular quality assurance and accreditation approval as the Bachelor and Master programmes.

## HUK-England

*Foundation Degrees* are higher education qualifications with a vocational focus and were introduced in 2001. They are intended to provide learners with a basic knowledge of a subject to equip them for further employment or study. In the main, they are provided by partnerships between universities and further education colleges. Courses last for two years (or three to four years for part-time options). Foundation Degrees are at the same level as Higher National Diplomas and Certificates. A key characteristic of the Foundation Degree is that it can provide a path to a full honours degree (Bachelor level). Learners can 'top-up' to a full degree through an extra year of study.

*Higher National Certificates* (HNCs) and *Higher National Diplomas* (HNDs) are work-related vocational qualifications included in the QF for HE. HNCs and HNDs focus on 'learning by doing' and give skills that aimed at a particular job. Both qualifications are provided by further and higher education institutions. HNCs take about one year to complete full-time and two years part-time. HNDs take two years full-time and can also be taken part-time, which takes longer. HNCs can allow entry into the second year of a degree, while HNDs can allow entry into the second or third year. Policy in England has tended to focus on the expansion of Foundation Degrees, instead of HNCs and HNDs. This is because they are considered to be a means of widening access and progression to higher education, and were considered an effective way in which to do so. In Northern Ireland and Wales, they are seen as policy actions aimed at widening access.

### 4.1.2 First and Second Cycle Higher Education

In some countries, vocationally or professionally oriented qualifications are offered within the **first and second cycle higher education** of the Bologna framework. In some cases, programmes leading to these qualifications are provided at universities. Several countries have implemented a specific type of institutions dedicated to professional education at bachelor's and masters' levels, such as universities of applied sciences, polytechnics or university colleges. Furthermore, in some countries these programmes are offered in dual format (as a type of apprenticeship system at tertiary level). In several cases there is no agreement on whether these programmes/qualifications can be considered as higher VET because they are clearly embedded in the higher education sector (see information on 'grey zones'). The research conducted at national level (and in particular the interviews with national stakeholders) identified the following examples that could be considered as part of higher VET:

#### **First cycle/Bachelor's level (EQF level 6) – examples<sup>68</sup>:**

- AT: Bachelor degrees offered at universities of applied sciences;
- BG: Professional bachelor degrees offered at colleges within the structure of universities and self-contained colleges;
- DK: Professional bachelor degrees offered at business and technical academies and vocational colleges;
- EE: Professional higher education programmes offered at institutions of professional higher education;
- FR: Vocational bachelor (Licence professionnelle);
- LU: Professional Bachelor Degrees (Licences Professionnelles) offered at the University of Luxembourg;

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<sup>68</sup> Not in all countries listed below there is an overall agreement between stakeholders interviewed to consider them as part of higher VET.

- LV: 2<sup>nd</sup> level vocational higher education (5<sup>th</sup> level vocational qualification and vocational Bachelor's degree) or second level vocational higher education (5<sup>th</sup> level vocational qualification), to be implemented after the general or vocational secondary education;
- MT: Bachelor degrees offered at the two main VET providers (Malta College of Arts, Science and Technology - MCAST and Institute for Tourism Studies - ITS);
- NL: Bachelor degrees offered at universities of applied sciences;
- PL: State Higher Vocational Schools offer diplomas certifying the title of *licencjat* or *inżynier* (first cycle);
- SI: Professional study programmes (first cycle higher education) offered at higher education institutions (faculties, art academies and higher professional colleges; private faculties, art academies as well as public and private professional colleges can also be established as single institutions of higher education).

Some examples are presented in the box below.

### **Bulgaria**

*Professional bachelor* is the lowest level of higher education; the programme is more practically-oriented and less academic and research-oriented, when compared to other higher education programmes. The principal aim of professional bachelor is to prepare for employment as well as to facilitate progression to higher qualifications levels within the same qualification profile (bachelor, master – both, professional and 'academic'). In order to access the programme, one should have a completed upper secondary education (state matriculation exams) and positive results at the general entrance examination at higher education institutions in Bulgaria. The programme lasts for 3 years (180 ECTS) and is provided by colleges within the structures of universities as well as by independent colleges; the majority of the providers are public education institutions. After completing a professional bachelor, a person may progress to a 'normal' bachelor or master programme provided that these are from the same field of studies.

### **Luxembourg**

A *professional bachelor* degree is obtained after three years, and is only delivered by the University of Luxembourg (the only university in the country). These programmes aim at a rapid and direct insertion of students into the labour market. The programmes and courses are designed by the University based on the needs of industry, notably in terms of occupational profiles. Dialogue with industry is strong, and sometimes external experts from the industry are involved, e.g. in the Professional Bachelor in engineering, external experts from Arcelor Mittal are involved. The programmes provide a balance of academic teaching and applied training, which incorporates the specific features of the Luxembourg market. The programmes include one compulsory semester of placement in companies, as well as one compulsory exchange for half a year.

### **Second cycle/Masters' level (EQF level 6) – examples<sup>69</sup>:**

- AT: Master degrees offered at universities of applied sciences;
- LU: Professional Master Degrees (Master Professionnels) offered at the University of Luxembourg;

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<sup>69</sup> Not in all countries listed below there is an overall agreement between stakeholders interviewed to consider them as part of higher VET.

- LV: 2<sup>nd</sup> level vocational higher education (vocational master's degree or 5<sup>th</sup> level vocational qualification and vocational master's degree), exercisable at the bachelor, vocational bachelor's degree or fifth-level vocational qualification;
- NL: Master degrees offered at universities of applied sciences;
- PL: State Higher Vocational Schools (eight institutions out of 36) offer diplomas certifying the title of *magister* or *magister inżynier* (second cycle studies).

## **Austria**

*Master degree programmes at universities of applied sciences aim to provide professionally oriented higher education to enable graduates to solve vocational tasks based on scientific knowledge. Their defined mission is to support lifelong learning, permeability and non-traditional students. Some programmes are also offered in part-time form. Teachers are usually academics or have comprehensive work experience. Work-based learning is integrated in most programmes. Universities of applied sciences cooperate with companies in their sector and engage in international cooperation.*

## **Dual study programmes at higher education (Bachelor's and/or Master's level, EQF levels 6 and/or 7)<sup>70</sup>**

- AT: Dual programmes offered at universities of applied sciences;<sup>71</sup>
- BE-fr: Apprenticeship master degrees (Master en Alternance) offered by university colleges and by centres for adult education;<sup>72</sup>
- DE: Bachelor degrees of dual study programmes offered at cooperative state universities.

## **Belgium-FR**

Apprenticeship Master degrees are organised by University Colleges ('Hautes Ecoles') which are part of the formal higher education system. The Apprenticeship Master degree was created specifically for encouraging cooperation at local level between university colleges and enterprises. This master programme focuses on specific fields (e.g. construction, engineering, production, applied sciences, etc.) which translate the needs of the local economic sectors. This programme is based on the dual education system: learners spend 50% of the time at school and 50% at the enterprise. It targets learners who want to acquire an advanced VET specialisation.

## **Germany**

Dual study programmes offered at vocational academies/universities of co-operative education ('Berufsakademien'; cooperative state universities or dual universities) in cooperation with public and private companies are a blend of vocational and academic programmes. They combine studies with vocational training in an officially recognised profession. Admittance criteria are either a general qualification for university entrance or for university of applied sciences as well as a signed vocational training contract with a company. Enterprises participating in these programmes bear the costs of the company-based training and pay a wage to the learners. Vocational academies/universities of co-operative education as training

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<sup>70</sup> Not in all countries listed below there is no overall agreement between stakeholders interviewed to consider them as part of higher VET.

<sup>71</sup> There is no agreement between stakeholders interviewed to consider them as part of higher VET.

<sup>72</sup> They are not 'formally' considered as higher VET.

providers solely offer dual study programmes which last three years and end with a state-certified degree equivalent to a Bachelor's degree.

#### 4.1.3 Separate tier of post-secondary level programmes outside higher education

Some countries maintain a **separate tier of post-secondary level programmes outside higher education** to deliver qualifications with a strong vocational focus. In most cases, these qualifications are linked to EQF level 5. Some examples are presented below:

*ISCED 1997 level 4<sup>73</sup>:*

- BG: IV degree vocational qualification;
- EE: VET certificate level 5;
- EL: Professional Specialisation Diploma Level 4; Post-secondary and not higher education diploma or 'degree';
- EL: Vocational training diploma (initial vocational training at post-secondary level) offered at Vocational Training Institutes (IEK);
- HU: SZKI VET grades post-secondary education;;
- IE: Post-leaving certificate;
- IT: Higher technical education and training pathways (IFTS)<sup>74</sup>;
- RO: Qualifications offered by post-high schools (*scoli post-liceale*);
- SE: Higher Vocational Education (HVE): Diploma in higher vocational education.

*ISCED 1997 level 5<sup>75</sup>:*

- CY: Higher professional programmes (2-3 years) / Post-secondary certificates and diplomas;
- CZ: 'Certified Specialist' (DiS) offered at Tertiary Professional Schools (or Higher Technical Schools)<sup>76</sup>;;
- DE: qualifications offered at Trade and technical schools (Fachschulen, Fachakademien)<sup>77</sup>;
- SE: Higher Vocational Education (HVE): Advanced diploma in higher vocational education<sup>78</sup>;
- SK: Post-maturita specialising programmes offering the qualification called 'Certified Specialist' (diplomovaný špecialista, DiS)<sup>79</sup>.

Some examples of this type of education are presented in the box below.

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<sup>73</sup> Most programs listed here are classified as ISCED 1997 4C; the program from Sweden is ISCED 1997 4B and for the one from Romania no specification is given.

<sup>74</sup> Linked to EQF level 4.

<sup>75</sup> All programs listed here are classified as ISCED 5B.

<sup>76</sup> Linked to EQF level 6.

<sup>77</sup> Linked to EQF level 6.

<sup>78</sup> NQF/EQF level not yet decided; EQF level 6 based on the information presented in the Cedefop report "Sweden - European inventory on NQF 2014" – however, not yet approved.

<sup>79</sup> Probably EQF level 5 but NQF/EQF level not yet finally decided.

## Cyprus

The Ministry of Education and Culture recently introduced post-upper secondary VET provided at Post-Secondary Institutes of Vocational Education and Training and leading to *post-secondary certificates and diplomas*. They offer further technical specialisation to graduates of secondary education since the 2012/13 academic year. In these programmes, students acquire, improve, or upgrade their qualifications and skills in order to better preparing them for the labour market. The programmes usually include practical training in industry and businesses/enterprises.

## Germany

*Trade and technical schools* (qualifications awarded are linked to EQF level 6) fall under the competence of the Ministries of Education of the respective Länder and aim at preparing students for jobs in middle-to-upper-management. Graduates also have the opportunity to take an additional exam for gaining access to studies at universities of applied sciences (or, if graduating with excellent degrees, access to universities in the respective subjects). Trade and technical schools offer part-time or full-time programmes lasting one to four years (usually two years for full-time and four years for part-time programmes) in the fields of: Agriculture, Business, Design/Manufacturing, Social Care and Technology. Graduates obtain the occupational designation 'state certified/recognised...'. Trade and technical schools are in most cases called 'Fachschulen', in some regions (e.g. Bayern), they are called 'Fachakademien'.

## Hungary

*VET grades* have long traditions in Hungary and programmes have been running in a similar form since 1998. The programmes build on general secondary education and/or IVET. The programme VET grades differ in their implementation and delivery, based on the pre-qualification of the students. Those who continue education in the VET grades from grammar schools can undertake a programme during two years, which combine theoretical and practical education. For students, who have already obtained qualification-related theoretical and practice oriented education at an IVET school, completion of the programme is only one year in length.

Providers of VET grade programmes are secondary VET schools. VET grades form a part of the formal education system and fall under government-regulated VET provision. They encompass a large diversity of study options, offering qualifications across all sectors (as it is defined in the OKJ, the Hungarian National Qualifications Register). Completion of the post-secondary VET grade facilitates entry to the labour market, by offering a higher level qualification than it can be obtained through IVET. The content of the programmes by qualification, the exam requirements and the qualification and work experience-related requirements to deliver the programmes are centrally set and defined.

## Ireland

The *Post Leaving Certificate (PLC)* is a full time programme for learners who have completed their Leaving Certificate and for adults returning to education. PLC is offered at NQF level 5 and 6 (EQF levels 4 and 5) in a wide range of fields providing routes to both employment and third level education. The programme caters for those who require further VET to enhance their prospects of employment or progression to other studies. As such it served around 36,600 learners in 2011/2012, and according to the Central Statistics Office the number has slightly declined in recent years. There are more than 32,000 approved PLC places available nation-wide through Education and Training Boards (having the responsibility for all state funded further education and training) and secondary level schools.

## Slovakia

'Higher VET' in Slovakia can be characterised as an 'in-between' area of the education system where the *DiS* qualification ('*Certified Specialist*') is generally recognised as one step higher than 'maturita' (upper-secondary school leaving certificate) but not reaching the complexity and advancement of university technical education. The programmes (offered at IVET providers) are classified at ISCED 5B and are planned to be linked to EQF/NQF level 5. The main feature of this type of qualification is its specialisation on job-related knowledge and skills and a great share of practical (work-based) learning. Also, graduates from this type of programme are seen as candidates either for mid-management positions in businesses and public administration, or skilled specialists in narrowly defined fields of vocational activities.

## Sweden

*Higher vocational* education (HVE) courses serve the needs of job seekers and high competence demands from industry and prepare learners for jobs which are related to a specific trade or vocation. Various private and public providers, for example private companies, municipalities, county councils and universities run the training courses. The content of the educational programmes and specialisations can change over time. New programmes will start and old ones will be discontinued as the labour market changes. An education provider can apply for one or two 'training sessions'. This means that one education programme can exist for a maximum of four years (with some exceptions: for instance pilot training due to high investment costs). After this period, the education provider must apply for new 'training sessions'. Companies and organisations tied to the programmes take an active part in the planning as well as the implementation of the programmes. Employers and industry representatives take part as members of the programmes' steering committees. They may also take part through giving lectures, joining in projects or by offering on-the-job training. The Swedish National Agency for Higher Vocational Education analyses labour market needs, decides which vocational programmes will be approved as higher vocational education and allocates public funding to education providers. Furthermore, the agency monitors and audits the education providers and the training courses.

In Austria and Latvia specific types of programmes or qualifications are offered that share common features with the types described above but have certain specificities:

- In Austria, VET colleges provide vocational education in various areas of specialisation. In their main form, they are offered as five-year full-time programmes for young students, but they are also offered as VET colleges for people in employment (e.g. in the form of an evening school).<sup>80</sup> VET colleges provide a professional qualification (diploma) and a higher education entrance certificate. The first three years of the full-time programmes are classified at ISCED (2011) level 3 (and are considered as IVET), whereas the last two years are classified at ISCED (2011) level 5. The VET college qualification is linked to EQF level 5<sup>81</sup>.
- Latvia is a specific case because 'higher VET' is considered as VET and at the same time treated as an integrated part of the higher education sector. The following type of education is classified as ISCED 2011 5 (EQF level 5): 1<sup>st</sup> level vocational higher education (college) education (4th level Latvian vocational qualification), to be implemented after the general or vocational secondary education.

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<sup>80</sup> Schneeberger, A. et al. (2013) *Postsecondary vocational education and training in Austria*, Country background report: OECD-Review 'Skills beyond school'. ibw-Forschungsbericht Nr. 175.

<sup>81</sup> Preliminary allocation, NQF not yet operational.

#### 4.1.4 Qualifications acquired based on professional experience and examinations (competence tests)

Other types of qualifications that can be identified in a couple of countries and that are considered as part of higher VET, are those acquired based on **professional experience and examinations (competence tests)**. Usually, training is not compulsory but preparatory courses are offered in the context of CVET.

Typical examples are *master craftsperson examinations/qualifications* that build on apprenticeship certificates. In some cases, qualifications are linked to licensed professions, such as electricians, where successful completion of the exam is legally required to work in the profession, or to run a small business or also to train apprentices. These qualifications are offered in:

- AT: Master Craftsperson Exam (MeisterInnenprüfung), are expected to be linked to EQF level 6;
- DE: Master Craftsperson Examination (MeisterInnenprüfung), linked to EQF level 6;
- FR: Master Craftsperson Certificates (Brevets de maîtrise, BM) issued by the Chambers of Trade (chambre des métiers), linked to EQF level 5;
- HR: Master Craftsperson Qualification (programi za majstore), linked to EQF level 5;
- LU: Master craftsperson diploma (Brevet de Maitrise), linked to EQF level 5.

##### Austria

The *master craftsperson exam* is a part of the traditional apprenticeship system in Austria. It is conducted by the master craftsperson and qualification examination authority, located at the Chambers of Commerce. The only requirement to sit the exam is a minimum age of 18. Technically, it is not required to attend any programme, however, most candidates participate in courses offered by CVET providers. Furthermore, most candidates have sufficient work experience in the related sector. The master craftsperson exam is conducted in five modules by an examination committee (consisting of experts with sufficient work experience) and entitles holders to set up a business, train apprentices. The master craftsperson exam is required for the exercise of 82 'regulated' professions, mostly in the areas of business administration, engineering, manufacturing and construction, as well as agriculture and health.

##### Croatia

The *Master Craftsperson Qualification* is acquired through successfully completion of a so-called 'Master Craftsperson Exam'. In order to access the exam, a candidate should have a minimum of three years' experience in the profession in which s/he wants to take the exam. Preparation courses for the exam are provided (by institutions for adult education, trades and crafts education centres, community colleges and chambers); however these are not compulsory. The exam is organised in a centralised way. The Croatian Chamber of Trades and Crafts has prepared catalogues for the standardisation of exams. A five-member committee holds the exam. The Committee consists of a president (master tradesman), a member responsible for the practical part of the exam (master tradesman), a member responsible for the professional theoretical part (usually VET teacher), a member for the business-management and legislative part and a member responsible for the pedagogical part. The written parts of the exam take place in chambers and the practical part in trade/craft businesses or VET schools.

## Luxembourg

Programmes leading to the *master craftsperson diploma* are provided by Chambers of Trade only, which organise courses and exams on behalf of the Ministry of Education. Courses are organised either in the Training Centre of the Chamber of Trades, in technical high schools or in the National Centre of Continuing Vocational Training. These are mostly evening classes. The content is designed by experts of the trades concerned (mostly employers), linked to Chambers of Trades. The Ministry only validates the programmes once they are designed. They are based on occupational profiles. Working groups of the Chambers of Trades apply anticipative methods to design the programmes: they observe the (technical) evolution of trades in Luxembourg, and these evolutions are taken into account and reflected in the courses. Candidates do not need professional experience to enter the training, but at least one year of professional experience is required to be able to sit for the final exam. Once the master craftsperson diploma (*brevet de maîtrise*) is obtained, graduates have the title of 'master craftsperson' (*maître-artisan*). The programme entitles the holders to two main rights: (i) create their own company/business, as individual, associate or technical manager; and (ii) train apprentices. Work-based learning is not incorporated in the programme. Therefore, there is a compulsory one-year professional experience after the training to be able to sit for the final exam. Students can register for the programme if they already possess an EQF level-3 qualification. If they have an EQF level-4 qualification, and at least one year of work experience, they can ask for an exemption of courses and they can pass the exam directly.

In some countries there are also qualifications offered in the CVET context that focus on specific professional fields and are obtained based on *competence tests* and/or on the validation of non-formal and informal learning but they are *not considered as master craftsperson qualifications*. Examples include:

- BE-nl: Professional qualifications (EQF levels 5-7);
- CZ: Vocational Qualifications (EQF levels 5-7);
- EE: Occupational qualifications (EQF levels 5-8);
- FI: Specialist Vocational Qualifications (SVQs).

## Belgium-NL

"A *professional qualification* gives an overview of the competences with which a profession can be exercised. A professional qualification can be obtained through education, training or the certification of one's practical experience. It is 'a complete and classified set of competences with which a profession can be exercised.'<sup>82</sup> Professional qualifications linked to EQF level 5 can be obtained through formal education and training (HBO5) or the recognition of prior learning with or without additional training from a recognised training provider (such as the Public Employment Services). The first professional qualifications at level 5 were recognised in 2012. Since then a total of 33 professional qualifications have been allocated to level 5 of which two-thirds were recognised in the past two years (2014-2015). In addition to the professional qualification at level 5, there are currently two qualifications at level 6 and two at level 7.

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<sup>82</sup> Flemish Government & AKOV (2012) *The Flemish Qualifications Structure. Developed, Approved, Implemented*. December 2012, p6.

## Czech Republic

The concept of 'Vocational Qualifications' (VQs; formerly known as 'Partial Vocational Qualifications') is the constitutive feature of the recently introduced system for the recognition and validation of the outcomes of further learning. Some of them are already available in the National Register of Qualifications (NSK) linked to EQF levels 5 to 7. A total of 57 VQs are found assigned to one of the three above levels. Furthermore, five full qualifications are found in the NSK that can be achieved by completing a given number of partial qualifications. There is an independent quality assurance system within the NSK and the network of Sector Councils (SCs). The SCs are responsible for the initial formulation of the Qualification Standard and Assessment Standard of a VQ, the National Institute for Education supervises the methodology, the Ministry of Education approves the outcomes. Since the VQs are part of the system for the recognition and validation of the outcomes of further learning, there is no specific provider; formal learning or teaching is not necessarily involved, and exams taken before accredited commissions.

## Estonia

The *Occupational Qualifications* system<sup>83</sup> is part of the Estonian qualifications system as well as of the Estonian NQF and forms an interface between the life-long learning system and the labour market. Occupational qualification standards (OQS) describe occupational activities and provide the competency requirements for occupational qualifications and their levels. OQs are designed in close collaboration with employers and are available in the state register of occupational qualifications.<sup>84</sup> OQS are the basis for developing national VET curricula, curricula for higher education and other training programmes, and for assessment of individuals' competence, incl. self-assessment and awarding an occupational qualification. Thus, they facilitate the assessment and recognition of already acquired competences regardless where they have been acquired (formal, non-formal or informal learning). For obtaining an occupational qualification linked to higher EQF levels (5-8) the corresponding educational qualification usually needs to be acquired. In addition to the educational basis further non-formal training and work experience is usually also required for applying for an occupational qualification.

## Finland

*Specialist Vocational Qualifications* (SVQs) are part of the competence-based qualification system (CBQ) which is the main form for the implementation of formal vocational adult education in Finland. At the moment there are around 130 different SVQs available in 7 different VET fields. SVQs are seen as qualifications which indicate a command of the most demanding tasks in the specific field. With regard to some of the SVQs, e.g. Business Management (Specialist Qualification) and Management (Specialist Qualification), a clear trend can be observed, namely that more and more candidates of these qualifications have a higher education degree when they start their studies. Competence-based qualifications are open to all who want to have a formal vocational qualification, regardless of their age, work experience or educational background. Persons with broad and all-round professional competencies can demonstrate their vocational skills in competence tests without taking part in so called preparatory training. However, competence tests are most often completed with participation in preparatory training. Vocational skills are demonstrated in competence tests irrespective of whether the skills were acquired through work experience, study or other activities. What matters is the possession of the skills and competencies required in the profession and defined in

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<sup>83</sup> Estonia Ministry of Education and Research: Occupational Qualifications - <https://www.hm.ee/en/activities/kvalifikatsioonid/occupational-qualifications>.

<sup>84</sup> Kutsekoda - <http://www.kutsekoda.ee/en/kutseregister>

the national vocational requirements. The national qualification requirements (NQRs) determine the modules included in the qualification, possible specialisations that the modules form, the composition of the qualification, the vocational skills required for each qualification module, the assessment criteria (targets and criteria of assessment) and methods of demonstrating vocational skills.

In the UK, several types of *qualifications* are offered within the higher VET context that are *closely linked to labour market needs and work-based learning*:

- UK-England/Wales/Northern Ireland:
  - National Vocational Qualifications (NVQs, linked to EQF levels 4 and 5): NVQs are competence-based and oriented towards employment. They are assessed in the workplace and are taken in conjunction with an apprenticeship. They are based on National Occupational Standards for a specific sector/work place. NVQs can be taken by full-time employees or students with a work placement. They are not required to be completed in a specific timeframe. The higher VET NVQs correspond to levels 5 to 8 on the EQF – NVQ Level 4 (e.g. NVQ Level 4 Diploma in Construction Site Supervision) and NVQ Level 5 (e.g. Management in Health and Social Care).
  - BTEC qualifications are undertaken in vocational subjects ranging from business studies to engineering. They are similar to NVQs but are awarded by Edexcel, a private awarding body. They combine theoretical and practical VET and like, NVQs, can be taken in conjunction with an apprenticeship. The BTEC Higher National Qualifications are the main higher VET qualifications and correspond to levels 4 and 5 on the EQF.
  - Similarly, post-graduate professional qualifications are considered to sit within the purview of higher level VET qualifications. Traditionally, these qualifications have been developed separately from other vocational qualifications, by separate organisations regulated by independent statutes. These qualifications can include those regulated by government and those unregulated by government. They are usually specifically oriented towards the labour market, and can be acquired through a combination of formal course tuition and work-based learning. These qualifications are linked to EQF levels 4 and 5.
- UK-Scotland:
  - Scottish Vocational Qualifications (SVQs, linked to EQF levels 4 and 5) are the equivalent of NVQs in Scotland. Like NVQs, these are based on national occupational standards developed by employers across the UK. Like NVQs, there is no written exam, but assessment is performed on evidence from their employment submitted by learners undertaking the SVQ.
  - Scottish Professional Development Awards are designed for those already in a career or vocation who wish to extend or broaden their skills base.<sup>85</sup> They can be embedded as part of another qualification, such as the HNC or the HND (they are also similar to professional qualifications). The qualification is targeted at those who do not wish to undertake a full SVQ but still wish to have a specific certified qualification. Within the PDA an individual is allowed up to 12 months to complete their qualification, however they generally only take up to 3-4 months depending on the PDA. They are linked to EQF level 5.

#### 4.1.5 Other types of programmes/qualifications

In some countries specific types of programmes or qualifications are offered that do not belong to the categories presented above. These types include:

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<sup>85</sup> Scottish Qualifications Authority - <http://www.sqa.org.uk/sqa/16759.823.html>.

- Pathways offered *outside* of what is traditionally considered as the *formal system* or programmes/qualifications for specific occupations that are in some countries *regulated by other ministries* as those part of 'mainstream' education:
  - AT: e.g. Security Academy of the Federal Ministry of the Interior.
- Specific forms of apprenticeships at higher levels:
  - IE: Apprenticeships (up to 4 years, EQF 4-5, ISCED 4C) and Traineeships (up to 2 years, EQF 4-5, ISCED 3C) provide officially recognised vocational qualifications;
  - IT: Higher education and research apprenticeship programmes can lead to VET qualifications at different levels (upper secondary and tertiary levels, up to a PhD);
  - UK: Higher level Apprenticeships (Modern, Technical and Professional Apprenticeships in Scotland; EQF levels 5-8) can lead to further academic qualifications such as an Honours Degree or to working towards professional qualifications specific to an industry.
- Different forms of programmes/qualifications offered *outside the formal system and/or in the CVET context*:
  - AT: CVET courses offered at higher education institutions: A number of higher education institutions (universities of applied sciences, academic universities and universities of education) provide continuing education courses. Courses are offered to non-higher education graduates (who need to fulfill other access requirements, such as professional practice) as well as post-graduates. Courses lead to a Master degree (e.g. Master of Advanced Studies, Master of Business Administration) or a graduate degree ('Akademische/r...').
  - AT: Other forms of training not regulated by law (CVET) lead to qualifications provided at CVET institutions, companies, higher education institutions and VET schools.
  - AT: Sector specific qualifications awarded by a certifying authority based on competence tests, such as the certified financial accountant diploma or the civil engineering exam.
  - BE-fr: higher VET courses delivered by PES, apprenticeship and entrepreneurial training organised by the Espace Formation PME (EFP) in Brussels and the IFAPME in Wallonia (organised by SMEs and subsidised by regional authorities). Private sector associations can organise or subcontract higher CVET courses to offer to their company's members which pay annual contributions for the purpose of training of their employees.
  - DK: The vocational and adult education system includes Further Adult Education (Videregående voksenuddannelse or Akademiuddannelse, EQF level 5), Diploma degrees (Diplomuddannelse, EQF level 6) and Master degrees (Masteruddannelse, EQF level 7).
  - IE: Second Chance and Adult Learning programmes also provide qualifications up to the level of EQF 5. Most of these have been installed into the system in order to support unemployment through up-skilling and re-skilling, as well as to reach early school leavers.
  - NL: Outside of publicly funded degrees companies and sector organisations may set up their own professional training programmes (ISCED 1997 5A and ISCED 2011 667, EQF levels 5 and 6). For adult education, this is rather common in the Netherlands and has led to a large offering of accredited and non-accredited, short and long programmes. The Sector Council for private education and training promotes the opportunity of the NQF as a way to further establish recognition of those privately funded programmes that are most similar to a regular higher VET programme.

## **4.2 Specificities of higher VET**

This section presents results of the analysis of the 'types of programme/qualification'-sheets collected. After having identified the main types of higher VET programmes/qualifications in each country, according to 'national perceptions' and their perceived prevalence, they were described using a structured template. This allowed grouping them according to a number of key dimensions, such as by segment of education and training, ISCED and EQF levels, governance, provider type, quality assurance, target group, design, mode of delivery, or sectoral focus. The results presented here are based on a total number of 63 different programme/ qualification sheets analysed. These programmes/qualifications are listed in Annex 1.

More than half of these sheets fall into the 'narrow' definition of higher VET, as described in the previous chapter, i.e. they are understood as higher professional and VET offered outside higher education. Selected examples include:

- Master craftsperson qualifications in Austria, Luxembourg, Germany or Croatia
- Estonia: EQF level 5 VET
- Austria: VET college qualifications
- Czech Republic: Higher Vocational Qualification (Certified Specialist - DiS.)
- Germany: Technical and Trade Schools (State-certified professional)
- Finland: Specialist Vocational Qualifications (SVQ)
- Hungary: VET grades
- Sweden: Diploma in Higher Vocational Education

Accordingly, slightly less than half of the higher VET types studied are part of the 'overlapping zone' discussed earlier on, corresponding to higher professional and vocational types of programmes or qualifications covered by the EHEA. Selected examples include:

- Austria: Bachelor's degree programmes provided at Universities of Applied Sciences
- Belgium-NL: HBO5
- Bulgaria, Denmark, France, Luxembourg: Professional Bachelor's Degree
- Croatia: Professional higher education studies – short cycle professional study (SCHE)
- Netherlands: Associate degree higher professional education
- Ireland: Higher Certificate Course

Please note that for this more in-depth analysis in this chapter, only the main types of higher VET programmes/qualifications per country were selected. As a result, the scope of this analysis is narrower than the one in the previous section.

### **4.2.1 History/tradition**

Higher VET combines types of programmes with a long tradition as well as recently created programmes. It is a dynamic area of qualification development but also an area that in some countries is strongly rooted in tradition.

More than one third of the types of qualifications/programmes analysed (22 out of 63) can be considered as recent, i.e. they were introduced less than ten years ago. In the case of Malta, for instance, the Undergraduate Diploma/Certificate was introduced as a direct response to an identified skills gap, which urged the introduction of VET offerings at higher level. Several of the recently (i.e. during the past ten years) introduced types of programmes/qualifications are of apprenticeship type (e.g. Greece, Italy and UK-Scotland).

Types of programmes/qualifications with a long tradition (more than 25 years in existence<sup>86</sup>) also account for close to one third of the examples studied, as do programmes/qualifications which have existed for between 10 and 25 years.

When taking a closer look at the recently introduced types of higher VET (less than ten years in existence): there is a clear tendency towards qualifications at qualifications levels linked to EQF level 5 in recently introduced programmes, with 19 out of 22 qualifications being offered at this level<sup>87</sup>. Examples include Professional Higher Education Studies (SCHE) in Croatia, EQF Level 5 VET in Estonia or the Associate degree higher professional education in the Netherlands.

#### **4.2.2 Scope**

##### **ISCED/EQF/NQF levels of programmes/qualifications**

A considerable share of the programmes/qualifications analysed falls in the category of 'first stage of tertiary education', corresponding to level 5 of the ISCED-97 classification. Close to half (29 out of 63) of the types of programme/qualifications included in the analysis are classified at ISCED level 5B<sup>88</sup> (ISCED-97); another 9 are classified as ISCED level 5A. More than one fifth of the types of programmes/qualifications are considered as 'post-secondary non-tertiary' education, i.e. they fall into one of the sub-levels of ISCED level 4.

The revised ISCED-2011 classification provides a more detailed breakdown at higher levels of education. According to this classification, 28 programmes/qualifications are considered as 'short-cycle tertiary education' (corresponding to ISCED-2011 level 5), 15 programmes/qualifications are at level 6 (Bachelor's or equivalent), and 2 examples are at level 7 (Master's or equivalent).

Information on the EQF level of qualifications are meanwhile available from practically all countries, although for some countries the allocation of qualifications to the NQF is still pending and the information on EQF levels thus to be considered as prospective. Information on the EQF level has been available for all 63 qualifications analysed, illustrating a clear dominance of EQF level 5 qualifications among the cases studied<sup>89</sup>. 36 (out of 63) qualifications refer to EQF level 5, 17 to EQF level 6 and 2 to EQF level 7<sup>90</sup>. For eight types of qualifications, a range of EQF levels is indicated, i.e. individual qualifications within those types may have different EQF levels. Higher VET qualifications related to EQF level 7 can be found, for instance, in the Netherlands (Masters degree professional higher education) and Latvia (2nd level vocational higher education). 'Apprenticeship for high training and research' qualifications in Italy are offered up to EQF level 8.

##### **Segment of education and training**

Post-secondary non-tertiary VET programmes/qualifications account for approximately one third of the programmes/qualifications studied, while 40 percent of the cases

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<sup>86</sup> Examples of such programmes/qualifications with a long tradition are the Master craftsperson exam in countries such as Austria, Germany and Luxembourg, VET grades in Hungary or the Higher National Diploma (HND) in the UK.

<sup>87</sup> In two cases out of these 19, the EQF level is prospective; in another three cases, the qualification is not EQF level 5 exclusively, but can be obtained at different EQF levels.

<sup>88</sup> The ISCED-97 classification considers as level 5B the following type of programme: it is more practically oriented and occupationally specific than programmes at ISCED 5A, and does not provide direct access to advanced research programmes; it has a minimum of two years' full-time equivalent duration but generally is of two or three years. For systems in which qualifications are awarded by credit accumulation, a comparable amount of time and intensity would be required; the entry requirement may require the mastery of specific subject areas at ISCED 3B or 4A; and it provides access to an occupation.'

<sup>89</sup> Keeping in mind, as stated above, that the current chapter only studies the main types of higher VET programmes/qualifications per country (in terms of their relevance). As a result, the scope of this analysis is narrower than the one in the previous chapters.

<sup>90</sup> In five cases (three for EQF level 5, and another two for EQF level 6) this refers to the prospective EQF level, as the qualification has not been officially allocated to the NQF yet.

studied are considered to belong to higher education. A very small number of programmes/qualifications are considered CVET.

For several cases, a unique allocation to one segment is not possible, for instance, when the same type of programme is offered both as an IVET and a CVET pathway; or when a programme/qualification can be considered both as belonging to CVET and HE.

#### **4.2.3 Governance**

##### **Awarding Body**

The studied types of higher VET were analysed according to their type of awarding body, i.e. whether the qualifications are awarded by a relevant ministry, social partner, sectoral body, provider or a combination of different bodies. The majority of types of qualifications studied are awarded by the education and training provider (45 out of 63), such as a VET institution or a higher education institution. Sometimes, providers act as awarding bodies together with other bodies, such as with ministries/public authorities, as it is the case with state-recognised educational providers. A smaller number of qualifications are awarded by the responsible ministry itself. A very small number of qualifications are awarded by social partners or sectoral bodies.

Examples of cases where more than one body is involved in the awarding of qualifications:

- AT: With Austrian VET colleges, the Federal Ministry for Education and Women's Affairs is the highest level of authority. VET colleges (recognised by the State of Austria), on their part, act as certifying institution and award the qualification.
- LU: Master craftsperson diplomas are signed by the Ministry of National Education and Chamber of Trades and the President of the Chamber of Trades.
- UK: In Scotland, HNDs (Higher National Diploma) are awarded by the Scottish Qualification Authority. In England, Wales and Northern Ireland, HNDs are awarded by other awarding bodies, including the Business and Technology Council.

Looking at these findings it is apparent that higher VET is somewhere 'in-between' higher education and VET when it comes to the nature of awarding bodies. In higher education, the higher education institutions as education and training providers are the awarding bodies in the vast majority of countries. In VET, the situation varies but the role of central awarding authorities (ministry, sectoral body or chamber) is usually rather strong. This is also linked to the existence of uniform national qualifications standards for a given qualification. This is not the case in many higher VET types of programmes analysed.

##### **Funding**

Almost all cases studied rely on some form of public funding, however to a varying extent. Half of the cases exclusively rely on public funding. In forty percent of the cases studied, private funding through individual learners plays a role, however usually (with very few exceptions) in combination with other forms of funding. Funding through sectoral bodies does not seem to play any role in the cases studied. Private funding through companies was mentioned in 13 of the cases studied, however never as a sole form of funding. Based on the data available, no significant relationship between funding arrangements and the segment of education and training or the EQF level of qualifications can be identified i.e. cases where public funding does not play a role can be found across various segments of education and training and across various EQF levels. The same holds true for private funding through companies.

##### **Quality assurance at programme/qualification level (for programmes or qualifications offered outside higher education)**

When taking a closer look at the programmes or qualifications studied which are **offered outside higher education**, it can be observed that the majority (more than 70 percent) have some kind of accreditation for programmes/qualifications in place. In many cases, the authority for accreditation lies with a relevant ministry. In some countries, accreditation bodies or qualifications bodies are responsible for programme/qualification accreditation (CZ: Accreditation Commission, FI: Finnish National Board of Education; RO: Romanian Agency for Quality Assurance in Pre-university Education; UK-EN: Ofqual). Some examples of accreditation procedures are listed below:

- SE: The Swedish National Agency for Higher Vocational Education decides which vocational programmes will be approved as higher vocational education and allocates public funding to education providers. Higher vocational education is designed to suit an evolving labour market which means that the content and providers will change over time. The Swedish National Agency for Higher Vocational Education analyses labour market needs, decides which programmes are to be provided as Higher Vocational Education and allocates public funding to education providers.
- IT (Higher technical education and training pathways): The process is based on public tenders. The Regions publish a public tender calling for application by interested subjects. The submitted 'projects' are then evaluated. The project evaluation procedure can be considered as the first stage of accreditation that will then be finalised by the region once the entity has been created.
- FI (SVQ): In Finland, competence based qualifications have been and are designed by the ministry, trade unions, employers, training providers, teacher unions and student unions. New qualifications are designed in close cooperation of all relevant stakeholders. Formally the Finnish National Board of Education is responsible for implementation of the process.

In 6 cases (out of 32 non-higher education examples), there is no programme/qualification accreditation. They exclusively refer to programmes/qualifications at post-secondary non-tertiary level. From the cases without programme/qualification accreditation, the following examples can be highlighted:

- DK (Further vocational adult education): In 2013, there was a reform on accreditation of Higher Education, including higher VET. Prior to the reform, accreditation took place on a programme level whereas the new system accredits individual institutions.
- EE (EQF level 5 VET): The curriculum groups are accredited. Different levels of VET (i.e. level 5) are not accredited separately.

#### **4.2.4 Types of providers**

Based on the analysis of the programme/qualification types, there seems to be a large dominance of public providers over private ones. In 52 out of the 63 cases studied, the qualifications/programmes were provided by public providers (including four cases with both public and private providers).

The analysis of the specific type of VET providers does not identify common patterns for higher-VET types of programmes and qualifications. It rather highlights the vast diversity of the field that can be considered higher VET. They may be offered by various types of providers, including secondary, post-secondary VET providers, CVET providers and various types of higher education institutions. Based on the examples studied, also sectoral bodies and enterprises play a role as higher VET providers, although to a smaller extent.

The majority of providers (53 out of 63) offer additional types of programmes or qualifications to the one studied here. These additional offerings are often related to

VET or both VET/academic-related programmes; there is however no clear tendency on whether these additional programmes/qualifications are located at a higher or lower level than the example studied here.

Interestingly, the results seem to show that providers' main area of focus often lies on other types of programmes/qualifications, i.e. not in the provision of the higher VET-type studied here. This may suggest that higher VET programmes/qualifications tend to be a complementary offering for many providers. For instance, as found within the HAPHE project, in some countries 'professional higher education' is provided by specialised institutions located within universities (e.g. FR and SI).<sup>91</sup> As an example, in France, the Technological university diplomas are awarded by technological university institutes, which are part of universities.

#### **4.2.5 Design of types of programmes/qualifications**

##### **Responsibility**

In the majority of cases studied, the responsibility for programme/qualifications design lies with the education and training providers (42, multiple mentions possible), followed by ministries (18, multiple mentions possible) and in some cases a joint responsibility between the two. Only in a few cases are sectoral bodies, social partners and employers responsible for design, however they are very often mentioned to be regularly involved in programme/qualifications design.

Taking a closer look at the breakdown by the segment of education and training, results confirm that the responsibility for the design of higher education programmes almost exclusively lies at provider level. As for CVET programmes/qualifications, the main responsibility for design seems to lie either at ministerial level or at provider level, with similar prevalence for both. Cases where sectoral bodies or social partners are responsible for design almost exclusively refer to CVET or post-secondary non-tertiary programmes/qualifications.

##### **Link to occupational profiles**

In almost half of the types of programme/qualification studied, there is a compulsory link to specific occupational profiles. Taking a closer look at the examples *without* any link to specific occupational profiles, these mostly refer to higher education programmes/qualifications (8 out of 14), and to a smaller extent to post-secondary non-tertiary level (5 out of 14).

Programmes/qualifications with a compulsory link to occupational profiles (28 out of 63) can be found across all EQF levels and segments of education and training studied, without a clear tendency being observed.

#### **4.2.6 Key focus and target groups of the types of programme/qualifications**

##### **Key focus/purpose**

Preparation for employment as a key focus of the programme/qualification was mentioned for 50 out of 63 qualifications (multiple responses allowed), followed by up-skilling ('improving or updating one's knowledge, skills and competences') with 29 responses and re-skilling ('acquiring new skills for a career move, progression or retraining'). Preparation for further learning or training seems to play a much less prominent role; it has been mentioned in 14 cases as a key focus of the programme/qualification.

- IT: Programmes at Institutes of Technology and Sciences have the purpose of training high level technicians with strong competences in new technological sectors that are strategic for the economic development and competitiveness of the country.

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<sup>91</sup> Camilleri, A. F. et al. (2013) *Profile of Professional Higher Education in Europe*, Malta: Knowledge Innovation Centre.

- FR: The main objective of the BTS is to prepare for a rapid professional integration. Yet, it is also possible to continue studying afterwards, e.g. in a professional Bachelor for a domain related to the BTS diploma obtained, or in some faculties of engineering following a specific entry exam or an interview and examination of school record.

This clear focus on preparation for employment (and the relatively low incidence of further learning as a key focus) is a commonality of higher VET offerings at all levels and across all segments studied. There is no indication, based on the cases studied, that programmes/qualifications of one particular segment of education and training are more or less likely to have 'preparation for employment' or 'preparation for further learning' as a key focus.

- As expected, CVET and post-secondary non-tertiary programmes/qualifications significantly more often focus on re-skilling and up-skilling, compared to higher education programmes/qualifications.
- There are significant differences across segments of education and training in terms of permeability of the types of higher VET studied, i.e. whether they provide access and progression to further learning. Three quarters of higher education programmes/qualifications studied offer access to further learning/possibilities of progression. This compares to approximately 40 percent for the CVET and post-secondary non-tertiary cases studied, suggesting that permeability is still an issue in certain areas.

#### **4.2.7 Content and type of learning outcomes**

As for the balance between academic (general) and vocational learning outcomes, the majority (38 out of 63 cases studied) of the cases studied are considered to have a focus on vocational learning outcomes (i.e. with a share of more than 50 percent related to vocational learning outcomes). For one third of the cases, the balance between academic (general) and vocational learning outcomes is considered equal.

The extent of research activities included in the types of higher VET studied is very low: 54 out of 64 types are considered to have no or very little research included in the learning process. Cases that include some element of research can exclusively be found in higher education.

#### **4.2.8 Entry requirements**

The programmes/qualifications were analysed according to the entry requirements in place which learners must meet in order to enter them, i.e. whether learners must be holders of a qualification at upper-secondary level, a higher education entrance qualification, whether they must provide evidence of certain exam results or grades, or whether they must have a certain amount of work experience. For a significant majority of the types of programmes/qualifications studied, the requirement for accessing the programme/qualification is the possession of an upper-secondary level qualification (in 45 out of 63 cases). Work experience plays a role in 8 of the cases studies, usually in combination with another qualifications requirement (mostly upper-secondary qualification). Programmes/qualifications which require prior work experience can be found across all segments of education and training, but most often in CVET and post-secondary non-tertiary VET.

#### **4.2.9 Mode of delivery, acquisition and pathways**

##### **Delivery formats**

Flexibility of delivery formats seems to play an important role with higher VET-type programmes. More than half of the programmes studied are offered both in full-time and part-time format. This flexibility of delivery formats can be found across all segments of education and training, including IVET, but is most prevalent in higher education, where three quarters of the higher VET programmes studied are offered in both full-time and part-time format.

- LU: The Professional Bachelor is generally offered in full-time format, but can also be completed part-time, with a duration of five years instead of three years full-time.
- MT: The VET Higher Diploma is offered both as a full-time programme and a part-time programme, through evening and weekend classes.
- FR: The Professional Bachelor is offered both as a full-time programme and as a part-time programme in apprenticeship format.

In terms of the learning site, slightly more than half of the cases studied (55%) are school/provider-based programmes (i.e. at least 75% of the curriculum is presented in the environment of the education provider, including distance education). Slightly less than half of the cases studied (45%) combine school/provider based and workplace learning.

### **Work-based learning (WBL)**

The higher VET programmes/qualifications were analysed as to whether they incorporate elements of work-based learning, and if so whether this takes place to a slight, medium or considerable extent. In 47 out of the 63 higher VET programmes/qualifications studied, the extent of work-based learning is considered 'medium' or 'large'. The high relevance of work-based learning in higher VET programmes/qualifications is emphasised by the fact that there are only two cases in the studied sample where work-based learning is not incorporated at all: in one of these cases, however, learners must deliver proof of several years' work experience to enter the programme. Work-based learning plays an important role across all segments of education and training. In many cases, it is not possible to make a general statement about the type and extent of WBL within one type, due to significant variations across providers and/or programmes.

- SE: A part of the training takes place in the workplace, and is called for learning at work (Lärande i arbete – LIA). There shall be a curriculum for the LIA, which should indicate the objectives that students are expected to achieve and how education providers rate knowledge, skills and competencies. An education that leads to a qualified professional vocational degree, comprising at least 400 credits (two years of study) must include LIA to at least 100 professional credits. In courses that do not lead to a qualified professional vocational degree, LIA does not have to be included.
- AT (VET colleges): Internships during the school holidays are a compulsory component of many (however not all) curricula, with significant differences in extent across different types of VET colleges.
- HU (higher education VET): Half a year work-based training is a compulsory part of the HE VET programmes. Minimum 14 weeks (5 days a week) for full time (day time) students and 240 hours for distance learning students.
- UK: Higher Apprenticeships are part of a nationally accredited work-based programme designed to meet employers' needs at higher skill levels.
- UK-Scotland: Modern, Technical and Professional Apprenticeships are the main types of higher level apprenticeships in Scotland. These programmes are designed by industry to support employees to acquire certificated competencies required to deliver their job role through work-based learning and or off-the-job training. These can be found from levels 5-8 on the EQF. A key characteristic of the Technical and Professional Apprenticeships is that the qualification taken in conjunction with the apprenticeship can be any one of SVQs, HNCs, HNDs, professional qualifications and any other qualifications based on current National Occupational Standards (NOS) at the equivalent of EQF level 5 and above. This feature was introduced in 2012 after a consultation with employers to make the higher level apprenticeships more relevant to Scottish employers. Thus, they were

developed in response to employer feedback on the need for flexible work-based learning.

### **Duration/volume**

The duration of programmes generally ranges from one to four years. In many cases, the exact duration is variable, depending on the specific programme of this type, or its format (e.g. part-time or full-time).

For almost half of the cases studied, information on their volume in terms of ECTS is available, ranging from 60 to 240 ECTS credits. Programmes/qualifications with 120 ECTS are most prevalent, followed by those with 180 and 60 ECTS credits.

As regards the expression of the volume in terms of ECVET points, the small number of responses for now does not allow any analysis. Examples include:

- EE: EQF level 5 VET with 120-150 ECVET points for the initial level and 15-60 ECVET points for the subsequent continuous level.
- SE: Diploma in Higher Vocational Education: 30-60 ECVET points.

### **Assessment and certification of learning outcomes achieved**

Provider-level assessment of learning outcomes achieved, as opposed to some form of centralised/standardised assessment, applies to 49 out of 66 cases studied. Examples of centralised/standardised assessment can be encountered above all at post-secondary non-tertiary level (9 out of 14 cases), followed by higher education (in four cases). In 18 cases, employers are involved in the assessment/certification process, either on a compulsory (in at least seven cases<sup>92</sup>) or voluntary basis. Again, it is the segment of post-secondary non-tertiary education where employers are most often involved in the assessment/certification process (in 12 cases out of a total number of 22 post-secondary non-tertiary programmes/qualifications).

#### **4.2.10 Teachers and trainers**

Requirements for teachers and trainers very often refer to a specific level of qualification (in 20 out of 63 cases) or to both a level of qualification and related work experience (in 27 out of 63 cases). As for the typical background of teachers and trainers – whether academic or professional – the results show a very balanced picture with no clear tendency to be identified. At the same time, this 'balanced picture' indicates already, that higher VET type programmes have a much higher share of teachers and trainers with a professional background than other types of education and training located at a similar level. In addition, requirements towards teachers and trainers are reported to vary significantly across institutions and/or subjects taught.

- HU: For VET grades, the basic requirement is to have teacher qualification, however those who teach the practice-oriented subjects often have specific business experience as well.
- IT: For higher technical education and training pathways, 50% of the teachers should come from the industry, with at least 5 years of work experience.

#### **4.2.11 Partnerships and cooperation**

##### **Partnership and cooperation with business**

Partnerships and cooperation with business and industry play an important role in higher VET programmes, as the results show. For all cases studied, there is some form of partnership or cooperation in place. In more than 80 percent of the cases, the extent of cooperation was stated as being of either 'medium' or 'large' extent. As for the form of cooperation, work-based learning is most prevalent (mentioned in almost

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<sup>92</sup> 'at least', because information has not been available for all the 18 cases where employers are involved in assessment/certification.

three thirds of the cases), followed by cooperation in provision (i.e. professionals from the field as teachers/trainers). It was also mentioned that it is particularly difficult to draw generalisations on the extent of cooperation even within one particular type of qualification/programme, as there are significant differences both across providers and fields.

- HR (Programmes for master craftsperson): Cooperation refers to the development of exam programmes, representation in the Committee holding the Master Craftsperson Exam.
- IT (Apprenticeship for high training and research): The personal training plan of the apprentice is developed by the company in agreement with the education provider.

### **Cooperation with other training institutions**

Based on the results obtained, cooperation with other training institutions seems less prevalent compared to the cooperation with businesses (see above). For a quarter of the programmes/qualifications, it was stated that cooperation with other training institutions was not incorporated at all. As to the forms of cooperation, they mainly refer to credit transfer and permeability and, to a lesser extent, joint provision, as the following examples illustrate:

- PT (Professional higher education technical courses): Adjustment between training offered in different education levels (EQF 4, 5, 6), so that courses of lower levels give access to courses in higher levels. Shared use of human and material resources for training of EQF levels 4 and 5.
- UK-EN (Foundation Degree): Programmes are developed by partnerships between higher education and further education institutions.
- BE-nl (HBO5): Adult educational institutes and HEI are obliged to work together to provide HBO5 programmes.
- LU: Some BTS (Advanced Technician Diploma) have partnerships with the University of Luxembourg or Universities in the Greater Region, to provide BTS students with the possibility to continue their studies at professional Bachelor level.

### **4.2.12 Sectoral prevalence**

Higher VET-type programmes and qualifications can be found in various fields and sectors. From the research, the three top sectors with higher VET-type offerings seem to be business, engineering and health.

## **5 Statistical information on higher VET**

One of the aims of this study was to understand the scale of higher VET. For this purpose, the research team analysed international statistics which distinguish between enrollment in academic and vocational (or professional) programmes. This analysis is based on a broad understanding of higher VET, including vocational and professional education and training offered outside higher education as well as those belonging to the 'overlapping zone' (see Figure 2). The results as well as limitations of this analysis are presented below. The team also asked country researchers to report, where available the national statistics on higher VET. The data collected in this manner is of course not comparable as it does not concern the same types of programmes and frequently the indicators used are somewhat different. The national data was nevertheless used to assess the trends (increase/decrease) and to comment on numbers of participants and graduates.

### **5.1 International statistics**

The research team used data on enrolment at different levels of education according to the ISCED 2011 categorisation as collected through the UOE data collection system jointly managed by UNESCO, OECD and Eurostat.

ISCED 2011 uses a three digit coding scheme whereby:<sup>93</sup>

- The first digit designates the level of education (primary, lower-secondary, etc.). It goes from 1 to 8 and the levels that correspond to post-secondary education and above are levels 4 and above;
- The second digit refers to orientation of programmes. It is either general or vocational at levels 2 to 5. At levels 6 and above the terminology of professional and academic are used, however no definitions have been provided so far for these dimensions. At these levels the distinction between two types of orientation are voluntary for countries to use. The second digit 4 indicates that the programme is general or academic and the second digit 5 indicates that it is vocational or professional. Digit 6 indicates that the orientation is not specified;
- The third digit refers to the possibility to access higher levels of education on completion of a given programme. This distinction is not used in the category below.

#### **5.1.1 Programmes classified as higher VET (or as having professional orientation) in ISCED 2011**

Based on the working definition for higher VET ISCED 2011 levels 4, 5 and partly 7 were included in this analysis - level 8 was not included. ISCED 2011 does offer the possibility to differentiate between professional and academic programmes at ISCED level 8 (doctoral studies or equivalent). However none of the countries allocated any programmes at this level to the professional category.

The analysis of countries' mapping of programmes according to the ISCED classification shows that:

- Most programmes classified as ISCED 4 are vocational and many of these programmes (though not all) are likely to also be seen as 'higher'. However some programmes are leading to qualifications that are linked to EQF level 4 which is out of scope of the working definition for higher VET ('above EQF level 4');
- Similarly most programmes at ISCED level 5 are vocational and can be considered as higher VET;
- Those countries that do differentiate programme orientation at ISCED level 6, classify most professional Bachelor degrees in the category of professional. The

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<sup>93</sup> UNESCO (2012) *International Standard Classification of Education 2011*, Montreal: UNESCO-UIS.

majority of qualifications classified in the professional orientation can be considered as higher VET. However, some countries also classified some important qualifications that could be seen as higher VET as academic (notably Germany);

- The programmes at ISCED level 7, even if classified as professional would not typically be seen as higher VET by most of the respondents in the national contexts;
- There are programmes or qualifications that could be seen as higher VET which are not classified according to ISCED. These are the master craftsperson qualifications in certain countries, qualifications accessed through recognition of non-formal and informal learning (which are often called vocational, professional or occupational qualifications) and lifelong learning professional courses delivered by universities.

Further details on this analysis are provided below.

As shown in table 9 below the vast majority of programmes classified at ISCED levels 4 and 5 are considered as vocational and categorised as such in the ISCED 2011 classification. Consequently, as shown in the sections below, it can be considered that the vast majority of persons enrolled in these programmes participate in higher VET. Vocational qualifications at ISCED levels 4 and 5 are:

- Training programmes for young people or adults learning to similar or the same qualifications as those achieved at upper-secondary but addressed at those who have completed a different upper-secondary course or who are only taking part in the vocational component of the training. These qualifications are likely to be linked to EQF level 4 (and not 5) and hence technically should not be considered as higher VET, since the level of skills and competences required is rather comparable to upper-secondary level.
- 'Top-up' or specialisation training courses for people who already hold a first VET qualification;
- Adult training courses (specifically designed for adults) or requalification courses (for unemployed) for which again it is not clear whether they are above EQF level 5 or at EQF level 4;
- Artistic programmes are also frequently classified at this level. However most respondents would not consider these programmes as vocational even though some of the professions prepared can be rather technical. It is also not clear to what extent the creative sector itself would see these qualifications as vocational;
- Stand-alone types of VET programmes and qualifications that are clearly different from other initial VET at secondary level and can be considered as 'core' higher VET programmes. These are often short cycle qualifications such as the Higher Technician Certificate (BTS) in France and Luxembourg or various forms of post-secondary college programmes and higher degrees (often two years programmes).

The above shows that not all the persons enrolled in ISCED 4 and 5 programmes (even if they are labelled as professional) are taking part in higher VET as some of them are preparing for qualifications below EQF level 5 or artistic qualifications. Nevertheless, in the absence of better data, enrolment at levels 4 and 5 will be considered as a proxy for enrolment in higher VET.

When it comes to the ISCED levels 6 (Bachelor and equivalent) and 7 (Masters and equivalent), an important number of countries have decided not to differentiate between academic and professional orientation. Where the distinction has been made, the programmes classified as professional at level 6 are:

- Various forms of professional Bachelor;

- Specialised teacher training programmes;
- Non-university programmes/ qualifications such as business schools or colleges for specific professions (medical and paramedical fields);

However, Germany for example, has classified an equivalent of professional Bachelor programmes (provided at Fachhochschulen and Berufsakademien) as academic programmes. Therefore though these programmes are professionally oriented they are considered as academic because they offer a Bachelor qualification which enables further progression. This example shows the differences in the understanding of what constitutes higher VET across countries.

The programmes that are classified as professional at ISCED level 7 (Masters or equivalent) are mostly engineering qualifications, medical and paramedical qualifications as well as veterinary studies. Though these programmes are indeed closely linked to specific professions they would usually not be seen as higher VET as they are core university qualifications. As of 2013, only Luxembourg has classified programmes at this level that are other than Masters' degrees – for example, training for chartered accountants and chartered auditors.

Table 9. Number of programmes classified according to their orientation and level per country (ISCED 2011)

	Level 4 - post-secondary non-tertiary		Level 5 - Short cycle tertiary		Level 6 - Bachelor or equivalent			Level 7 - Master or equivalent			Other
	General (44)	Vocational (45)	General (54)	Vocational (55)	Academic (64)	Professional (65)	No distinction (66)	Academic (74)	Professional (75)	No distinction (76)	
AT		3		9			2			3	
BE_fr		6		1		6	2			9	
BE_nl	3	4		1	3	3		2			
BG		2			1	1				3	
HR				1	1	1		3	1		
CY				2			2			2	
CZ	1	4		3	1	1		3			
DK				4	1	5		4	2		
FI		1		1			2			3	
FR	1	1		3	4	4		2	4	2	
DE	3	6		1	13	6		12			
EL		1			4	3		4	2		
HU				2			6			8	
IE		6	1	1			3			2	1
IT		2		1			5			6	1
LV		2		1	1	3		1	3		
LT		1			1	2		2	1		
LU		1		1	3	2		1	1		
MT		3	2	4			4			3	
PL		5		6			4			6	1
PT		1		2			5			9	1
RO		1					1			2	1
SK		2		2			1			4	1
SI				1	1	2		1	1	2	
ES		1		3			2		1	4	

Source: ICF based on 2013 ISCED mapping; UK data not supplied

An overview of the programmes and qualifications that are not categorised according to ISCED and for which no data is supplied to the UOE database has also been carried

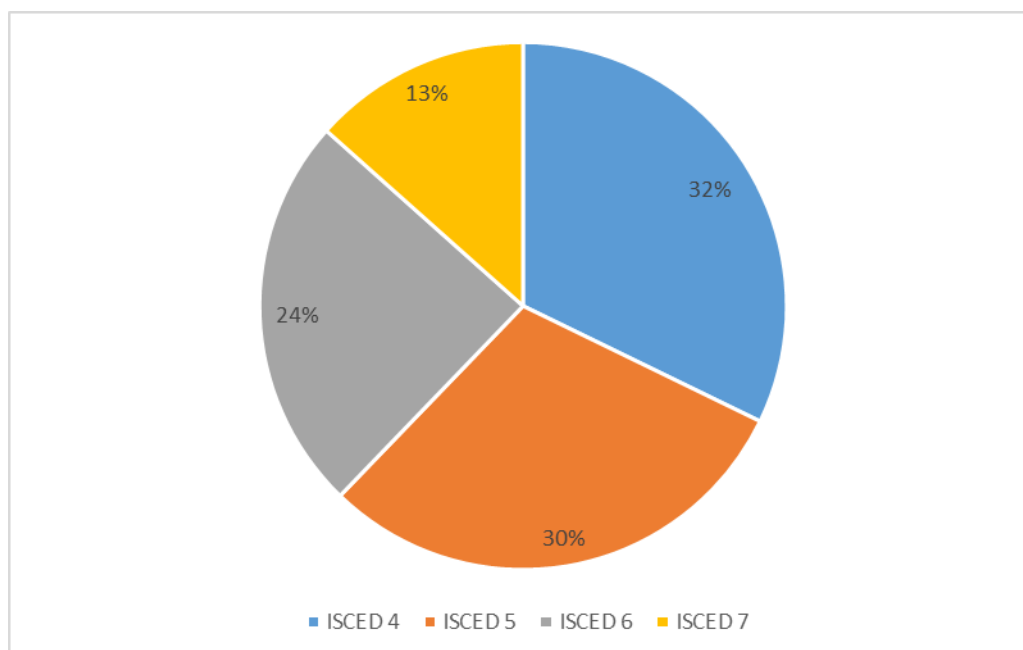
out. A review of these programmes and qualifications shows that there are a number of them that are likely to be considered as higher VET that are not classified according to ISCED and for which participation data is not reflected in the international statistics. Examples of such qualifications are:

- Master craftsperson examination in Austria (the participation in the training programme is reflected in the international statistics but the qualification can also be accessed without prior training and the number of persons qualified through this channel is not reflected in the data). In Croatia, Slovenia and Poland the training programmes preparing for the qualification of Master craftsperson are not classified in ISCED.
- Other countries have specific professional qualifications that are accessible through recognition of non-formal and informal learning and not reflected in these statistics (this is specific in ISCED mappings of Belgium-NL, Bulgaria, Latvia);
- 'In Austria and Slovakia there are 'other' university courses which are typically lifelong learning courses for professionals and not included in ISCED;
- In Ireland the training offered by skillnets and the accelerated in-company skills training are CVET courses at various levels.

### 5.1.2 Participation in higher VET: overview

In 2013, there were roughly 4.8 million persons enrolled in programmes that could be considered, according to their ISCED 2011 classification, as higher VET (ISCED levels 4, 5, 6 and 7). This actually represents 20% of total enrolment in post-secondary education and training at ISCED levels 4, 5, 6 and 7 (excluding level 8 – doctoral studies and equivalent). The majority of them were enrolled in programmes at ISCED levels 4 and 5.

Figure 4. Participants in post-secondary programmes with a professional or vocational orientation per ISCED level



Source: Eurostat

As shown in table 10 below, the vast majority of people participating in programmes at ISCED levels 4 and 5 are enrolled in programmes that are considered as vocational. As discussed in the previous section, some of these programmes lead to qualifications linked to EQF level 4 (not 5) and some others concern artistic education. However these programmes are likely to represent a small share of learners.

When looking at ISCED level 6, roughly 10% of learners are enrolled in programmes that are categorised as professional. These are mostly programmes such as professional Bachelor. However, many countries decided not to make a distinction between the orientation of Bachelor programmes where Germany included these as academic, not professional. Therefore the actual share of learners in these programmes is likely to be higher.

The EU-level data on professional orientation of programmes at ISCED level 7, though presented in table below, is not reliable for the following reasons:

- The figures are highly influenced by the French data (98% persons enrolled in professionally oriented programmes at this level are French); and
- France decided to consider as professionally oriented the majority of Master degree programmes since all Master programmes are expected to be linked to a profession or group of professions.

The numbers of students enrolled in vocational programmes at ISCED levels 4 and 5 are comparable. For the ISCED level 6, the numbers in the table are also similar to levels 4 and 5 but this is affected by the fact that many countries did not differentiate between academic and professional orientation at this level. It is likely that if this distinction was made and if countries categorised professional Bachelor as professional and not academic (unlike Germany for example), the number of higher VET students at this level would be higher.

Table 10. Enrolment in post-secondary education, by orientation (2013)

	Total	General/ Academic	Vocational/ Professional	Not differentiate d	VET as % of total
ISCED 4 (post-secondary non-tertiary)	1,670,574	153,616	1,530,226		92%
ISCED 5 (short cycle and equivalent)	1,475,420	49,385	1,426,035		97%
ISCED 6 (Bachelor and equivalent)	11,988,372	3,112,813	1,157,559	7,718,000	10%
ISCED 7 (Masters and equivalent)	5,432,464	1,560,023	637,699*	4,794,765	12%
Higher VET as share of total	20,566,830		4,751,519		23% (20% if excluding the FR data at Master level)

\*98% of these students are from France. France is the only country that considers that the majority of Master programmes are professionally oriented

Source: ICF calculations based on Eurostat (educ\_uoe\_ensr, extracted on 13/11/2015)

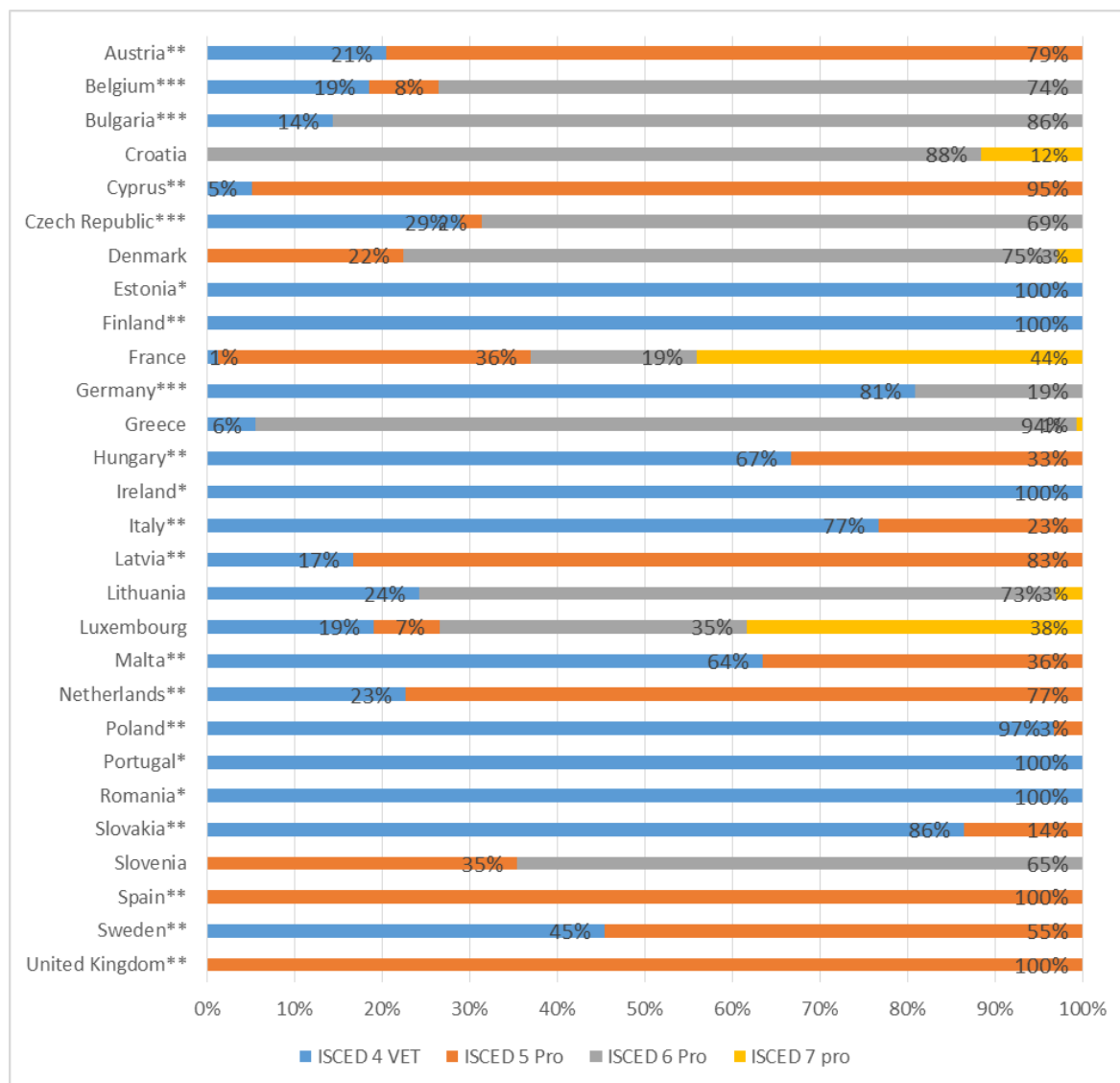
Figure 5 shows the share of higher VET students per ISCED level. The following groups of countries can be identified:

- Countries where most students enrolled in higher VET are in ISCED 4 programmes (Estonia, Finland, Germany, Ireland, Italy, Poland, Portugal, Romania, Slovakia);
- Countries where most students enrolled in higher VET are in ISCED 5 programmes (Austria, Cyprus, Latvia, the Netherlands, Spain and UK);

- Countries where most students enrolled in higher VET are in ISCED 6 programmes (Belgium-FR and Belgium-NL, Bulgaria, Croatia, Denmark, Greece, Lithuania); and
- Countries where there is a mix of levels (Czech Republic, France, Hungary, Luxembourg, Malta, Slovenia, Sweden)

France and Luxembourg are the only two countries that report a significant number of students as being enrolled in professionally oriented programmes at level 7. The other countries either did not differentiate according to programme orientation or the numbers of students in professional ISCED 7 programmes is very low.

Figure 5. Share of students enrolled in vocationally and professionally oriented programmes per ISCED level



Legend: \*The country did not provide differentiate programme orientation at ISCED levels 5,6 and 7; \*\*The country did not differentiate programme orientation at ISCED levels 6 and 7; \*\*\*The country did not differentiate at ISCED level 7.

Source: Eurostat

There are important differences when looking at the situation of individual countries. In some countries the enrolment in vocational or professional programmes at ISCED levels 4, 5, 6 and 7 is below 10% while in others it is above 25-30%. This illustrates the important differences in the existence of higher VET tracks and their popularity. The difficulty of using this data for a country ranking (low, medium and high) is the

fact that not all countries differentiate the orientation at ISCED levels 6 and 7. For those countries that do not make this distinction the overall share of higher VET learners is negatively affected. For example the Netherlands has popular professional Bachelor degree programmes but the 2013 ISCED statistics do not differentiate between academic and professional programmes. To at least partly address this negative bias the researchers looked at both:

- The share of higher VET students at ISCED levels 4, 5 and 6 as share of all enrolment in post-secondary, except doctoral studies (ISCED levels 4, 5, 6 and 7). Otherwise the numbers would be strongly affected by the high share of VET students in ISCED levels 4 and 5; and;
- The share of higher VET students at ISCED 4 and 5 as a share of all learners at levels 4, 5 and 6. In this way the data for professional Bachelor and equivalent qualifications is not included in the calculation and the countries which did not make a distinction in their Bachelor programmes orientation are ranked on the same basis as those which did make the difference.

As a result it can be considered that the participation in higher VET compared to enrolment in other post-secondary programmes is:

- Medium to high: AT, BE, DK, FR, DE, HU, IE, LV, LT, LU, MT, SI
- Medium to low: HR, CY, EE, EL, PL, RO, ES, SE, UK
- Low: BG, CZ, FI, IT, NL, PT, SK

This was calculated as follows:

- Enrolment in vocational and professional programmes at ISCED levels 4, 5 and 6 as a share of total enrolments at levels 4, 5, 6 and 7 was considered: low if 10% and below; medium if above 10% and below 30%, high if 30% and above. The cut-off points were determined according to the distribution of countries (low tier, middle tier and upper tier);
- Enrolment in vocational and professional programmes at ISCED levels 4 and 5 as a share of total enrolments at levels 4, 5 and 6 was considered: low if 10% and below; medium if above 10% and below 25%, high if 25% and above. The cut-off points were determined according to the distribution of countries (low tier, middle tier and upper tier);
- Subsequently countries were ranked into the above three categories according to a combination of the ranking on the two indicators as follows:
  - Medium to high: the countries that ranked high-high or medium-high;
  - Medium to low: the countries that ranked medium-medium, medium-low or high-low;
  - Low: the countries that ranked low-low.

The detailed numbers are presented in table 11 below.

Table 11. Enrolment in post-secondary education and training per orientation, per country (2013)

	ISCED 4			ISCED 5			ISCED 6			ISCED 7			VET at ISCED 4&5 as % of all ISCED 4,5&6	
	Total	Vocational	VET as % of total	Total	Vocational	VET as % of total	Total	Vocational	VET % of total	Total	VET as % of ISCED 4,5,6&7 enrolment			
Austria	19,827	19,827	100%	76,800	76,800	100%	180,234	N/A		140,087	23%	medium	35%	high
Belgium-FR and NL	61,977	57,024	92%	24,123	24,123	100%	364,202	225,900	62%	85,553	57%	high	18%	medium
Bulgaria	2,464	2,464	100%	N/A	N/A		195,637	14,688	8%	82,951	6%	low	1%	low
Croatia	N/A	N/A		N/A	N/A		102,795	43,925	43%	58,196	27%	medium	0%	low
Cyprus	176	176	100%	3,250	3,250	100%	19,990	N/A		7,896	11%	medium	15%	medium
Czech Republic	58,513	12,240	21%	992	992	100%	267,731	28,980	11%	133,524	9%	low	4%	low
Denmark	N/A	N/A		31,692	31,692	100%	182,281	105,090	58%	67,546	49%	high	15%	medium
Estonia	10,633	10,633	100%	N/A	N/A		44,758	N/A		17,004	15%	medium	19%	medium
Finland	24,188	24,188	100%	92	92	100%	228,273	N/A		60,051	8%	low	10%	low
France	34,753	17,806	51%	504,896	504,896	100%	931,748	267,769	29%	831,956	34%	high	36%	high
Germany	828,667	749,831	90%	540	540	100%	1,635,907	177,524	11%	930,366	27%	medium	30%	high
Greece	N/A	13,268		N/A	N/A		588,201	221,549	38%	48,072	37%	high	2%	low
Hungary	74,261	74,261	100%	37,018	37,018	100%	237,647	N/A		77,043	26%	medium	32%	high
Ireland	55,594	55,594	100%	41,618	0		121,210	N/A		28,429	23%	medium	25%	high
Italy	8,181	8,181	100%	2,486	2,486	100%	1,108,260	N/A		727,019	1%	low	1%	low
Latvia	3,488	3,488	100%	17,348	17,348	100%	63,274	N/A		11,333	22%	medium	25%	high
Lithuania	15,376	15,376	100%	N/A	N/A		124,519	46,104	37%	32,495	36%	high	11%	medium
Luxembourg	840	840	100%	329	329	100%	3,435	1,545	45%	2,394	39%	high	25%	high
Malta	2,366	2,305	97%	2,466	1,324	54%	6,914	N/A		3,116	24%	medium	31%	high

	ISCED 4			ISCED 5			ISCED 6			ISCED 7			VET at ISCED 4&5 as % of all ISCED 4,5&6		
	Total	Vocational	VET as % of total	Total	Vocational	VET as % of total	Total	Vocational	VET % total	as of Total	VET as % of ISCED4,5,6&7 enrolment				
Netherlands	1,571	1,571	100%	5,338	5,338	100%	558,456	N/A			97,327	1%	low	1%	low
Poland	323,424	323,424	100%	10,907	10,907	100%	1,266,471	N/A			583,045	15%	medium	21%	medium
Portugal	10,341	10,341	100%	N/A	N/A		231,528	N/A			120,001	3%	low	4%	low
Romania	92,854	92,854	100%	N/A	N/A		409,606	N/A			187,195	13%	medium	18%	medium
Slovakia	18,384	18,384	100%	2,872	2,872	100%	195,718	N/A			0	10%	low	10%	low
Slovenia	N/A	N/A		13,406	13,406	100%	54,865	24,485	45%		25,829	40%	high	20%	medium
Spain	N/A	N/A		346,382	346,382	100%	1,085,012	N/A			514,369	18%	medium	24%	medium
Sweden	22,696	16,150	71%	26,036	19,411	75%	252,980	N/A			136,075	8%	low	12%	medium
United Kingdom	N/A	N/A		326,829	326,829	100%	1,526,720	N/A			423,592	14%	medium	18%	medium
EU	1,670,574	1,530,226	92%	1,475,420	1,426,035	97%	11,988,372	1,157,559	10%		5,432,464	20%		20%	

Source: ICF calculations based on Eurostat (educ\_uoe\_ensr, extracted on 13/11/2015)

There appears to be no clear relationship between the level of enrolment in VET at upper-secondary level and the level of enrolment in higher VET. Several hypothesis could be formulated around this relationship but none seem to be fully supported by the data when looking at the EU 28 countries:

- One could expect that in countries with low enrolment in VET at secondary level, there would be higher participation in VET at post-secondary level. The reason behind this assumption is that a certain number of qualified professionals need to be trained in each economy. It seems indeed that none of the countries that have low enrolment at upper-secondary level also has low enrolment in higher VET. But some of the countries in the medium-to-low category have quite low numbers of students in higher VET (e.g. Sweden or UK). This assumption however seems to be true for example in Ireland where there is very low enrolment in secondary VET and the majority of VET programmes are at higher levels;
- One could also expect that those countries which have high enrolment in upper-secondary VET would have relatively high enrolment in higher VET. The reason behind this assumption would be that higher VET could offer people with VET qualifications further development and progression opportunities. While this does appear to be true for example in Austria or Belgium-FR and Belgium-NL it does not verify in some other countries. In the Czech Republic and Slovakia for example an important part of VET graduates from secondary level progress to higher education but enrol into academic programmes.

The comparison between the level of enrolment at upper-secondary VET and higher VET is shown in table 12 below.

Table 12. Comparison of enrolment in upper-secondary VET and enrolment in 'higher VET'

Enrolment in higher VET*, 2013	Enrolment in VET as share of students in upper secondary education (ISCED 3), 2013		
	High VET (>65%)	Medium secondary VET (44%-65%)	Low secondary VET (<44%)
Medium to High	AT, BE, LU, SI	FR, DE, DK, LT	HU, IE, LT, MT
Medium to Low	HR, RO	PL, SE, UK	CY, EE, EL, ES
Low	CZ, SK, FI, NL	BG, IT, PT	

\*categories developed in this study – see above

Source: ICF calculations based on Eurostat data on enrolment in VET

### 5.1.3 Participation in higher VET by ISCED level

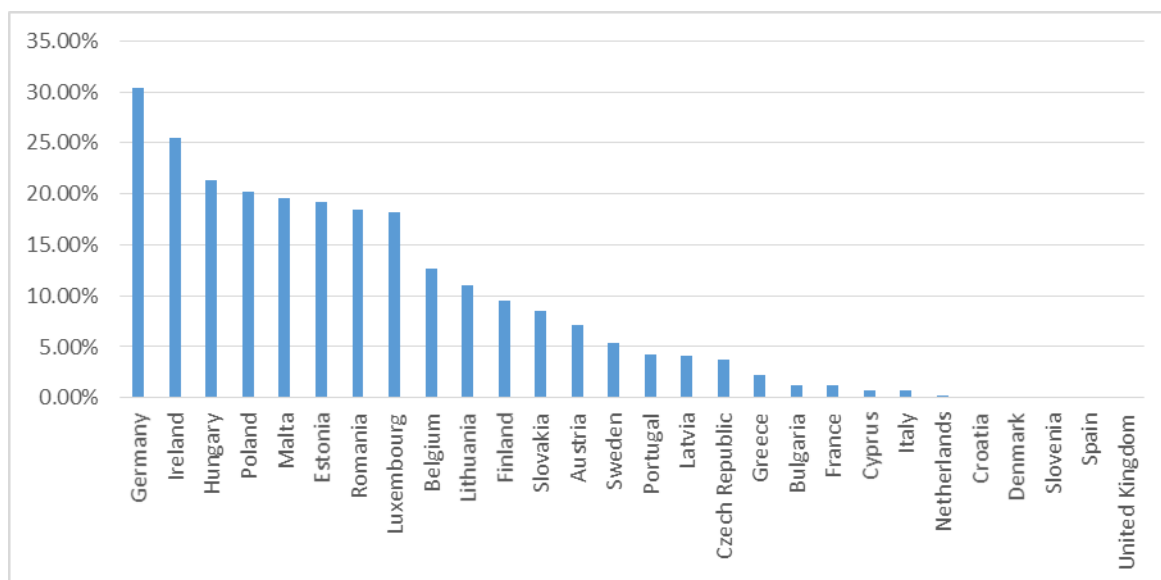
This section discusses the main findings at ISCED levels 4 and 5. The data at ISCED levels 6 and 7 were not analysed further because, as discussed above, an important number of countries did not make a distinction between professional and academic programmes and even among those that did so inconsistencies have been identified.

#### 5.1.3.1 ISCED level 4 – post-secondary non-tertiary

In 2013, there were in total 1.67 million learners enrolled in programmes at ISCED level 4 at EU level. From this EU total, most learners were in Germany (49%), Poland (21%), Romania (6%), Hungary (5%), Ireland (4%) and Belgium-FR and Belgium-NL (4%). In other countries which have programmes at this level and where statistics are available the total numbers of learners are relatively low (below 20,000 learners).

Figure 6 below compares the number of learners enrolled at ISCED level 4 with professional orientation, to the total population of learners enrolled at ISCED levels 4, 5 and 6. Countries where post-secondary non-tertiary education is a relatively strong segment are: Germany, Ireland, Hungary, Poland, Malta, Estonia, Romania and Luxembourg.

Figure 6. Enrolment at ISCED level 4 as share of country's total enrolment at ISCED levels 4,5 and 6 (2013)



Source: Eurostat

As shown in Figure 7 below, the vast majority of students enrolled in ISCED 4 programmes are enrolled in vocational programmes. In those countries where programmes at this level exist (or where the statistics are reported) the majority of programmes are vocational and these are the programmes that attract most students. In a number of countries (AT, BG, CY, EE, FI, HU, IE, IT, LT, LU, NL, PL, PT, RO, SK) vocational programmes represent 100% of learners at this level.

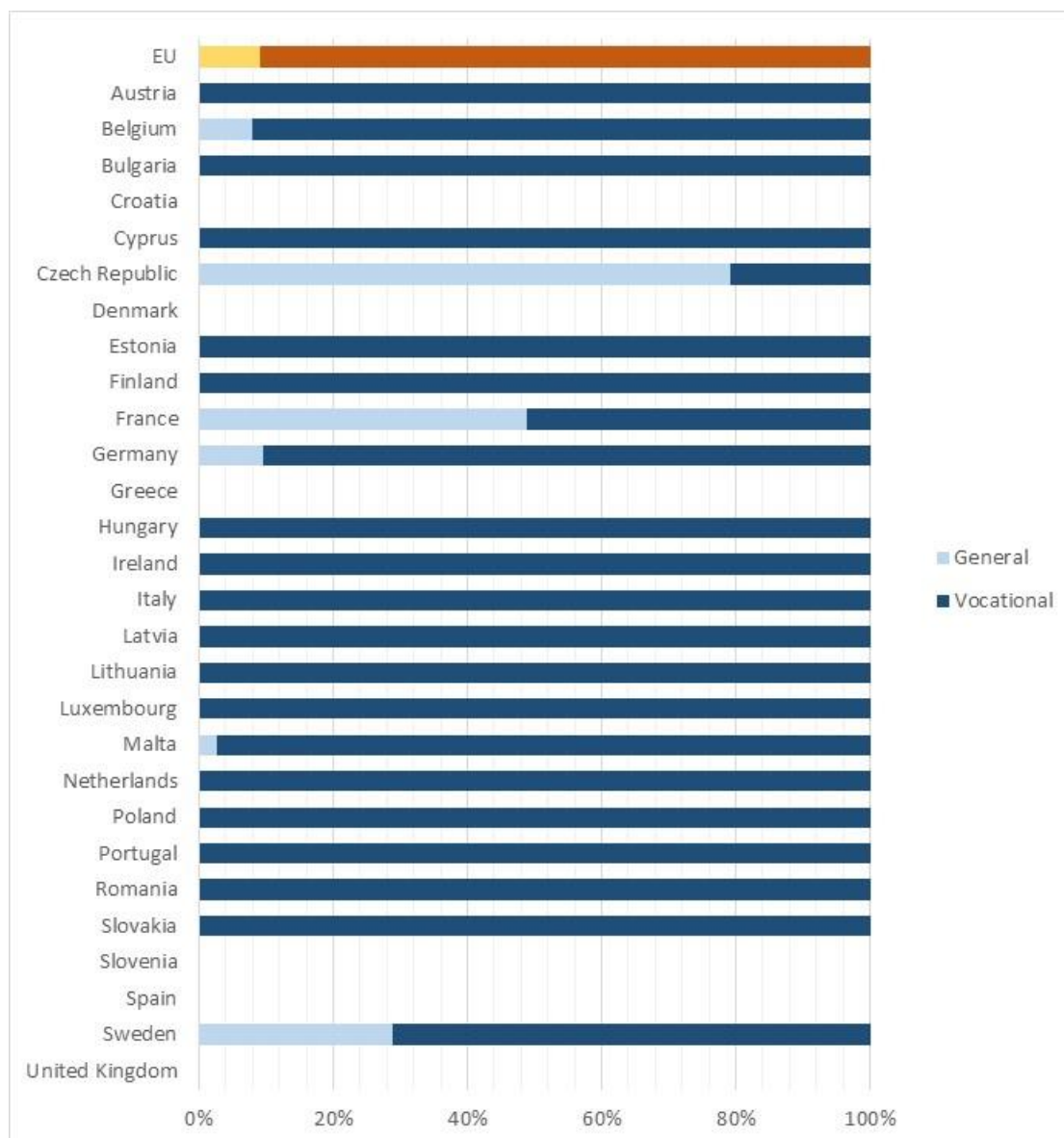
There are three notable exceptions: Czech Republic, France and to a lesser extent Sweden:

- In the Czech Republic the programmes at this level classified as academic are lifelong learning courses (non-degree courses) delivered by universities which result in a university certificate. This category covers a broad range of programmes some are more academic in nature than others. For example some of these programmes prepare learners for entry examinations to degree programmes in universities and hence can be considered as academic. Others are actually rather professional as they are aimed at graduates or professionals to further develop their professional capacity;
- In France, the programmes classified as academic at this level are preparatory programmes for examinations into selective higher education institutions;
- For Sweden the mapping of programmes to ISCED 2011 was not available at time of drafting this report. Hence it is not clear which programmes were classified as academic at this level.

Figure 8 below shows that in certain countries ISCED level 4 programmes are commonly taken by adult learners. While at EU level the share of learners who are older than 25 is around 25%, it is much higher in some countries. This suggests that in some countries many of these programmes provide further specialisation training or re-qualification opportunities for adults. For example:

- In Finland over 90% of learners enrolled at ISCED level 4 are aged above 25;
- In the Netherlands they are over 80%;
- In Belgium-FR and Belgium-NL, Luxembourg and Sweden they are over 50%.

Figure 7. Share of students enrolled in vocational and general programmes as ISCED level 4 (2013 data)



Source: ICF calculations based on Eurostat

Figure 8. Enrolment at ISCED4 level by age groups (2013)



Source: ICF calculations based on Eurostat

Figure 9 shows the breakdown of students' enrolment in vocational programmes at ISCED level 4 per economic sector. The most important sectors are:

- Health and welfare;
- Social sciences, business and law;
- Services; and
- Engineering, manufacturing and construction.

Annex 3 contains the more detailed breakdowns of these four sectors. The most important subsectors are:

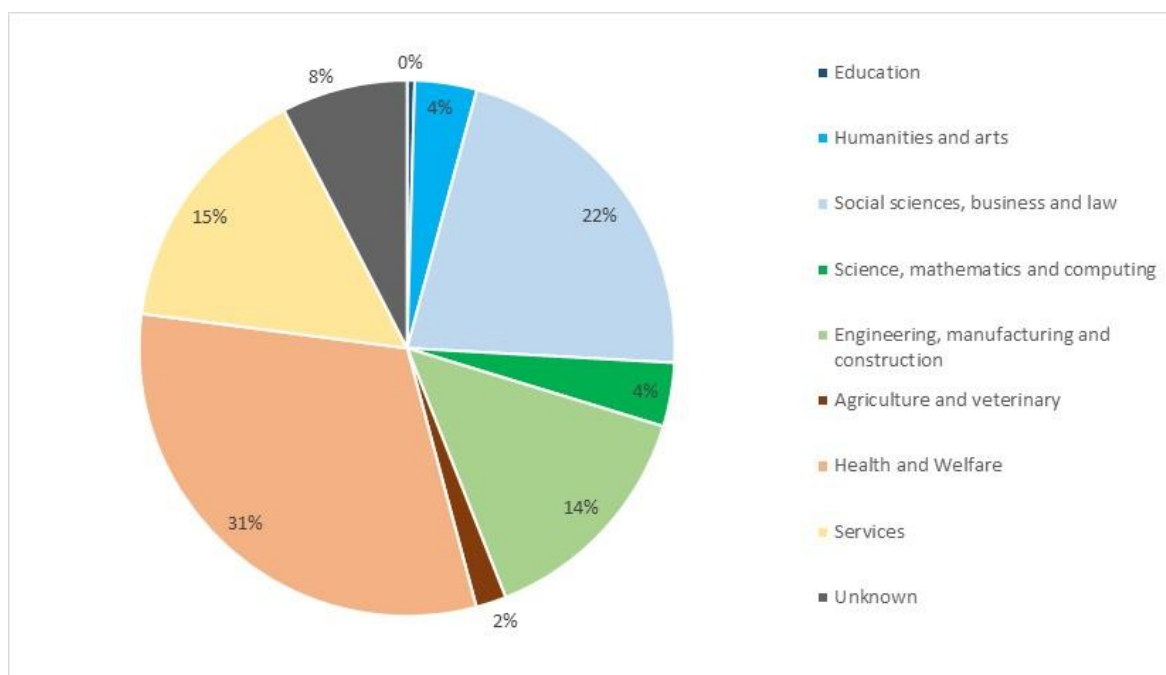
- Business and administration;
- Nursing and caring;
- Engineering and engineering trades; and
- Social work and counselling;

There are important differences though across the countries (see Annex 3):

- In the Netherlands the most important sector, in terms of participation, is education;
- In Finland, Bulgaria and Poland the most important sector is social sciences and business;

- In Portugal, the Netherlands, Luxembourg, Estonia and Cyprus it is engineering;
- In Romania, Germany, France and Austria it is health and welfare;
- In Slovakia, Poland, Lithuania, Latvia and Estonia it is services.

Figure 9. Enrolment at ISCED4 vocational per field of study (2013, EU)



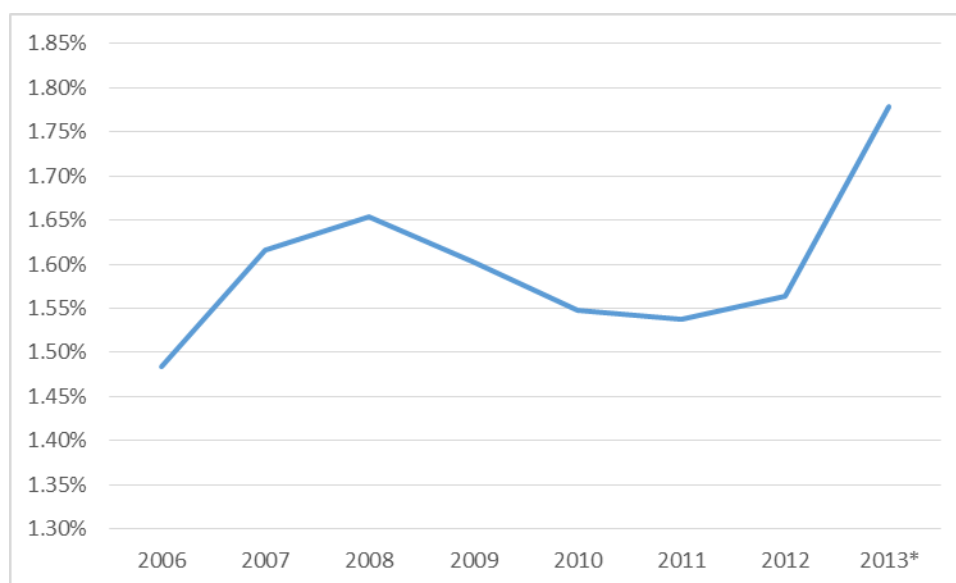
Source: ICF calculations based on Eurostat

There is for the moment no trend data available that would follow the ISCED 2011 classification as countries only started reporting data according to this nomenclature in 2013. However given that the vast majority of programmes classified as ICSED 4 in 2011 were vocationally oriented it can be assumed that the same would hold for the programmes classified at ISCED level 4 in 1997.

The total numbers of students enrolled in post-secondary VET courses were at their highest in 2009 and then again in 2013. Figure 10 below shows the evolution of the number of participants in post-secondary education (ISCED level 4) compared to the total population in the age group 18-30. The data shows that:

- Between 2006 and 2008 the share of people enrolled in post-secondary VET compared to the age group 18-30 was growing;
- However in 2009, 2010 and 2011 a smaller share of the population was registered in this type of programmes;
- The share of participants in this type of programmes started growing again as from 2012.

Figure 10. Evolution of numbers of participants in post-secondary education compared to total population aged 18-30 (percentage)



Legend: the OECD database includes only 21 EU countries – the following countries are not included: Bulgaria, Croatia, Cyprus, Latvia, Lithuania, Malta, Romania

\*data for 2013 is from Eurostat database, it includes the same 21 countries as those available in the OECD database. Data for these countries for that year is missing: upper-secondary level – the Netherlands; post-secondary level – DK, EL, ES, SI and UK.

Table 13. Evolution of enrolment in post-secondary VET in absolute numbers

	2006	2007	2008	2009	2010	2011	2012	2013*
Post-secondary non-tertiary education	1,341,832	1,461,426	1,497,517	1,449,429	1,388,356	1,370,834	1,380,442	1,553,850

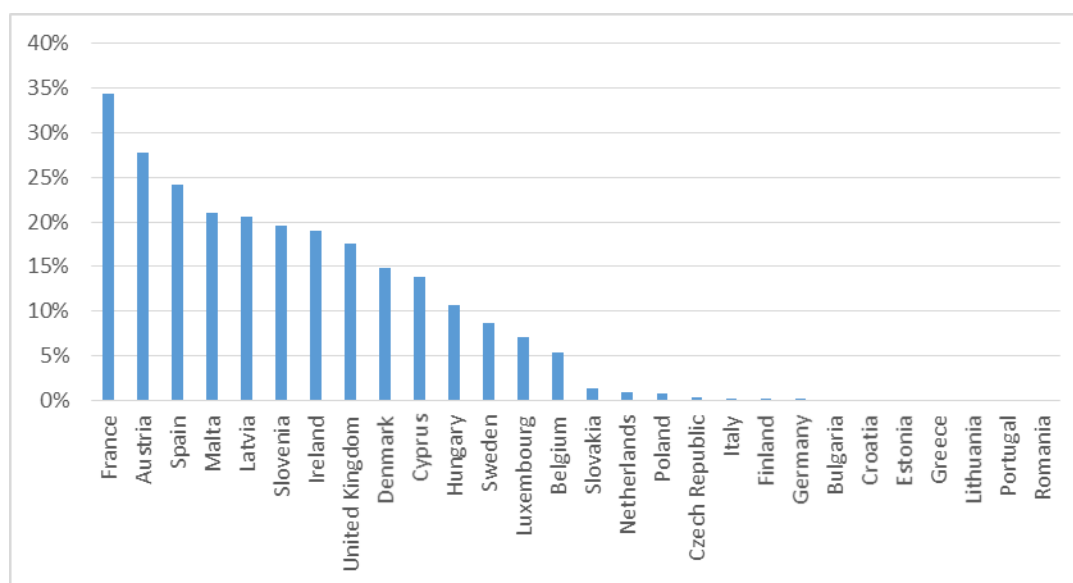
Source: OECD – UOE database

### 5.1.3.2 ISCED level 5 – short cycle tertiary

In 2013, there were in total 1.475 million learners enrolled in programmes at ISCED level 5. The majority of them were in France (34%), Spain (23%), UK (22%) and Austria (5%). However several countries have not provided the data.

Figure 11 below compares the enrolment at ISCED level 5 with total enrolments at ISCED level 4, 5 and 6. The countries with a strong segment of education and training classified as 'short cycle tertiary' are: France, Austria, Spain, Malta, Latvia, Slovenia, Ireland and the United Kingdom. It is interesting to note that, except Ireland and Malta, these are different countries than those that have a strong 'post-secondary non-tertiary' segment. This could indicate that countries that have strongly developed programmes at ISCED level 5 focus to a lesser extent on ISCED level 4 programmes and vice-versa.

Figure 11. Enrolment at ISCED level 5 as share of country's total enrolment at ISCED levels 4, 5 and 6 (2013)



Source: Eurostat

Figure 12 below shows that the vast majority of students enrolled in ISCED level 5 programmes pursue vocational studies. The share of students enrolled in vocationally or professionally oriented programmes at this level is even higher than at level 4. In most countries 100% of students at this level are enrolled in programmes with vocational orientation. The exceptions are Ireland, Malta and Sweden<sup>94</sup>:

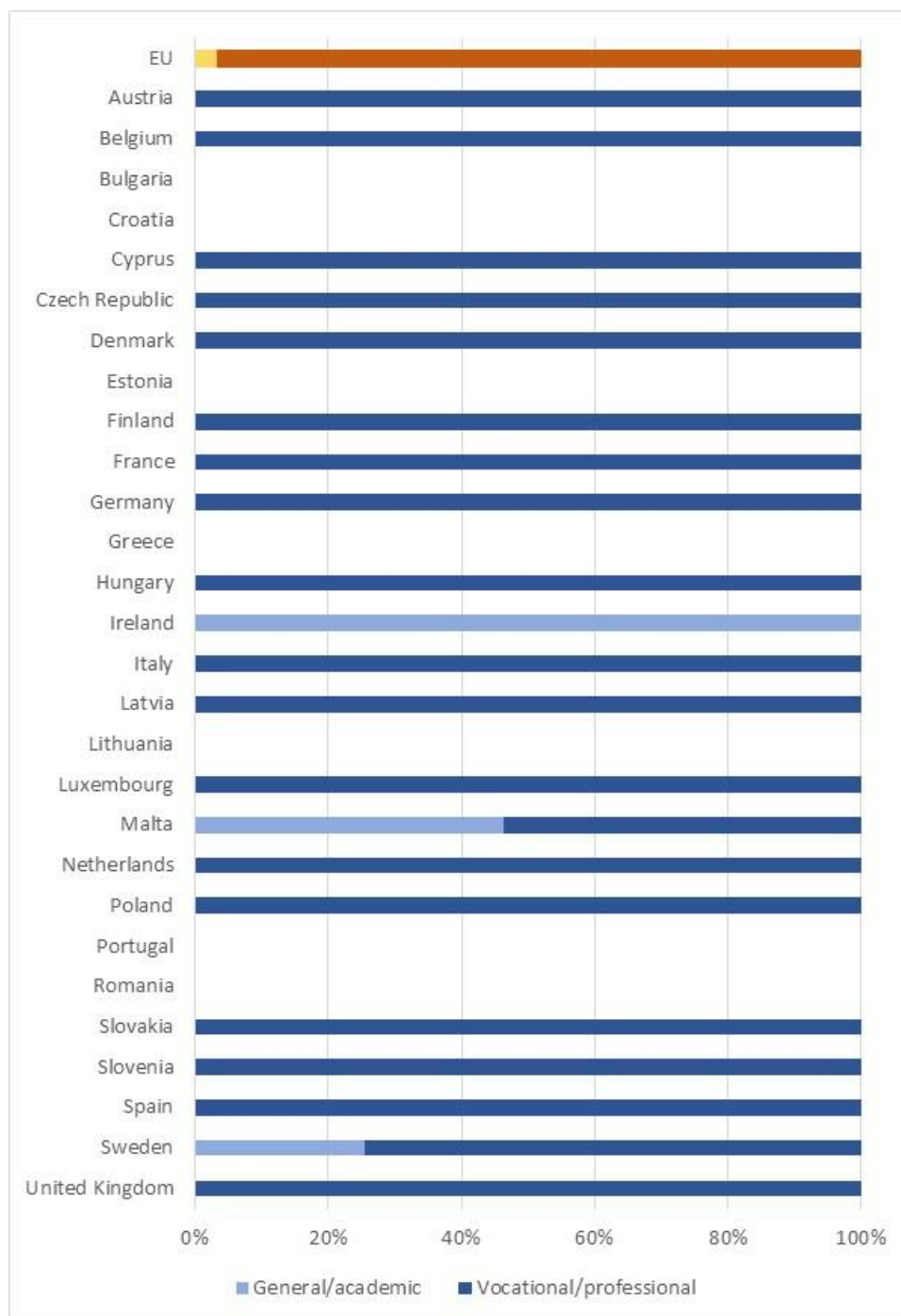
- In Ireland the only qualification classified at this level is the 'Higher Certificate' which is a short cycle qualification awarded by Institutes of Technology and in some cases universities (two years in duration). The qualification is probably considered as academic because it falls under the authority of the Quality and Qualifications Ireland. The certificates however are often professionally oriented (for example in fields such as business or ICT);
- In Malta the qualification classified as academic at this level is the 'Higher Diploma' which is a similar type of qualification as the 'Higher Certificate' in Ireland.

At EU level the share of students who are above 25 (31%) is even higher than the share of students from this age group at ISCED level 4 (see figure 13). The following countries have a particularly high proportion of more mature students at this level:

- Belgium-FR and Belgium-NL and United Kingdom over 60%
- Denmark, Germany and Sweden over 50%; and
- Ireland, Latvia and the Netherlands over 40%.

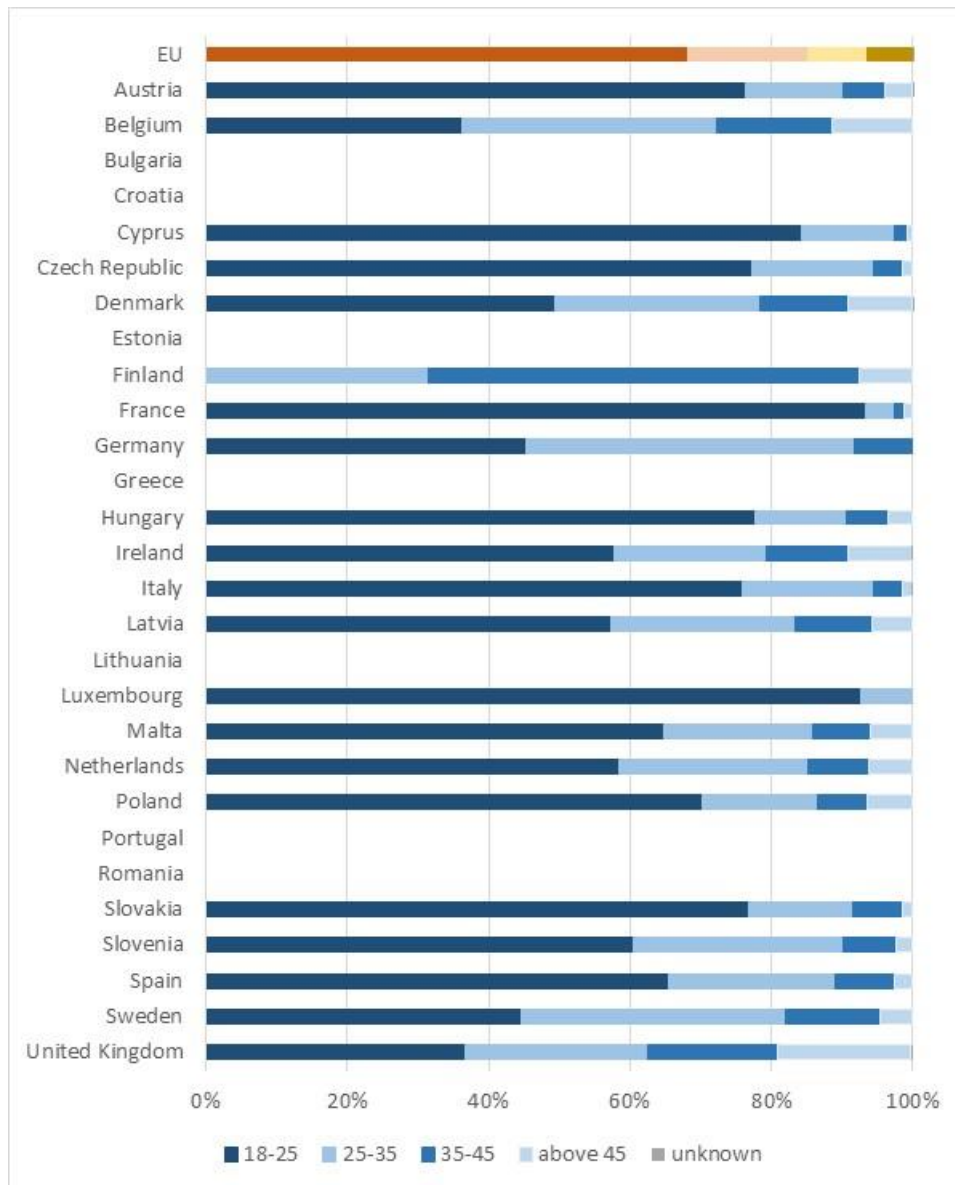
<sup>94</sup> The programme mapping to ISCED 2011 was not available for Sweden at time of writing this report.

Figure 12. Enrolment at ISCED level 5 per orientation (2013)



Source: Eurostat

Figure 13. Enrolment at ISCED5 per age group



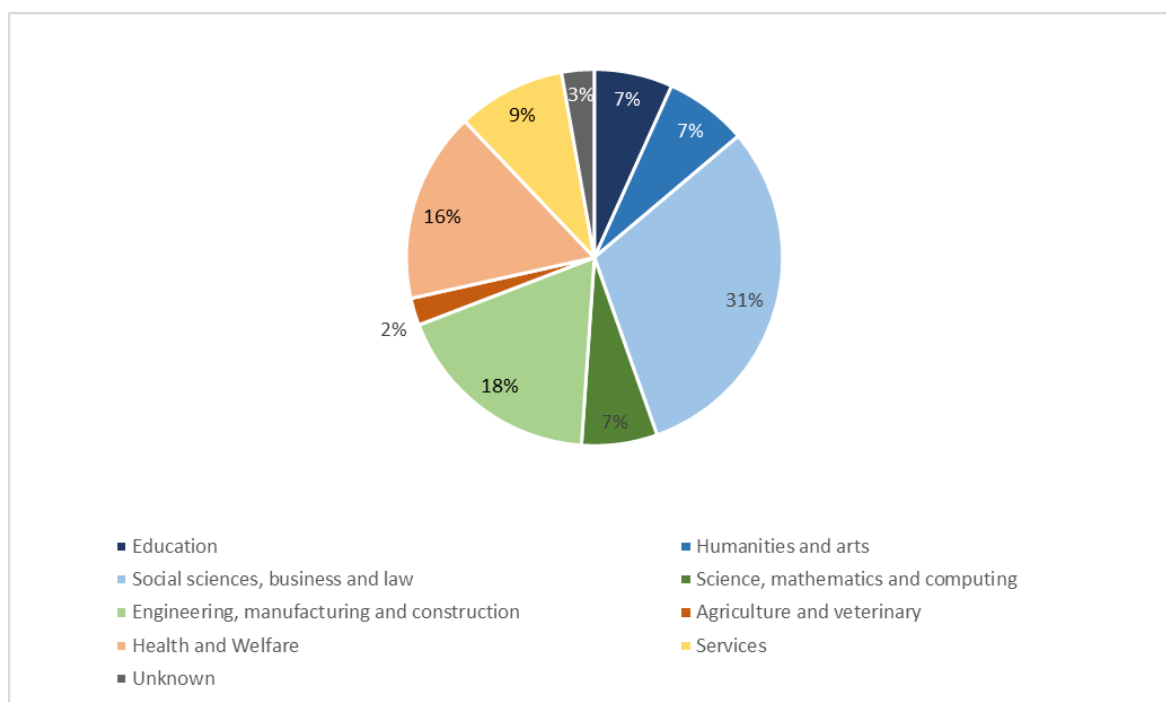
Source: Eurostat

As illustrated in Figure 14 below, similar to the ISCED level 4, the most prominent economic sectors, in terms of enrolment at ISCED level 5, are: social sciences, business and law (31% of students – in particular business and administration (28%), engineering, manufacturing and construction (18%) and health and welfare (16%). When looking at the more detailed sectoral breakdowns, the following sectors stand out as attracting most students:

- Health (11%);
- Wholesale and retail (8%);
- Management and administration (8%);
- Computer science (4%);
- Electronics and automation (4%);
- Education science (3%);
- Social work and counselling (3%);

However the EU average numbers are strongly influenced by a few countries, which are the countries that have high numbers of students at this level. For example 72% of students enrolled in wholesale and retail are in France, 90% of students in the sector of health are in three countries: UK (47%), France (23%) and Spain (21%).

Figure 14. Enrolment at ISCED5 per main sector (2013, EU)



Source: Eurostat

## 5.2 National statistics

Part of this study included collection of national statistics and data. This was done through a national data collection exercise which included a qualitative and a quantitative part. Since all country researchers performed a number of interviews with key experts and practitioners in the field at national level, the statistics on higher VET at national levels were also a product of expert suggestions. Furthermore, the collection of national data was mainly based on the national understanding of what could be considered as higher VET in the respective context and not on all types of programmes or qualifications that would fit the working definition for this study.

There were several categories under which data was collected for each country. However, since the country mapping was also exploratory, not all collected data following the same format and in some countries some data was not found. This means that this particular statistical information is incomparable.

Nevertheless, the value and abundance of data collected can be beneficial to extract some trends in different countries and to understand the extent of development of higher VET in different Member States.

In the following paragraphs we will present and elaborate on these findings according to the sections under which they were collected. The categories included:

- Participation in higher VET programmes; and
- Graduates of higher VET programmes/holders of higher VET qualifications.

Further data on progression to other educational programmes and labour market outcomes/insertion is presented in section 6.3 on outcomes of higher VET.

The national correspondents were asked to collect statistical data where available and reflect on how the use and outcomes of these programmes/qualifications could be quantified for purposes of deriving quantitative trends. In occasions where data was not available, even from single programme providers, the correspondents indicated so.

### 5.2.1 Participation in higher VET programmes

Country researchers were asked to review educational statistics, including CVET where available. If the data was accessible, the country correspondents managed to gather information on types of programmes, comparable enrolment in different programmes within higher VET, and where possible data broken down by years, gender and sectors.

As a result almost all country researchers managed to find some data on participation in higher VET programmes and in most cases by annual enrolment which helped us understand if a country has experienced an increase or decrease in the number of enrolments in the past several years. An overview of the national data is presented in table 14 below. It shows that the situation varies quite strongly. While some countries have seen an important growth in participation in higher VET programmes, others have experienced stagnation or on contrary an important decline.

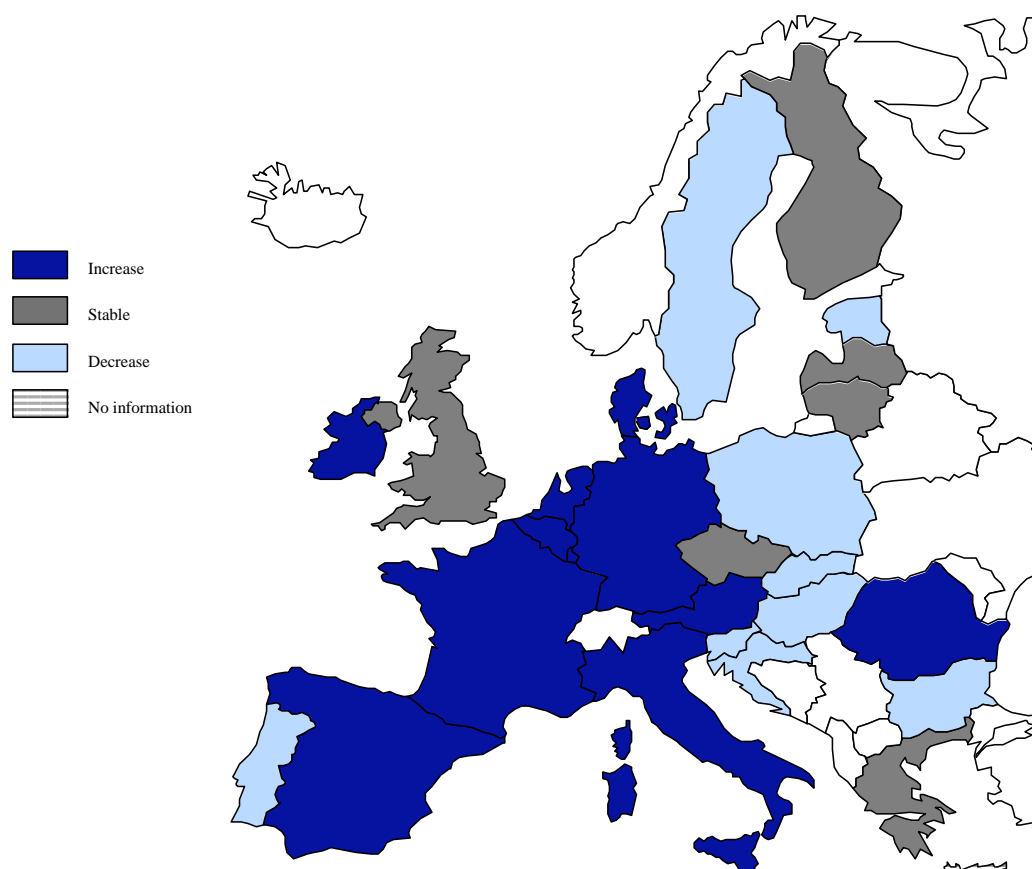
Table 14. Evolution of participation in higher VET according to national figures

<b>Increase</b>	At, BE-fr, BE-nl, DK, DE, ES, FR, IE, IT, LU, MT, NL, RO
<b>Stable</b>	CZ, EL, FI, LT, LV, UK
<b>Decrease</b>	BG, EE, HR, HU, PT, PL, SE, SI, SK

No information for CY

Source: various sources summarised in ICF country templates

Figure 15. Enrolment in higher VET per country across time



Source: various sources summarised in ICF country templates

The calculations in the table 15 below were made based on data provided by the country researchers. However it needs to be noted that the indicators used differ across countries. In most countries the data reported is on enrolment but in some the data concerns numbers of graduates. Note also that when data for more than one type of programme or qualification was available, the overall ranking was made based on the overall evolution. Any oscillations equivalent to 7% and less were considered as a stable evolution. Such small changes may be linked to demographic change or they may be temporary.

Table 15. National estimates based on enrolment per country

Country	Name of the programme	Start (2000)	Nr Last (2013)	Nr Increase Stable Decrease	Percentage
Austria	Post-secondary VET	123,676 (2000)	135,524 (2013)	increase	9.58%
	Bachelor/Master programmes at universities of applied sciences	20,591 (2003)	43,593 (2013)	increase	111.71%
	CVET <sup>95</sup>	8,693 (2003)	38,047 (2013)	increase	337.67%
Belgium-NL	Professional Bachelor	89,849 (2009)	105,028 (2013)	increase	16.89%
	HBO5	18,235 (2011)	17,989 (2013)	stable	1.35%
	Short cycle programmes	41,561 (2003)	51,932 (2013)	increase	25%
Belgium-FR	Bachelor's degree, master's degree offered by the Promotion sociale	111,344 (2002)	122,085 (2008)	increase	8%
Bulgaria	IV degree vocational programmes	5,111 (2000)	1,618 (2014)	decrease	68.34%
Cyprus	N/A	N/A	N/A	N/A	N/A
Czech Republic	DiS	30,681 (2003)	28,332 (2013)	stable	7.66%
Denmark	Business and technical academies	382 (2005)	28,417 (2014)	increase	7339%
	Short-cycle higher VET	37,986 (2004)	28,700 (2013)	decrease	24.45%
Germany	Trade & Technical schools	155,200 (2004)	190,900 (2013)	increase	23%
	Dual study programmes	40,982 (2004)	64,358 (2013)	increase	57%
Estonia	Professional higher education	22,433 (2006)	15,749 (2014)	decrease	29.8%
Greece <sup>96</sup>	higher VET - non-university schools	2,722,100 (2004)	2,666,900 (2014)	stable	2.3%
Spain	Higher level cycles of professional training	225,964 (2004)	314,380 (2013)	increase	39.13%
Finland	Vocational specialist qualification	22,776 (2010)	21,434 (2013)	stable	5.89%
France	DUT	111,096 (2004)	116,397 (2014)	stable	4.77%

<sup>95</sup> Combined CVET programmes at universities of applied sciences, at universities of education, university courses and university courses at private universities.

<sup>96</sup> Estimates based on the numbers of graduates employed since there were no available data for enrolment across several years.

	STS, BTS and DMA	228,329 (2006)	254,967 (2014)	increase	11.67%
Croatia	SCHE	5,421 (2008)	859 (2013)	decrease	84.32%
Hungary	Post-secondary VET	60,293 (2004)	14,026 (2013)	decrease	76.74%
	HE VET	5,489 (2004)	4,585 (2012)	decrease	16.47%
Ireland	Secondary level including PLC	338,765 (2003)	367,178 (2013)	increase	8.39%
	Institute of Technology <sup>97</sup>	88,224 (2004)	102,656 (2014)	increase	16.36%
Italy	ITS	1,130 (2011)	1,289 (2014)	increase	14.07%
	Professionalising Apprenticeship	Started in 2003 389.149 (2010)	410.369 (2013)	increase	
Lithuania	Higher VET	9,082 (2004)	8,605 (2013)	stable	5.25%
Luxembourg <sup>98</sup>	BTS diploma	306 (2011)	551 (2013)	increase	80.1%
Latvia	Short-cycle tertiary education / non-university tertiary (ISCED-2011 5B)	17,249 (2004)	16,105 (2014)	stable	6.63%
Malta <sup>99</sup>	HE including higher VET	9,245 (2004)	15,038 (2014)	increase	62.66%
Netherlands	Higher VET	app. 350,000 (2004)	app. 450,000 (2014)	increase	28.57%
Poland	Colleges	21,555 (2006)	5,803 (2013)	decrease	73.08%
	State higher vocational schools	99,946 (2005)	76,012 (2012)	decrease	23.95%
Portugal	Polytechnic	142,710 (2010)	125,248	decrease	12.24%
	Technical Specialisation Courses	9,511 (2011)	9,999 (2012)	Stable	5.13%
Romania	Post high school	44,641 (2004)	72,692 (2011)	increase	62.84%
	Special post high school	227 (2004)	210 (2011)	Stable	7.49%
	Foreman schools	3,825 (2004)	6,564 (2011)	increase	71.61%
Sweden	Higher VET	3,155 (2010)	2,551 (2013)	Decrease	19.14%
Slovenia	Higher VET	55,260 (2005)	35,501 (2013)	Decrease	55.66%
Slovakia (graduates)	DiS	5516 (2008)	2421 (2014)	Decrease	56.1
United Kingdom	FE and Skills Learner Participation on higher VET England	1,587,800 (2005)	1,621,800 (2012)	Stable	2.14%
	Higher VET Scotland	46,026 (2006)	51,991 (2011)	increase	12.96%
	FE provision Northern Ireland	174,752 (2009)	153,354 (2013)	Decrease	12.24%

Source: ICF country templates

<sup>97</sup> All enrolments to Institutes of Technology (full-time and part-time enrolments, and entrants).

<sup>98</sup> Professional Bachelor and Master enrolment is not calculated separately from the other (academic) degrees.

<sup>99</sup> Malta enrolment in higher VET is not separately calculated, thus the change shows the numbers for entire HE including higher VET.

As it is clearly visible from the numbers above, throughout Europe there are both examples of an increase and decrease in the popularity of higher VET programmes. These calculations, even though just estimates, provide an interesting input for analysis. For instance, an interesting increase has been reported in Denmark where the numbers of students enrolled into professional Bachelor courses skyrocketed in a period of ten years. Other similar examples include Austria, Luxembourg and Romania. Although each of these countries tracked the enrolment within different periods, we can state with relative confidence that the higher VET programmes have seen a rise in popularity. The lower rates of decrease in enrolments in some countries can also add up to this conclusion.

Additional to this there are other interesting qualitative and quantitative perspectives on higher VET that were collected within the country templates. However, as for data on gender disparities and economic sectors, not all country correspondents managed to find available information on one or both of these aspects. This being said, we have captured this data in a descriptive manner below, whilst also providing more information on overall numbers of new programme entrants.

Among the countries with an increased number of new enrolments, **Austria** experienced an increase in post-secondary school-based VET (from 123,676 in 2000 to 137,602 in 2010) and then a mild decrease in 2013 (135,524). The most popular programmes with a steady increase can be located in the areas of engineering, industry and trade, followed by business administration. Furthermore, there has not been a noticeable difference in gender. A same pattern is seen in the tertiary pathways in programmes at universities of applied sciences (from 20,591 in 2003 to 43,593 in 2010), and with all CVET programmes. The Flemish part of **Belgium-FR and Belgium-NL** shows a strong increase in enrolments in the professional Bachelor from 89,849 in 2009 to 105,028 in 2013. Flanders has had a slight decrease in enrolment in HBO5 between 2011 and 2013 (from 18.235 to 17.989), with business and economics sector being most popular.

Another country to see a strong increase of higher VET enrolment was **Germany**, with more than 50% increase in dual study programmes in less than 10 years (from 40.982 in 2004 to 64.358 in 2013). Quite expectedly, the number of dual study programmes has doubled in the same period and so did the number of companies involved in dual study programme scheme. Participation in trade and technical schools has significantly grown as well from 142,100 in 2000 to 190,900 in 2013. The analysis shows that the most popular of all higher VET programmes in Germany are at universities of applied sciences and at universities of co-operative education, whilst popularity is growing in vocational academies as well.

In **Denmark**, there has been a rapid increase in enrolment into business and technical academies that provide short-cycle higher VET, professional Bachelor degrees and further vocational adult education. In 2005 there were only 274 men and 108 women enrolled into such programmes while in 2014 the numbers were 16,548 and 11,869 respectively. **Spain** has as well seen a significant increase in the numbers of students enrolled in professional training, from 225,964 in 2004 to 314,380 in 2013. Highest numbers were registered for administration, commerce and marketing, health, socio-cultural and community services, as well as electricity and electronics.

**France** has also seen an overall increase in enrolment numbers over the last few years. Even though the DUT diploma has been relatively stable with a small increase over the years, BST has changed more intensively in less than 10 years and had reached a 11.67% increase.

A strong increase in enrolment in programmes leading to the Post Leaving Certificate in **Ireland** was observed with almost double the numbers in a period of 20 years (from 17,678 in 1993 to 34,003 in 2013). Student enrolments in courses provided by Institutes of Technology have also increased, even though not as dramatically.

**Luxembourg** has been registering an increase of over 80% in the number of students enrolled in higher VET programmes, and a large portion of which were heading to the degrees and qualifications in the health sector. Another quarter of students go to the trade sector. In **Malta**, over the past 20 years, there was a significant increase in student participation at Further and Higher Education levels from just above 11,000 in 1995 to 30,394 in 2014. However, we could not find data that specifically calculates only higher VET in Malta.

In **Romania**, according to the National Institute of Statistics, the number of students enrolled in post-secondary education has steadily increased in recent years, from 44,000 students in 2005/6 to over 100,000 in 2013/4. Concerning the make-up of the student population in post-secondary education, data shows that 81% of the students enrolled in this form of education in 2010/2011 were following health-related programmes. In addition to being the most popular post-secondary programme, the sanitary field has increased almost double, from 26,844 students in 2005/2006 to 51,151 in 2010/2011.

Numbers of higher apprenticeship enrolments have been increasing significantly in the **United Kingdom**. Furthermore an increase has been reported in England and Scotland, while in Northern Ireland, popularity of FE programmes has fallen around 12%.

In the **Netherlands**, the total number of participants in higher VET has also increased over the past decade. Degrees in business and economics were the most popular degrees in 2014, making up 40% of the enrolment numbers. The lowest enrolment was in Agriculture and Art degrees, accounting for 2% and 6% of the enrolment figures respectively.

**Italy** has been experiencing a slight increase in the number of students enrolled in higher VET programmes, until 2014 where the numbers shifted back to the period similar to 2011. Nevertheless, while ITS programmes experienced growth of 14% in popularity, apprenticeship enrolments decreased around 11% over the ten years.

**Czech Republic** is among the countries that have experienced a decrease in the number of enrolments over the period of several years to a decade. Enrolment in higher VET (DiS) programmes in Czech Republic show a decline of 7.66% in the last 10 years (2013 had 28,332 in comparison to 30,681 in 2003). In **Lithuania**, most of the professional Bachelor's programmes have seen either a steady pace or a decline in the numbers of enrolment in the period of the last 10 years.

**Hungary** has registered quite a strong decrease of enrolment in higher VET within the last 10 years, even though the numbers of total enrolment into post-secondary education has been rather steady. The numbers in post-secondary VET decreased from 60,293 in 2004 to 14,026 in 2013. New enrolments in higher education VET (ISCED 1997 5B) per year also decreased from 5,489 to 4,585 during the same time period.

A decrease in the number of enrolments has been evident in **Estonia** with regards to participation in professional higher education, from 22,433 in 2006 to 15,749 in 2014. While such trends are evident in most of the fields, only in engineering, manufacturing and construction there has been a slight increase through this period of time. In neighbouring **Latvia** as well has experienced a slight decrease in the numbers of students enrolled in short-cycle tertiary education, and within a period of ten last years there has been a decline in enrolments in courses under ISCED 1997 5B, from 17,203 in 2010 to 16,104 in 2014. Next to these countries, **Sweden** has held a relatively steady number of enrolments into higher VET programmes, with those in the field of economy, administration and sales being the most popular. A small decrease has been evident in the numbers across several years.

In **Poland**, there are approximately 78,000 students learning at institutions that provide higher VET programmes. The data indicates a decrease in the number of

students, as in the whole higher education sector in Poland from 2006 onwards. Additionally, both types of programmes measured under higher VET have seen a strong decrease in the number of enrolments across years. **Portugal** has also seen a slight decline in the number of total enrolments into post-secondary education, which includes those involved in polytechnic degrees. The decline comes from 142,710 in 2010 to 125,248 in 2012. On the other hand, the number of registered students in the Technological Specialisations has been perceived as steady with approximately 7,000 student enrolments each year consistently.

A decline in the number of enrolments into programmes of higher VET has also been seen in **Slovenia**, from 44,682 registered students in 2000 to 35,501 in 2013.

In **Bulgaria** the share of participants in ISCED 4 courses compared to other VET programmes is steady but very small in total (1% of all learners). However, the absolute number of students in these programmes has seen a decrease from 5,111 in 2000/1 to 1,618 learners in 2014/15 which is predominantly connected with the decline in number of vocational colleges. Professional Bachelor programme enrolments also represent a very small part (6%) of the total tertiary level enrolment in Bachelor and Master programmes.

In **Croatia**, between 2008/09 and 2013/2014 academic years the total number of learners in SCHE has constantly decreased from 5,421 learners (which was approximately 3.8% of the total number of learners in higher education programmes for 2008/09) to 859 learners (approximately 0.5% of the total number of learners in higher education programmes for 2013/14). This relates to the main challenge concerning SCHE, i.e. the short duration of the professional study and the need to complete additional courses in order to progress to higher qualification levels.

While these indications show some trends, many of the countries that experienced decline in their enrolment might also have experienced a decline in population. On the other end of the spectrum, for some of the countries with a strong tradition in VET, higher VET has followed the main labour market trends and, thus, gained popularity over the years of implementation.

### **5.2.2 Graduates of higher VET programmes/holders of higher VET qualifications**

Country researchers were also asked to provide data on the number of graduates of higher VET programmes and/or holders of higher VET qualifications per type of higher VET identified. On occasions where available, the researchers were asked to present the data broken down by years, gender and economic sectors.

An increase and decrease in the number of graduates was usually related to the enrolment trends showed above. Countries that experienced a strong or steady increase in numbers of graduates from higher VET programmes were Austria, Denmark, Spain, Luxembourg, Netherlands, Sweden and Slovenia. A more steady graduation was evident in countries such as Czech Republic, Germany and Portugal while a decline in the number of graduates was reported in Bulgaria and Croatia.

As one of the countries with a strong increase in number of graduates from higher VET, **Austria's** numbers increased in school-based VET from 36,725 in 2003 to 43,987 in 2013 (over half of them female graduates). The same pattern was noticeable for tertiary pathways where the programmes for applied sciences show an increase from 2,961 in 2003 to 12,323 in 2013.

Similarly to the number of enrolments in higher VET courses in **Denmark**, the number of graduates has been rapidly increasing. At the same time though, Denmark has seen a slight decrease in the number of graduations from the further vocational adult education and diploma degree.

A strong increase in participation of higher VET in **Spain** resulted in a moderate increase among the number of graduates. The increase has been from 79,141 in 2008

to 106,684 in 2012. Graduation from higher VET programmes in **Luxembourg** has registered a moderate increase as well, which was to be expected according to the increased numbers of enrolments.

In the **Netherlands**, the statistics show that there was a steady increase in higher VET degree completions up to 2011. In 2012 a sudden decrease is seen in the number of degrees conferred with 2013 seeing more graduates. Graduation from higher VET forms of programmes has seen a slight increase in **Sweden**, in all fields and professions.

Interestingly, the number of enrolments in **Slovenia** has dropped while the number of graduations has seen an increase, from 5,510 in 2000 to 6,743 in 2013.

A steady graduation was observed in countries that had experienced steady enrolment but also in some others that had an increase and decrease in the number of students enrolled. As expected from the relatively steady numbers of enrolment, the numbers of graduates in **Czech Republic** has been keeping ground as well, with an insignificant decrease in the last year of data collection (2013).

Graduation rates for combined industry and trade and crafts courses in **Germany** has been steady over the period of ten years, with slightly more graduations in comparison to enrolment than in years before 2013. In **Finland** too, graduate numbers have not changed much in the last few years.

Even with the decline in the number of enrolments, **Portugal** has experienced a relatively steady share of graduations across the span of a few years. The same can be observed for the numbers of graduates from the Technological Specialisation Courses.

Finally, decreasing numbers in graduation can be observed predominantly in those countries that reported a decline in the number of enrolments. As such, given the decrease of enrolment in professional higher education in **Estonia**, graduation rates were expected to follow the same decline, which national data clearly shows. Nevertheless, graduation decrease is a bit less drastic with a difference between 3,943 in 2006 and 3,271 in 2014.

**Croatia** has seen turbulent times in the number of graduates since in the period from 2010 to 2013 the number of candidates who successfully passed the Master Craftsperson Exam increased from 966 up to 1,360 persons and then, in 2014, decreased to 1,114 persons. Furthermore, between 2007/08 and 2012/13 academic years a constant decrease in the number of graduates in Short Cycle Professional Study Programmes can be observed: from 1,230 to 474 graduates respectively.

A strong but expected decrease in numbers of graduates was noted in **Bulgaria**, considering that the numbers of enrolment in programmes leading to a IV degree vocational qualification dropped significantly in the last 15 years. This led to a decrease from 4,721 to 1,097 graduates. This is also the case for the Professional Bachelor degrees which dropped from 5,103 in 2000 to 3,156 in 2014.

## **6 Main trends, developments and challenges**

The country experts were asked to make an overall judgement on the state of play of higher VET in their countries related to three main indicators:

- The level of development of higher VET;
- This was considered:
  - a) strong if there was a strong tradition of higher VET with a clear framework and higher VET is an established pathway;
  - b) medium where higher VET has been existing for a longer period but is still being re-defined;
  - c) emerging where on the contrary higher VET is a relatively new pathway.
- The level of enrolment in higher VET;
  - Considered as either high, medium or low compared to enrolment in higher education (taking into account that some types of higher VET might also belong to higher education).
- The labour market relevance of higher VET.
  - Considered as high if there is a clear trend that higher VET has good employment outcomes (compared to higher education) and as varied if there is no clear trend.
- The experts were asked to make these judgements based on:
  - Data on enrolment in higher VET compared to other segments of education and training;
  - Data on labour market transition of higher VET graduates compared to other segments of education and training combined with feedback from interviews; and
  - Analysis of the tradition of higher VET and its development over time.
- The initial classification by the experts was reviewed for consistency by the core study team.

Table 16 below shows that:

- There are 10 countries (AT, BE-fr, DE, DK, ES, FI, FR, IE, NL, PT) where higher VET is a strong system, with high enrolment and good labour market outcomes. A country could also be put into this category if one of the three indicators is 'medium'
- There are 10 countries (BE-nl, CY, EE, HR, LU, LV, MT, SE, SI, UK) where higher VET is less strongly established and the participation and/or labour market outcomes are not consistently strong; and
- There are another 9 countries (BG, CZ, EL, HU, IT, LT, PL, RO and SK) where higher VET is a relatively new pathway, with not very strong participation and unclear labour market outcomes.

Though this categorisation only represents an estimate and could be discussed, it shows that the countries that tend to have strong VET system at secondary level (in terms of participation but also labour market outcomes) also tend to have well developed higher VET (Austria, Germany and Denmark). There are also countries in this category which do not have strong upper-secondary VET; for example Ireland has very little VET at secondary level and most VET is actually higher VET. Furthermore, some countries have high participation in upper-secondary VET and a low level of development of higher VET, for example Czech Republic and Slovakia.

The countries with an emerging sector of higher VET are mostly countries from central and eastern Europe (except Italy). With the exception of Bulgaria, they are also countries which have seen a relatively important growth in tertiary education attainment in the period 2009-2012 (above 4% average annual change in the period 2009-2012<sup>100</sup>). It may be the case that in these countries the strong expansion of higher education is preventing higher VET to emerge more strongly as higher education is absorbing most applicants.

Table 16. Country experts' categorisation

	Development of HVET	Enrolment in HVET	Labour Market relevance of HVET
AT	Strong	High	High
BE nl	Emerging	High	High
BE fr	Medium	High	High
BG	Emerging	Low	Variable
CY	Medium	Medium	High
CZ	Medium	Low	Variable
DE	Strong	High	High
DK	Strong	N/A	High
EE	Medium	Medium	Variable
EL	Medium	Low	Variable
ES	Strong	High	N/A
FI	Strong	High	High
FR	Strong	High	High
HR	Emerging	Low	High
HU	Medium	Low	Variable
IE	Strong	Medium	High
IT	Medium	Low	Variable
LT	Emerging	Medium	Variable
LU	Medium	Medium	High
LV	Strong	N/A	High
MT	Medium	Medium	N/A
NL	Strong	High	High
PL	Emerging	Low	Variable
PT	Strong	Medium	High
RO	Emerging	Low	Variable
SE	Emerging	Low	High
SI	Medium	Medium	Variable
SK	Medium	Low	Variable
UK	Medium	Low	High

Source: ICF country templates

<sup>100</sup> European Commission (2012c) *EU2020 fiche on tertiary education*.

## **6.1 Development of higher VET as part of the education systems**

As discussed in section 3 there are several 'grey zones' when looking at the area of higher VET. These are zones of overlap with other segments of education and training. They become apparent when looking at how higher VET is embedded in the national education system and how it is regulated. One of the areas of evolution and development noted by the country researchers was the relationship between higher VET and the rest of the education and training sector. In particular the diversification of higher education and changes in the higher education sector led to changes in the higher VET sector as discussed below.

By looking at the legislative framework governing higher VET it appears that:

- It is rarely seen as a segment on its own;
- It is often seen as a further level of VET either giving the opportunity to (secondary level) VET graduates to upgrade their qualifications or giving the possibility to general education graduates to qualify for a profession in a relatively short period of time;
- It is often embedded in the framework for higher education as one of the branches, often in line with the idea of diversification of higher education offer; and;
- It is rarely formally part of adult learning but this could be because adult learning itself is not always included in the formal education and training system and referenced to either ISCED or EQF levels.

The legislative frameworks for higher VET are discussed in greater detail in section 3 of this report and therefore not reported here. This section focuses more on the discussion of recent developments of higher VET as part of the education system.

Many country researchers reported as an area of development the relationship between higher VET and higher education. This seems to be a particularly vivid topic with a number of ongoing discussions and developments. This concerns in particular the development or reforms of short cycle qualifications or professional bachelor degrees. For example in Austria the introduction of short cycle degrees is being considered and tested through pilots. In the Czech Republic the replacement of the higher VET qualification Qualified Specialist (DiS) with professional bachelor degrees was considered but has not been agreed upon. However, the coexistence of similar programmes in higher VET and academic higher education was observed as an obstacle for development of higher VET in Spain. Also, a lack of permeability between at least some higher VET types of programmes or qualifications (offered outside higher education) and those belonging to higher education was mentioned in Austria, French speaking Community of Belgium-FR and Belgium-NL, Bulgaria, Hungary or Germany.

This ambiguous relationship between higher VET, more specifically the professional programmes covered by the EHEA framework and higher education has been extensively<sup>101</sup> discussed in literature in relation to the diversification of higher education<sup>101</sup> and the topic of vocational and academic drift<sup>102</sup> (see also below). The EURASHE publication on professional higher education in Europe explains this tension by these two parallel developments<sup>103</sup>:

- On the one hand institutions that were traditionally non-academic providing professional education and training at higher levels profiled themselves

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<sup>101</sup> See for example UNESCO (2004) *Diversification of Higher Education and the Changing Role of Knowledge and Research*.

<sup>102</sup> See for example EURASHE (2014) *Professional Higher Education in Europe Characteristics, Practice examples and National differences*.

<sup>103</sup> Idem

increasingly as higher education institutions so as to be considered on equal footing with universities;

- On the other hand the massification of higher education and concerns about employability of higher education graduates pushed more traditional universities to develop programmes that were more clearly professionally oriented.

This trend is not new as these topics were already discussed in the nineties. However the economic crisis and youth unemployment including among higher education graduates further exacerbated these discussions.

Another development which influences the relationship between higher VET and the rest of the system is the development of NQFs. NQFs are expected to show the relationship between levels of qualifications according to learning outcomes rather than according to the pathways or duration of studies. Their development should therefore be an opportunity for higher VET qualifications to gain clearer positioning vis-à-vis the rest of the education system. The extent to which higher VET is reflected in qualifications frameworks varies across countries. There are countries such as Austria where the discussion about placing higher VET qualifications offered outside higher education at the same levels as higher education qualifications was controversial and led to the decision to create two different 'branches' of the NQF for the levels 6, 7 and 8, one for 'Bologna qualifications' and the other one for vocational or professional qualifications. According to Cedefop (2015a) a similar situation can also be found in countries where vocational qualifications awarded outside the formal education system are placed on a parallel set of levels, for example in Cyprus, Estonia and Slovenia.

The discussions about opening of higher levels to VET qualifications delivered by non-higher education providers were more or less controversial in the countries, depending on whether such qualifications exist in the formal education system. In countries with strong higher VET types of qualifications outside the higher education system (such as Austria, Germany or the Netherlands) the question of placing VET qualifications at the same level as higher education ones was debated at length. In other countries there are no such qualifications in the formal education system. Considering that in most countries qualifications awarded by organisations from outside the formal education system are not yet included in the NQFs, it can be expected that this discussion will surface again when the inclusion of these qualifications in the NQF will be on the agenda.

For the moment we can observe three situations regarding the inclusion of higher VET offered outside higher education in NQFs:

- Some countries have closed the levels 6 and above to other 'awarding' bodies than higher education institutions (restricted to qualifications in line with the Bologna cycles) (BG, DK, EL, RO);
- A few countries have an NQF which has parallel strands for some higher VET qualifications (AT, BE-nl);
- Other countries have opened all levels to all types of qualifications. However in most countries in practice not all levels have seen VET qualifications allocated to them. For example in Germany there are for the moment no VET qualifications at the level equivalent to EQF level 8. In Ireland or the Netherlands this is the case above level 6.

There are also two exceptions: in France professional qualifications awarded by social partners (CQP) are included in the register of qualifications but are not allocated a NQF level and the in the Czech Republic, separate qualifications frameworks are developed for vocational qualifications (in the system for the recognition of lifelong learning) and higher education.

Table 17. Higher VET and NQFs

	Higher VET in the NQF	Qualifications awarded outside the formal education and training system (as of 2015)
AT	Separate set of strands at levels 6, 7 and 8	Not yet included
BE nl	Separate set of strands for professional qualifications at all levels	Partially included
BE fr	Not fully clear how professional qualifications achieved through recognition of NFIL will be included	Partially included
BG	Level 6 and above restricted to higher education	Not yet included
CY	Still in development	Expected to be partially included
CZ	Separate qualifications frameworks for vocational qualifications (in the system for the recognition of lifelong learning) and higher education. The framework for vocational qualifications includes higher levels	Partially included
DE	Unique set of levels all open to VET (except level 8 in practice so far)	Not yet included
DK	Level 6 and above restricted to higher education	Not yet included
EE	In principle open but for the moment VET qualifications are only placed at levels up to level 6	Partially included
EL	Level 6 and above restricted to higher education	Not yet included
ES	Level 6 and above restricted to higher education	Not yet included
FI	Unclear (NQF not formally adopted)	Not yet included
FR	Unique set of levels all open to VET (some qualifications are in the qualifications register but do not have a level in the NQF)	Included
HR	Level 6 and above restricted to higher education	Not yet included
HU	Level 6 and above restricted to higher education	Not yet included
IE	All levels are open to VET (in practice there are VET qualifications up to the level that is equivalent to EQF level 6)	N/A
IT	All levels are open to VET (in practice there are no VET qualifications placed at levels higher than EQF 5 for the moment)	Not yet included
LT	All levels are open to VET (in practice there are no VET qualifications at levels above level 4)	Not yet included
LU	All levels are open to VET (in practice there are no VET qualifications at levels above level 5)	Not yet included

LV	All levels are open to VET (in practice there are no VET qualifications at levels above level 7)	Not yet included
MT	All levels are open to VET (in practice there are no VET qualifications at levels above level 6)	N/A
NL	All levels are open to VET (in practice there are no VET qualifications at levels above level 6)	Partially included
PL	separate set of strands at all levels for qualifications awarded outside the formal education system	Partially included
PT	All levels are open to VET (in practice there are no VET qualifications at levels above level 5)	Not yet included
RO	Level 6 and above restricted to higher education	Partially included
SE	All levels are open to VET (in practice there are no VET qualifications at levels above level 5)	Not yet included due to delays in adoption but expected to be included
SI	All levels are open to VET (in practice there are no VET qualifications at levels above EQF level 5)	Partially included
SK	All levels are open to VET (in practice there are no VET qualifications at levels above EQF level 5)	Not yet included
UK	All levels are open to VET	N/A

N/A – in these countries the inclusion of a qualification in the NQF is open to any awarding bodies and the notion of ‘qualifications outside the formal system’ is not meaningful as the inclusion in the NQF formalises the status of the qualification

Source: ICF country templates, Cedefop (2014c) and Cedefop (2015b).

## 6.2 Evolutions of the demand and supply of higher VET

Section 5 discussed the trend in participation in higher VET based on national statistics. While a number of countries have seen an increase in participation in this sector, others have seen a decrease.

There are several explanations for these trends. The following explanations were provided for the increase of participation in higher VET, all linked to the employment prospects of higher VET graduates:

- The economic crisis drew more candidates to higher VET qualifications which are seen as being more directly relevant for the labour market than the academic qualifications in higher education (e.g. in Greece). This is also linked to the constraints on families’ budget which imply that they can no longer afford to support young people during five (or more) years of studies.
- The labour market demand for highly skilled workers attracted more young people into higher VET in Austria.
- In the French speaking Community of Belgium-FR and Belgium-NL unemployed higher education graduates were provided additional higher VET training by the Public Employment Service as a result of the economic crisis.
- In Spain higher VET has traditionally had good employment outcomes even though like in the rest of the education system these were partly affected by the economic crisis. Positive employment prospects were also emphasised in the Luxembourg, Dutch and Swedish country reports.

Other factors influencing the growing demand for higher VET are:

- Public policy and support to increase this sector. In Austria subsidies are available to strengthen participation in higher VET. In Denmark the funding for higher VET that is part of adult learning has been increased. Similarly, funding has increased for VET colleges in Lithuania. Sweden also committed to an increase in the supply of training places in higher VET. A range of initiatives to strengthen higher VET have been introduced in the UK.
- The creation of an authority in charge of supporting cooperation between higher education and other stakeholders to create training adapted to labour market needs strengthen the development of professionally oriented qualifications in the French Speaking Community of Belgium-FR and Belgium-NL<sup>104</sup>.
- The creation of new higher VET pathways – for example, in Spain dual training was introduced as well as specialisation courses. In Germany, trial study programmes that combine a vocational training, an advanced vocational exam and a Bachelor's degree within a programme of a 4- 4.5 years' duration were introduced. Croatia introduced short cycle qualifications relatively recently (2005). The Netherlands introduced the Associate degrees in the same period (2005). Higher VET colleges were introduced in Sweden in 2009. In Hungary, dual higher VET is being introduced in 2015-2016 and it is under discussion in Slovenia. In Lithuania colleges which until now awarded only Professional Bachelor degrees are in discussions to open programmes at Master level.

The decrease in participation in higher VET on the other hand is explained by the:

- Expansion of higher education (CZ, HU, EE) which absorbs the profile of young people who in the past entered higher VET. This is coupled with a negative demographic trend whereby the population entering higher level studies is shrinking.
- Falling number of apprenticeship places in higher VET was noted in Italy.
- Negative image of higher VET in some countries where this pathway is seen as a second choice for those who are not accepted in higher education institutions (CZ, SK, HU, UK). At the same time some country reports noted that the reputation of higher VET is improving (CZ, NL, LT).

Some countries report data on the evolution of participation in selected higher VET programmes per field of study, for example:

- In Austria the sectors that have seen a strong increase in numbers of students in universities of applied sciences are: business administration, engineering, health studies and social science;
- In Flanders the sectors with a strong increase in participants are: healthcare and industrial science and technology.
- In Denmark these sectors are education (pedagogy), transport and logistics;

### **6.3 Outcomes of higher VET**

Country researchers were asked to collect information on labour market insertion of higher VET graduates where such statistics or information existed. Just a few countries had such data but where it is available in general it provides a positive picture of higher VET.

#### **6.3.1 Employment outcomes**

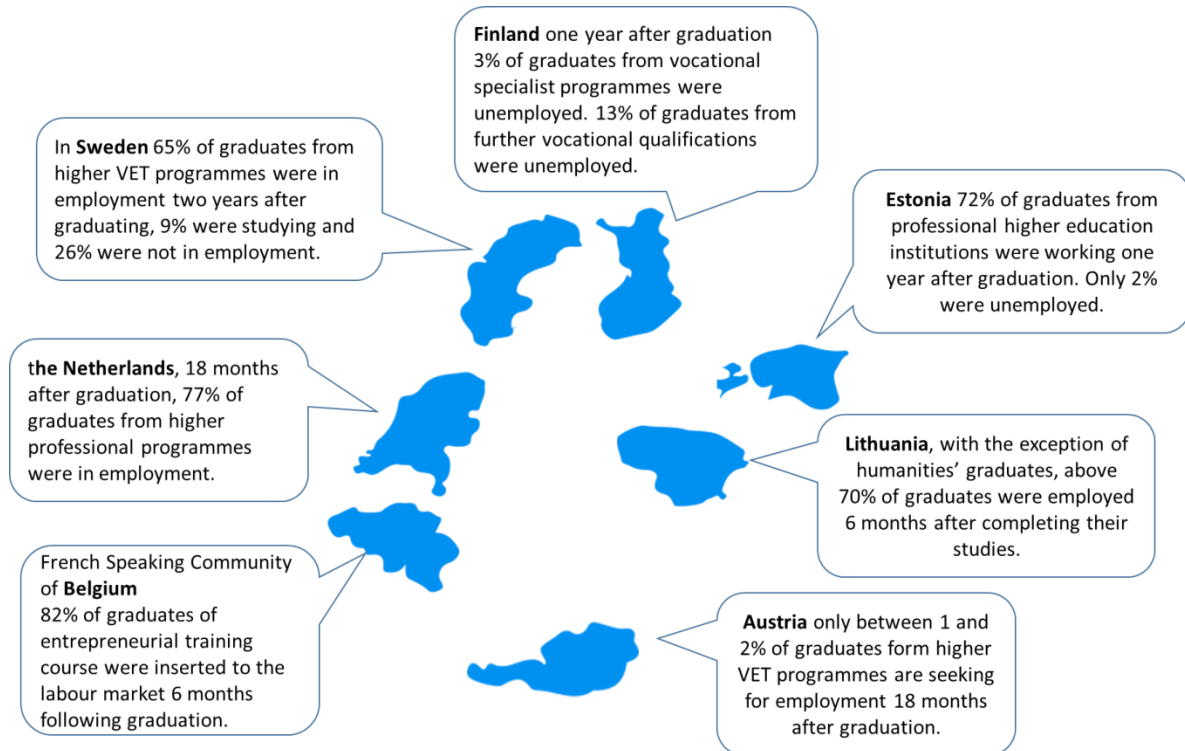
All the countries which provided data on employment rates of higher VET graduates were showing positive trends. In most cases the numbers reported concern short cycle or Professional Bachelor types of qualifications. Only Finland has data on employment rates of graduates from those programmes that fall under the narrow definition of

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<sup>104</sup> Académie de Recherche et d'Enseignement supérieur in French - ARES

higher VET. Overall the employment rates are either slightly lower than in higher education or equivalent. As illustrated in Figure 16, in some countries and for some fields of study the employment outcomes of higher VET graduates are even better than those of higher education graduates.

Figure 16. Overview of employment data of higher VET graduates



Source: ICF country templates

The data available is summarised below:

- In **Austria** only between 1 and 2% of graduates from higher VET programmes are seeking for employment 18 months after graduation. Graduates of post-secondary programmes and Master craftsperson qualifications are mostly in employment (88%). The same is true for graduates of continuous VET programmes (70%). Graduates from VET colleges are either in training (49%) or in employment (43%).
- In the French Speaking Community of **Belgium-FR and Belgium-NL** in 2012, 1,853 learners graduated from the entrepreneurial training course which prepares for setting up a business. Their labour market insertion rate was 82% within 6 months following the graduation. From these 17% set up a business.
- In **Estonia**, in 2014 72% of graduates from professional higher education institutions were working one year after graduation. Only 2% were unemployed (the rest worked or studied or only studied).
- In **Finland**, one year after graduation only 3% of graduates from vocational specialist programmes were unemployed while 83% were employed. In total, 69% of graduates from further vocational qualifications (which are at a lower level) were in employment and 13% were unemployed.
- In **Lithuania**, with the exception of humanities' graduates, above 70% of graduates were employed 6 months after completing their studies. The employment rate is slightly lower than for university graduates but this could be linked to the fact that students from these programmes continue further studies. In some fields of study (biomedical science or art) the difference is marginal.

- In **the Netherlands**, 18 months after graduation, 77% of graduates from higher professional programmes were in employment. The employment rates is above 80% among those who graduated from education or health care programmes.
- In **Sweden** 65% of graduates from higher VET programmes were in employment two years after graduating, 9% were studying and 26% were not in employment. However there are important differences in the employment rates per sector. In the sectors of law, technology and manufacturing, civil and structural engineering, transportation, environmental caring and protection the employment rates were above 70%. They were below 50% in sectors of wellness and body-care, agriculture (including animal care, forestry, gardening and fishing) and journalism and information.

### **6.3.2 Earnings**

In three countries the researchers also found data on wage differences between higher VET graduates and graduates from higher education. In all these countries higher VET graduates have, as one could expect, higher incomes than graduates from upper-secondary education but lower than university graduates. But in Austria in some sectors higher VET graduates have equivalent or even higher earnings. The three examples are presented below:

- The employment monitoring in **Austria** also shows that higher VET graduates observe gains in remuneration compared to those with lower levels of qualifications. For instance, graduates from universities of applied sciences have approximately the same level of earnings as Master graduates from universities but in some sectors their earnings are even higher.
- In **Germany**, ten years after graduation 33% of graduates from vocational academies earn more than EUR 3000 per month. In total, 62% of graduates from universities of applied sciences earn this income which is very similar to university graduates at 63%. Twenty years later the share of those who earn more than EUR 3000 is 84%, 90% and 89% respectively.
- In **Spain** graduates from non-university higher education have slightly higher income than those from upper-secondary education (by 6 percentage points). Graduates from short cycle programmes have more substantially higher income than upper-secondary graduates (by 38 percentage points).

## **6.4 Vocationalisation or academic drift**

There is evidence that the divide between higher education and VET is becoming increasingly blurred (Camilleri et al., 2013; OECD, 2012; de Weert, 2011; Maclean, 2010). As mentioned by Witte et al. (2008) the Bologna Process has provided countries with an opportunity for adjusting policies defining the types of higher education provision, and in some cases this has enabled university and non-university higher education to move closer to each other. This is reflected for instance, with the introduction of EQF level 5 qualifications in higher education aimed directly at the labour market (Cedefop, 2011) or professional doctorates (Scott et al., 2004). A clear distinction between academic and vocational/professional tracks at higher education levels based on the type of higher education institutions is also not possible since the same type of institutions can offer both academic and professional programmes (European Commission/EACEA/Eurydice, 2015).

Different authors have discussed whether there is a stronger focus on academic content and research in higher VET 'academic drift' and 'research drift', and whether vocational elements are being strengthened in academic higher education, for instance

by reinforcing practical learning or the relationship with the labour market ('vocational drift').<sup>105</sup> These tendencies seem to coexist.

There is not a clear trend as to whether higher education is becoming more vocational or VET becoming more academic. Countries are however in different starting positions. Some countries had a strong VET sector, including at higher level which is diminishing in popularity as the higher education sector is expanding. Programmes that used to be higher VET are being integrated into the cycles of the Bologna framework.

The country reports compiled show that both trends co-exist but not necessarily within the countries. Some countries see a stronger shift towards vocalisation of higher education, these are countries where higher VET programmes are developed from within the higher education sector. This is demonstrated by the following developments:

- Integration of higher VET providers or programmes into the formal higher education system (HU, RO, CZ);

For instance, in Hungary higher VET programmes (previously called 'advanced VET programmes') were made part of the formal higher education system. The University Colleges (Hautes Ecoles) and the Arts Colleges in the French speaking community of Belgium-FR and Belgium-NL were included in the higher education system in the nineties which generated somehow an 'academisation' of VET courses and increased the quality of education of the colleges.

- Introduction of VET elements in higher education programmes (e.g. apprenticeships, cooperation with enterprises);

This is for example the case in Croatia, Bulgaria, Lithuania with the new creation of short cycle qualifications in higher education (or discussions about them in Slovenia) or Professional Bachelor degrees.

The growing emphasis on vocational orientation of higher education programmes was also noted in France.

- Increasing permeability between (higher) VET and higher education for learners to easily transit from one system to another.
- Joint delivery of programmes or programmes which provide double qualifications are an interesting aspects of this debate, though yet relatively rare, for example:

In Belgium-FR and Belgium-NL (BEnl), higher VET at EQF level 5 was integrated into the formal CVET system and is delivered in cooperation with Universities (i.e. Hogescholen providing Professional BA).

In the UK there has been an increased focus on strengthening joint delivery arrangements between further and higher education sectors. These delivery arrangements can take the form of a blend of vocational and academic routes, which are designed in conjunction with individuals, employers and the local community.

There is also an increasing focus on integrating work-based learning elements into higher education programmes and create specific higher VET at EQF levels 6 and 7 (e.g. in BE-fr, DE BG, DK, HU, IE, IT, LU, LT, MT) (for more information see section 6.6.2). This is the case in Belgium-FR, Germany, Hungary, Luxembourg and Italy where recently dual Master/Apprenticeship programmes were created. In Denmark, PhD professional programmes were introduced (e.g. nursing and teaching). In Ireland and Bulgaria, discussion are on-going on developing, respectively, work-based learning higher education programmes in emerging fields and Professional Bachelor degrees. In Lithuania, VET colleges are launching Professional Master programmes and university programmes have a stronger professional focus. In Malta, institutions are

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<sup>105</sup> Smeby, J.-C. & Sutphen, M. (2015); Hippach-Schneider, U. (2014); Camilleri, A. et al. (2013); Kyvik, S. & Lepori, B. (2010); Dunkel, T. & Le Mouillour, I. (2009); Kyvik, S. (2009); Smeby, J.-C. (2006).

encouraged to provide a VET Bachelor programmes in all areas of study (as applicable) and initiate concrete plans for the introduction of VET Master programmes and both VET and HE institutions are encouraged to develop new joint study programmes between public VET providers and academic higher education providers through pilot projects.

Moreover, entrance to higher education has been made more accessible for learners with VET qualifications in different countries (e.g. AT, FR, DK, DE, LT, NL) (for more information see section 6.6.5). In France, for instance, tertiary non university VET qualifications (i.e. BTS) now give access to further studies at university (Professional Bachelor) as well as in Malta and in the Netherlands. Conversely, higher VET courses are also receiving increasing participation from learners who already have a higher education qualification (e.g. EE, EL). There is thus increasing permeability between both systems.

## **6.5 Sectoral developments and stakeholder cooperation**

As part of the statistical analysis the research team looked at participation in certain selected economic sectors across all post-secondary levels. The sectors which were frequently mentioned in country templates as having high numbers of learners were selected as well as some other sectors that were expected to be prominent at ISCED levels 4 and 5. The analysis shows that in certain sectors over 30% of all students are enrolled in programmes at levels 4 and 5. As seen earlier these programmes are nearly exclusively vocationally oriented. Consequently, it can be said that, in these sectors, higher VET is an important segment for the development of qualified workforce. Economic sectors where higher VET represents more than 30% of learners include:

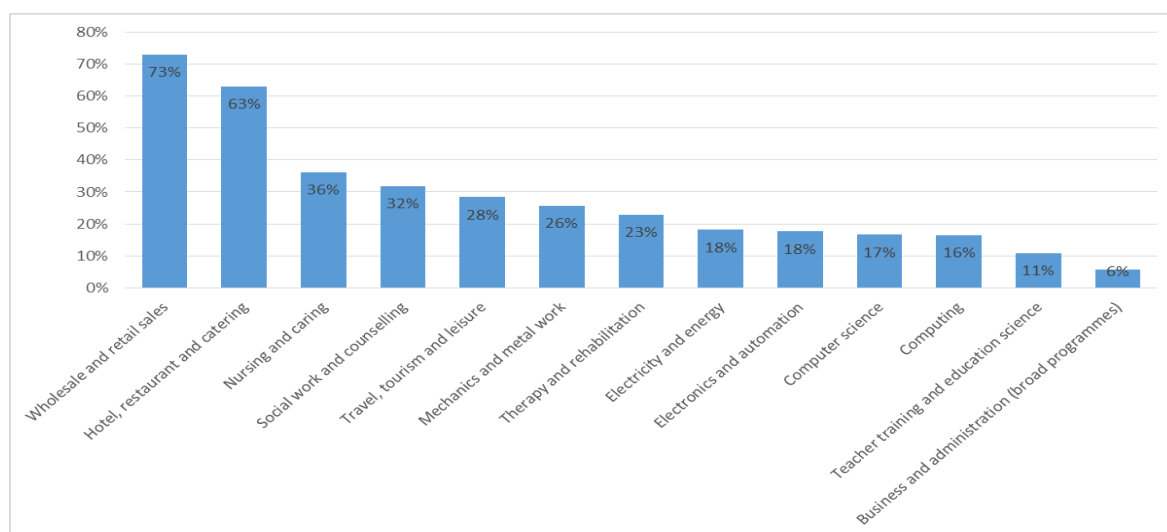
- Wholesale and retail;
- Hospitality sector (hotel, restaurant and catering);
- Nursing and caring; and
- Social work and counselling.

Other sectors with an important share of learners in higher VET (20-30%) are:

- Travel, tourism and leisure;
- Mechanics and metal work; and
- Therapy and rehabilitation.

The overview is presented in figure 17 below.

Figure 17. Share of students at ISCED levels 4 and 5 on all students enrolled in post-secondary education (ISCED4,5,6 and 7, 2013)



Source: ICF calculations based on Eurostat

The country reports refer to several sectors where higher VET programmes are particularly strong or developing:

- IT field and related professions: this trend was mentioned in Austria, Bulgaria, Cyprus, Czech Republic (the report mentions specifically programming languages, social media specialists, database specialists), Germany, Estonia, Spain, Finland, France, Ireland (including web-design), UK;
- Technology more generally: Belgium-FR in the context of innovation and technology clusters (e.g. mechatronic, photonics, TICS, sustainable chemistry and products, green construction), the Public Employment Service is cooperating with the clusters to develop tailor made training; Germany saw development of new professions within sectors such as mechatronics; Ireland (auto-motion, engineering, plastics moulding), Luxembourg (e.g. Wood Technology and Automatic Engineering; Analytical Chemistry; Metal Designer-Manufacturer), Latvia, UK;
- Health sector and social care sector: Austria, Germany (linked to demographic developments), Estonia, Luxembourg;
- The creative sector was mentioned in the Czech Republic (creative professions such as photography, TV professions, creative writing, arts via new media) but also in Luxembourg (audio-visual sector and applied writing), the Netherlands, UK;
- Green industries (including for example energy efficiency): Spain, France, Ireland, the Netherlands (occupations falling under the theme of smart cities and circular economy), UK (wind energy);
- Business and administration: Austria, Cyprus, Denmark, Finland, Luxembourg;
- Tourism: Greece;
- Energy: UK (Onshore Oil and Gas (Shale) and Nuclear);
- Education: Austria, Luxembourg

In some countries higher VET was affected by the fact that training programmes traditionally offered in this sector have become part of higher education. This mostly concerns health care (nurses) and social care but also teaching professions. This was for example mentioned in the case of Austria.

According to most of the country reports, providers in higher VET tend to have strong cooperation arrangements with employers and stakeholders. This proximity is one of the strengths of higher VET. Examples of cooperation are:

- In Austria, the Universities of applied sciences develop their curricula in close cooperation with employers and based on labour market needs;
- In Flanders, new qualifications and programmes in the area of higher VET (HBO) have to be based on an analysis of labour market needs;
- As already noted above, in the French speaking Community of Belgium-FR and Belgium-NL PES develops tailor made programmes in cooperation with the technology and innovation clusters;
- In Ireland, higher VET providers (ETB) are very well connected locally. They are systematically integrated into any regional and local plans for social and economic development;
- In Italy, the institutes that form part of higher VET (ITS and IFTS) were specifically developed to address labour market needs.
- The regional dimension of higher VET providers is also emphasised in the Netherlands where they are integrated into regional development plans. They are also part of innovation networks at regional level.

However, in some cases the country reports also note that what is driving the development of the supply in higher VET is not always the demand from the side of the labour market but it can also be demand from learners. If the two do not match it can result in an oversupply of graduates who chose certain fields because they are attractive ('fashionable') rather than because of their employment prospects. This was mentioned in the Czech Republic but also in the field of business administration in Austria.

## **6.6 Trends and drivers for development of higher VET**

This section discusses the main trends and drivers of change that affect the area of higher VET in the past decade. The discussion in this section is based partly on the results of the expert workshop complemented with insights from case studies, country templates and existing literature.

### **6.6.1 Demand driven sector - involvement of employers**

The complexity of jobs is increasing due to the integration of technology as well as outsourcing (and off-shoring) of activities that can be undertaken with limited qualifications and basic skills levels. As the nature of jobs in Europe changes, employers are searching for candidates with higher levels of skills (and qualifications). Cedefop<sup>106</sup> forecasts of future demand for skills show an increase in occupations that require medium to high levels of qualifications.

At the same time learners want to achieve higher qualifications as a way to better (and hopefully better paid) jobs. However not all learners are ready and have the possibility to enrol in long programmes. Therefore shorter programmes and possibly also work-based learning programmes that offer remuneration are a welcome alternative.

The case studies carried out for this study and the discussions during the expert workshop show that many higher VET programmes have strong involvement of employers. It seems that higher VET is an area that sees vibrant cooperation between employers and education providers. Unlike secondary VET, higher VET is in many cases somewhat less regulated (when it comes to qualifications and curricula) and

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<sup>106</sup> CEDEFOP Job Opportunities - <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/job-opportunities>.

hence easier to adapt regularly - even though this is not the case for all types of programmes. It is also an area where employers often have a strong interest in developing programmes that address the gaps they are facing.

As commented about in an earlier sub-section and also discussed below, one of the developments in higher VET is the increasing number of apprenticeship-type programmes at higher levels. These programmes are employer driven in the sense that without placements provided by the employers these programmes would not exist. The box below shows how employers are involved in the dual training programmes at Bachelor and Master levels of the Austrian University of Applied Sciences studied as part of the case studies (Joanneum). It shows that their involvement is multiple: they recruit students to the programme, they deliver teaching in the training institution as well as on-the-job learning, they evaluate the training programme.

#### **Cooperation with employers as part of dual programmes – Austrian case study**

Dual study programmes are Bachelor and Master study programmes offered at Universities of Applied Science (UAS) in Austria, using the benefits of the apprenticeship system at tertiary level. So far, only a few UAS offer dual programmes, however, more programmes started 2014 and are planned for 2015/2016. The UAS Joanneum was the first institution of this type in Austria that started a dual study programme. The first dual study programme, the Bachelor programme 'Produktionstechnik und Organisation (PTO)' (Production Technology and Organisation) started in 2003. In 2015, Joanneum cooperated with about 200 companies in different branches, producing machinery, stainless steel, food, cellulose, prefabricated houses, automobiles and vehicle components, electronic elements and medical equipment. The following forms of cooperation were identified in the case study:

- Selection of students: Companies can decide which students they employ based on a regular application procedure. Company representatives are also invited to participate in the Fachhochschule Joanneum students' selection process, for example as members of the selection committee.
- Learning content: Companies are asked to teach company specific knowledge during the company-based learning phases. Moreover, they are invited as lecturers or guest lecturers during the university-based phases.
- The companies agree to provide specific learning modules during the practical learning phase at the company. These modules are part of the curriculum for the Bachelor or Master programme.
- Implementation of practical learning phases: In the company-based learning phases students are involved in company projects that fit to the learning content of the UAS curriculum. Companies are supported by university lecturers and invited to regularly exchange their experiences with the FH Joanneum.
- Involvement in evaluation and further development: Companies are asked to share their opinion on the study program, the curriculum and its further development. This feedback loop aims to meet companies' demands in relation to focus areas, selection of lecturers and guest-lecturers or excursions to companies.

When the dual study programme was implemented, employers were first sceptical about the new approach and it was sometimes difficult to find a training company. Today this has completely changed. As said above over 200 companies cooperate with FH Joanneum as part of the dual study programme and companies actively ask

to cooperate with the institution.

Source: AT case study

Another way to ensure that higher VET responds to the demand from the side of employers is by ensuring that all programmes that are publicly funded and/or accredited respond to a need. The example below shows that in Sweden, higher VET providers have to involve employers in the design of programmes in order to receive public funding. The applications have to be regularly renewed and similarly employers' involvement needs to be sustained over time. It is not enough to only involve them in the design phase once.

**Cooperation with employers to justify public funding of a higher VET programme – Swedish case study**

It is important that education and employers collaborate when writing the application for funding for a higher VET programme. In the application to the Swedish National Agency for higher VET, the education provider must be able to describe the way in which education is in demand by the labour market regionally and nationally.

An important part of the application is the description of the employers' participation in education planning and implementation, since they actively participate in the education programmes. When the application is accepted, the education provider appoints a management group and develops an education plan for each training course. The management group has an overarching responsibility for achieving the goals of the training course, meaning that the graduates shall have the kind of competence requested by the employers and the labour market. The employers constitute the majority in a management group. Representatives from the employers can also lecture on a training course.

The Swedish National Agency on Higher Vocational Education carries out follow-up surveys on employment of previous higher VET students the year after they have completed their exam. In the 2014 follow-up, individuals who graduated during 2013 were asked about their occupation.<sup>107</sup> The results show that 87% were employed one year after graduation. Since the start of the follow-ups in 2007, the figures have been rather stable. During the dip in the Swedish economy in 2008 and 2009, the employment rate was 81 and 83% respectively. In the following years, the employment was 86 to 87%. In 2014, 48% are employed by the organisation that offered the on-the-job training.

Source: SE case study

An interesting example is the participation of higher VET providers in industrial clusters to support regional innovation and development. Such cases exist in several countries for example the Netherlands, Belgium-FR and Belgium-NL or Austria. The box below presents an example from Poland where this form of cooperation is relatively new.

**Higher VET providers as actors or regional development and supporting innovation – Polish case study**

Thanks to EU-financed didactic and laboratory infrastructure some State higher VET schools (PWSZ) support small and medium-sized enterprises in the regions to innovate in technical and organisational areas. They also carry out research upon the request of local institutions and organisations. Such cooperation is considered key to achieving high level VET training. It can also accelerate economic

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<sup>107</sup> Myndigheten för yrkeshögskolan (2015). *Studerandes sysselsättning 2014: YH- och KY-studerande som examinerades 2013*.

development, competitiveness and the importance of the region by increasing the potential of the school. Currently, some PWSZ are preparing to participate in the new EU's financial perspective to be included in the so-called 'smart growth' through regional development strategies<sup>108</sup>.

Some PWSZ have joined the industrial clusters and sometimes initiated their formation. They are considered by some to be a better 'first contact' scientific partner for business than academic HEIs<sup>109</sup>. Only a few companies conduct their own research and PWSZ can provide them with laboratory facilities, help to adapt and implement solutions that have already been employed elsewhere and ensure a steady supply of skilled local workforce. In turn, the school's membership in a cluster means that the school's graduates can be introduced to work in the industry and gives them experience to write empirical thesis.<sup>110</sup> It opens an opportunity for PWSZ engineers to organise study visits, e.g. to demonstrate modern methods applied in a workplace. It also allows them to respond quickly to the needs of the region's economy.

Source: Polish case study

In all the case studies carried out as part of this study, the higher VET providers have developed close cooperation arrangements with employers. In many cases they are required to do so by the national funding or accreditation requirements. The forms of cooperation vary from:

- Involvement of employers in the governance structures;
- Employers being involved in definition of the need for the programme;
- Joint curriculum design;
- Teaching; and
- Provision of work-based learning.

Table 18 below summarises how employers were involved in the case studies analysed.

Table 18. Cooperation with employers as part of case studied programmes

Case study	Cooperation arrangement
Austria - Dual Study Programmes at Universities of Applied Science	Companies are active partners in designing the study programme. Moreover, they are involved in the selection of students, the provision of company-specific content of teaching within the company-based training but also as lecturers.
Bulgaria – Programme for massage therapist with visual impairments	Companies provide practical training, which is a required component of the programme. The Medical College has long-term cooperation with five hospitals.
Germany - Dual study programmes at universities of co-operative education	Dual study programmes are developed in close cooperation with local Chambers of Industry and Trade (IHK), regional businesses and employee organisations. The programmes offered at the studied institution (BA Fulda) were developed upon request of local companies, who experienced a lack of highly-qualified skilled labour, as more and more secondary

<sup>108</sup> Studies 'at your fingertip' - <https://forumakademickie.pl/fa/2014/06/studia-na-wyciagniecie-reki/>

<sup>109</sup> Plawgo, B., Director of the Institute of Entrepreneurship in Higher Vocational School in Łomża cited in Paciorek, A. (2013) *Closer to the economy and people*, Perspectives No 3 (133).

<sup>110</sup> Paciorek, A (2013) *Closer to the economy and people*, Perspectives No 3 (133).

	school graduates chose the path of academic education rather than vocational education.
Finland - The role of guidance services in completing Specialist Vocational Qualifications (Competence-based Qualifications - CBQ)	CBQ-system is based on close and active cooperation of employers, employees and the education and training sector. This cooperation spans throughout all the phases and levels (national, regional, provider) of VET governance and delivery: they are developing the qualification structure, drawing up qualification requirements, planning and arranging competence tests as well as assessing competence test performances in tripartite cooperation.
France - The role of Chambers of Commerce and Industry (CCI) in the delivery of higher VET	CCIs are governed by private sector representatives who strongly influence the education and training activities delivered by CCIs. CCI education and training institutions' governance bodies include a very high share of private sector representatives. These stakeholders can thus also weigh on the types of programmes to be developed, their content and the expected learning outcomes. CCI higher VET programmes include a very high share of teaching delivered by non-academic professionals. CCI higher VET programmes include a very strong component of WBL usually taking place in the framework of apprenticeships, short and long-term internships.
Italy - Istruzione Tecnica Superiore (ITS)	Companies are members of the Participation Council of ITS. This can be compared with a shareholders council, where administrative decisions are taken (e.g. budget approval) and that includes all partners (industry, school, university, etc.). They are also members of the Direction/ Management council that, among other competences, defines the courses' content.
Poland - State Higher Vocational Schools	Cooperation with stakeholders in the dissemination of knowledge and in cultural, social and economic development of the region is a statutory task of State Higher Vocational Schools, as well as the promotion of technical, economic and technological progress. It takes the form of multifaceted activities: 1) Efforts related to the compulsory apprenticeships (often more than 500 hours throughout the education cycle), during which students learn the rules of work in the individual business units (production cycles, implementation of projects, technical solutions developed at the request of a specific entity within theses). 2) Bilateral agreements on cooperation between the PWSZ and a specific company / organisation (e.g. Special Economic Zones). 3) Agreements with practitioners to carry out practice; partnership agreements referring to specific fields of study that oblige both sides to cooperate in designing curricula, defining learning outcomes and modifying all activities related to education of students.
Portugal - Higher Professional Education Technical Courses	All proposals for a new programme must include the views from employers or socio-professional associations in the region where the provider is set. Employers are also involved by providing internships which are an inherent part of the programme.

Sweden – Higher VET programmes	Higher VET is tailored to suit a present labour market situation and training courses are offered in specific fields, where there is an explicit need for competence. Courses are funded only in cases there is an identified need from the regional labour market. Employers constitute the majority in a management group of higher VET providers. Representatives from employers can also lecture on a training course. Finally employers support the on-the-job training (LIA) with internships and supervisors for the students.
United Kingdom – Northern Ireland – Apprenticeship Strategy 'Securing our Success' and higher level apprenticeships	Each pilot initiative/ project is tailored to the specific needs of local/ regional employers. The general expectation is that participants studying for a two year qualification will spend the bulk of their time on-the-job; typically four days a week with the employer and one day a week studying.

Source: ICF case studies

### 6.6.2 Integration of work-based learning

The Bruges Communiqué (2010) and, more recently, the Riga Conclusions (2015) call for the promotion of work-based learning in all its forms. Work-based learning can be integrated in the programme (e.g. through on-site labs, kitchens or real business/industry projects), can take the form of on-the-job training periods (e.g. internships), or can be included in dual study programmes or apprenticeships (alternating learning phases at the higher education institution and in companies)<sup>111</sup>.

In the last decade, the sector of higher VET has seen an important development of work-based learning programmes. The country templates for the following countries mention the relatively recent creation of apprenticeship schemes at higher levels: Austria, Finland, Hungary, Ireland, Italy, Spain and United Kingdom<sup>112</sup>. In Slovenia the development of apprenticeships at higher levels is being considered. Other countries such as France, Germany and the French speaking community of Belgium-FR and Belgium-NL already have apprenticeships programmes at higher levels for a certain period of time<sup>113</sup>. They have gained in popularity and have become more wide-spread in the past decade.

It can be assumed that all programmes at higher levels which integrate intensive work-based learning (apprenticeships and dual programmes) can be considered as higher VET. These programmes are typically very closely related to a specific profession. Other higher VET programmes also integrate substantial periods of work-based learning. All the case studies analysed integrate on-the-job learning periods (either as apprenticeships or as traineeships). The intensity of work-based learning varies depending on the nature of the programme. For example the training for the Finnish specialised vocational qualifications is always tailor made and therefore there is no prescribed requirement on the scale of work-based learning. Other programmes analysed involve 3 or 6 months internships while others are apprenticeship programmes.

The two boxes below show examples of:

<sup>111</sup> EQAVET Web-based guidance on work-based learning - <http://www.eqavet.eu/workbasedlearning/GNS/aboutus.aspx>

<sup>112</sup> See also Ecorys (2013) and European Commission (2012b).

<sup>113</sup> There is an on-going project examining the different models of work-based programmes at tertiary level (EQF levels 5 and 6), and their role within the education and training system covering UK-England, France, Ireland, Norway, Austria and Poland [Arbeitsbasierte Lernprogramme im tertiären Bildungsbereich – eine international vergleichende Analyse von Modellen und Funktionen (H-VET), <http://www.bibb.de/de/24108.php>].

- how work-based learning is integrated with school-based learning;
- how self-reflection, autonomy and critical thinking are supported through project work and by asking students to reflect on their work-based learning; and
- how assessment of a complex set of competences acquired both on the work-place and in the theoretical training are combined in asking students to present a project and reflect on it;
- how companies are involved in the assessment of students;
- how the students are also encouraged to learn from each other's' experience by sharing their experience from different companies in the classroom; and
- how the training provider has a key role in ensuring the quality of work-based learning in partner companies.

#### **Integrating 'school-based' and work-based learning in higher dual programmes – German case study**

In order to take part in a dual study programme at higher level provided by the institution covered in this case study (Berufsakademie (BA) Fulda) students have to find a company in which they want to be trained. They have to apply and sign a contract. They then start their 'school-based' training for the first three months, with a focus on basic knowledge related to the field of study. At the end of the three months, the student has to develop a project idea in which the knowledge can be applied practically within the company. Afterwards, the 'dual student' then works in the company, usually in a different department each for a three-month-period, where the project is then implemented. A scientific paper has to be written, which is evaluated both by the trainer or mentor within the company, and the lecturer.

As soon as a prospective 'dual student' asks a company to take them in, BA Fulda arranges for a meeting with the company in order to describe the processes involved. Companies then sign a training agreement with BA Fulda, and usually announce a mentor/responsible for the dual student, often within the HR department. The mentor/responsible then coordinates with the BA regarding tasks to be conducted, or project work (e.g. in the form of case studies). BA Fulda employees will regularly make unannounced visits to partner companies, in order to check if the 'dual student' is treated according to the training contract. Once a year, learning venue cooperation meetings are held, in order to discuss problems, possible changes or improvements and to assure a high-quality education and training.

Source: German case study

#### **Quality assurance and assessment of work-based learning – AT Case study**

The curriculum of dual study programmes at Bachelor and Master level offered at the University of Applied Science (UAS) which was the focus of this case study (FH Joanneum) systematically integrates work-based learning. In addition to usual quality assurance arrangements in higher education, a number of elements aim to ensure high quality learning experiences at the workplaces:

- Modular system: The company has to agree to provide specific learning modules during the practical learning phase at the company. These modules are part of the curriculum.
- Diary and reports on practical phases: Students have to write a diary during the practical phase and summarise it in a practical report after the three months of practical training.

- Lectures at UAS: Practical reports and experiences made during the practical training are discussed within lectures and in seminars. This aims to encourage exchange between students, but is also considered as a feedback that can be used for further development of the study programme.
- Students have to write reports during their company-based training. These reports are the basis for the assessment of the development of their competences.
- Each practical training phase is accompanied by a lecture. Within this lecture, work-based learning processes are reflected and students have the possibility to exchange their experiences.
- Source: AT case study

Table 19. Integration of work-based learning

Case study	Work-based learning
Austria - Dual Study Programmes at Universities of Applied Science	<p>Systematic</p> <p>In the dual Bachelor programme at the institution studied - the theoretical learning takes place for 9 months in the 1<sup>st</sup> year, followed by an internship during the summer holidays. After the first year, learners start to work at the training company. They sign a contract and earn a salary. Within the second and the third study year, alternate phases of theoretical and practical training are conducted, each of them lasting for about three months.</p>
Bulgaria – Programme for massage therapist with visual impairments	<p>Systematic</p> <p>Work-based learning accounts for more than 50% of the programme and includes: a) clinical internship which takes place between the second and the fifth semester and accounts for 1,135 academic hours and; b) pre-graduation internship, which is 800 full hours.</p>
Germany - Dual study programmes at universities of co-operative education	<p>Systematic</p> <p>Dual studies combine phases of work-based learning with phases of school-based learning. These are either divided by day of the week, or by periods of three months. In the case studied, work-and school-based learning rotates in cycles of 3 months.</p>
Finland - The role of guidance services in completing Specialist Vocational Qualifications (Competence-based Qualifications - CBQ)	<p>Systematic</p> <p>Work-based learning (WBL) is an essential part of the provision of specialist vocational qualifications. At the institution analysed, all studies aiming for these qualifications include on-the-job learning in real working life situations. The competence tests are organised and conducted in real working life situations. As the specialist vocational qualifications have no defined scope of learning there is also no definite amount of WBL, WBL is always designed and defined individually for each student and documented in the personal study plan.</p>
France - The role of Chambers of Commerce and Industry (CCI) in	<p>Very frequent – depending on the type of qualification</p> <p>The role and intensity of work-based learning depends on</p>

the delivery of higher VET	each specific programme but almost all CCI-related higher VET programmes include a significant share of WBL as part of their curricula. This can vary from short internships (1-4 months), long internships (up to 6 months) to systematic alternation of school-based and work-based training in apprenticeships
Italy - Istruzione Tecnica Superiore (ITS)	Systematic The law prescribes that at least 30% of the programme is allocated to WBL. In the institution analysed, it reaches 44%, on top of which there are situational classes that in most cases are conducted in partners companies.
Poland - State Higher Vocational Schools	The provision of WBL in higher VET programmes in Poland is currently being reformed. By the end of 2016 or 2017 providers have to ensure that all programmes include a practical profile that: <ul style="list-style-type: none"> <li>• covers modules of activities aimed at gaining practical skills and social competence,</li> <li>• includes practical courses constituting more than half of the curriculum (obligatory three-month practice),</li> <li>• includes workshops, which are run by people with professional experience gained outside the HEI.</li> </ul>
Portugal - Higher Professional Education Technical Courses	Systematic Polytechnic institutes must present a list of partners for the development of WBL in the proposal of the programme to the Ministry of Education, and this list is available for students from the beginning of the programme.  Work-based learning takes the form of an internship to be developed at the end of the study programme. It corresponds to 30 ECTS and has a length of at least one semester.
Sweden – Higher VET programmes	Systematic Work-based learning is included in all training courses that qualify for an advanced diploma in higher vocational education. However, many shorter training courses offer on-the-job training, even though it is not mandatory. WBL constitutes about one third of the total education time, but the duration depends on the content of the training course.
United Kingdom – Northern Ireland - Apprenticeship Strategy 'Securing our Success' and higher level apprenticeships	Systematic To be accepted as one of the High Level Apprenticeship pilots, colleges or universities must develop a proposal which sets out in detail what the work-based elements of the programme will be and how they will be delivered. Each pilot is tailored to the specific needs of the employers but the general expectation is that participants studying for a two year qualification will spend the bulk of their time on-the-job; typically four days a week with the employer and one day a week studying.

Source: ICF case studies

### **6.6.3 Profiling of higher VET and targeting new audiences**

A number of higher VET pathways have been created relatively recently and are therefore less established and less well understood than other pathways at this level – in particular the academic pathways. For those types of programmes that have existed for a long time their profile vis-à-vis other programmes is also not always clearly understood in particular considering that many academic programmes are becoming more practice oriented.

Therefore a key point of development of higher VET is the profiling of the training offer, making sure it fills a gap and that the programmes are well understood and received by both learners and employers.

Some higher VET programmes fill a gap by focusing on a specific target group who, for various reasons, has limited access to or opportunities to succeed in higher education. This is the case for example in the Bulgarian programme analysed which specifically targets persons with visual impairments and train them as massage therapists.

Another example of how higher VET can serve a specific target group can be found in the Portuguese case study on Higher Professional Education Technical Courses. These programmes build on upper-secondary VET programmes and are designed to enable progression opportunities for VET graduates. The courses are physically located in places where there is expected to be sufficient supply of VET graduates from secondary level. The issue of continuity of pathways between secondary and higher VET is taken into account when deciding on the choice of programmes. Furthermore, polytechnic institutes often sign agreements with secondary schools to ensure a certain number of vacancies for students following Vocational Courses in the school that want to follow studies at a higher level.

In Sweden the issue of how the higher VET programme complements the existing education and training offer has to be considered when applying for funding.

### **Higher VET provision based on labour market demand – Swedish case study**

The Swedish National Agency on Higher Vocational Education analyses the labour market demands and decides which educational programmes will be provided.

The rationale behind the development of higher VET in this case is that (1) there must be a demand for skilled labour and (2) that demand is not met by education provided by secondary schools, corporate training, universities or other kinds of education providers.

The analysis conducted by the agency is based on different kinds of sources, and perhaps most significantly are the analyses of the labour market on the regional level provided by the regions.

In addition to the needs reported by the education provider, The Swedish National Agency on Higher Vocational Education takes part of the reports from Arbetsförmedlingen (the Employment Service) and Statistics Sweden as well as the agencies own analyses of the need for higher VET. The agency also has contacts with business organisations and employers to collect information on the skill needs. Some years ago, the agency prepared descriptions for about 120 professional roles in order to clarify the skills needed on the labour market.

Given that the agency has an overview of the higher VET provision, the existing provision and the extent to which it appropriately matches the needs of the labour market is also taken into account.

Source: SE case study

The country reports discussed the focus and key purpose of the types of programmes analysed. Some of the programmes had a very clear focus on a certain group of learners:

- The Master-crafts person qualifications (or similar) target those who aim to set up their own business (e.g. AT, BE-FR, DE, HR, LU). In these countries holding this qualification can be a requirement to be able to get a licence to set up a business; or
- Some of the programmes analysed are 'top-up' programmes for people already in employment. These programmes help them get additional qualifications, to further specialise or to improve their management skills. For example in Slovenia the short-cycle higher VET programmes aim at up-skilling middle management, in Finland the specialist vocational qualifications offer further specialisation training;

Many of the short cycle programmes have a double purpose:

- On the one hand they target young people who do not have previous qualifications in a given field with a view to preparing them for employment. They target young people who do not wish to enrol in longer university studies;
- On the other hand they target graduates from upper-secondary VET giving them an opportunity to progress further.

Several of the case studies programme target learners with less traditional profiles. In the Austrian case study, the dual programmes attract around 25% of students who do not have the higher education entrance qualifications. In the Swedish and Finnish case studies the target group typically includes working professionals or people who want to change orientation. An average age of enrolment in these programmes is 29 years, indicating that the courses attract a relatively mature population compared to higher education or other forms of VET.

As already mentioned above, the Bulgarian programme analysed focuses on young people with a physical disability – in this case visual impairment. This is a target group

that often has limited opportunities to participate in higher levels of education. In Bulgaria the Medical College in Sofia is the only educational institution in Bulgaria that offers this qualification/programme.

#### **6.6.4 Entrepreneurship**

According to the European Commission, entrepreneurship “is an individual’s ability to turn ideas into action. It includes creativity, innovation, risk taking, ability to plan and manage projects in order to achieve objectives”.<sup>114</sup> In recent years, the role of entrepreneurship education in contributing to growth and welfare has gained increasing attention at European and national policy levels. Historically entrepreneurship has been associated with founding and running a business and becoming an entrepreneur. Since the last fifteen years entrepreneurial skills refer to a more general set of competences focusing on initiative and innovation, creativity, capacity for problem solving, and tenacity.<sup>115</sup> The Riga Conclusions published in June 2015 specifically refer to the stimulation of innovation and entrepreneurship.

Higher VET programmes do not only prepare individuals for employment but also for self-employment and managerial positions. There is therefore often an emphasis on:

- Stimulating entrepreneurship competence in general focusing on the sense of initiative, critical thinking and analysis of business situations and identification of solutions;
- Specific knowledge linked to start-ups and business planning;
- Creativity and innovation.

These competences are developed through courses but also in particular during the periods of WBL and through project activities (see example in the box below).

#### **Entrepreneurship competences in higher VET – Portuguese case study**

The development of entrepreneurship competences is specifically addressed in the higher VET programmes implemented by the Polytechnic Institute of Tomar. Concretely, all the programmes have two transversal modules, compulsory for students:

- Creativity workshop, in the first year. The aim is to develop competences related to the development of ideas, problem solving, and decision making. It promotes self-awareness and self-reflection;
- Entrepreneurship module, in the second year. The aim is to develop competences to develop a project and launch a business.

Source: Portuguese case study

More examples are presented in table 20 below.

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<sup>114</sup> European Commission DG Growth - [http://ec.europa.eu/growth/smes/promoting-entrepreneurship/index\\_en.htm](http://ec.europa.eu/growth/smes/promoting-entrepreneurship/index_en.htm).

<sup>115</sup> European Commission (2011); Eurydice (2012); Aff, J. & Hahn, A. (2005); Heckmann, B. & Lindner, J. (2009).

Table 20. Entrepreneurship competence as part of programmes analysed

Case study	Entrepreneurship competence
Austria - Dual Study Programmes at Universities of Applied Science	Entrepreneurship competences and innovation are stimulated within the programme through project work which is part of Bachelor and Master thesis. Through these project-based assignments, students tackle concrete issues in their training company and aim to find technical or organisational solutions. Furthermore, the lectures include elements to improve personal competences or management competences, as for example presentation and communication skills. This aims to prepare learners for management positions in companies - or to open a business on their own.
Germany - Dual study programmes at universities of co-operative education	The courses currently offered by the provider generally focus on entrepreneurship and leadership, and a new course will focus on innovation and digitalisation, with a special focus on business model development. Many lectures focus on Leadership Skills such as management strategies, marketing, innovation and business models.
Finland - The role of guidance services in completing Specialist Vocational Qualifications (Competence-based Qualifications - CBQ)	The qualifications include rather large developmental assignments to be carried out in the work place. These assignments usually deal with innovative elements as they aim for some concrete changes at the working place. e.g. as part of the studies for specialist in the environment sector, each candidate needs to design, organise, implement, document and assess a development project at her/his work place concerning environmental protection.
Portugal - Higher Professional Education Technical Courses	In addition to responding to the needs of companies in the regional labour market, the higher VET programmes designed by the polytechnic institute of Tomar also aim at preparing students for self-employment. Thus, all the programmes include transversal curricular units on creativity and entrepreneurship, compulsory for the students.
Sweden – Higher VET programmes	Development of entrepreneurship competences can be included in the education plan, especially if the profession largely covers entrepreneurship and self-employment. When the analyses of the needs on the labour market are developed, the needs for entrepreneurship and self-employment are covered.

Source: ICF case studies

### 6.6.5 Flexible learning paths and progression

Considering that higher VET programmes target young adults and more mature students, countries have put in place strategies or guidelines that open up higher level VET for adult learners, most significantly at EQF level 5 (Cedefop, 2012b; Cedefop, 2015e).

Thus, one would expect relatively strong flexibility for learners in the programmes reviewed in this study. However this appears to be only partially true. For some programmes analysed through case studies (see table 21) it is possible to access the programme with no specific qualifications or after an examination but without having

the university entrance qualification. In most cases studies, progressive accumulation of modules, units or credit is not (yet) possible. If students want to get their skills and competences gained in another learning context or in the work context recognised, it is possible. However in most cases there are no formalised agreements about how much credit will be recognised. This is undertaken on a case by case basis. Most of the programmes analysed offer opportunities for further progression.

The example from Finland illustrates how qualifications can be obtained in a flexible and individualised way:

### **Obtaining a qualification based on personal study plans – Finnish case study**

The national Competence-based Qualification (CBQ) system is regulated by the Act and Decree on Vocational Adult Education and Training<sup>116</sup> and the qualifications are based on National Qualification Requirements (NQR).

Recognition of prior learning and validation on non-formal and informal learning are required and guaranteed by legislation. The recognition and validation of prior learning and competences is one of the core principles of the system and in principle all competence-base qualifications are to be obtained without any formal training at all.

For the completion of a qualification (or parts of it, i.e. modules) a written plan is to be prepared in cooperation with the authorised organiser of the qualification and the candidate. It must contain detailed descriptions of how, when and where the candidate will demonstrate her/his required vocational competences.

As a general principle, a person demonstrates her/his vocational skills through competence tests, demonstrating the skills required in practical work assignments and activities. Each module is assessed separately and competence tests are arranged in accordance with a student's individualisation plan for the completion of the desired qualification and according to the assessed and approved plan for arranging competence tests. The role of the individualisation plan (also known as personalisation plan, personal study plan) is a key document which defines and steers not only the learning process but also the certification process of a CBQ. The authorised VET provider has the responsibility for the implementation of the individualisation process. As described by the Finnish National Board of Education (2014, 33–34<sup>117</sup>), "Personalisation refers to customer-oriented planning and implementation of guidance, advisory and support measures for a student engaged in preparatory training for a competence-based qualification and a candidate attaining a competence-based qualification."

Source: Finnish case study

Further examples are presented in table 21 below:

Table 21. Flexible learning paths

Case study	Flexible learning paths
Austria - Dual Study Programmes at Universities of Applied Science	Entry: Those who do not hold a higher education entrance certificate can participate in specific higher education entrance exams  Accumulation: progressive accumulation of modules is not possible

<sup>116</sup> Laki ammatillisesta aikuiskoulutuksesta 631/1998 and Asetus ammatillisesta aikuiskoulutuksesta 812/1998. Both were reformed so that the new legislation has been implemented from 1.8.2015. For this case study the old legislation applies.

<sup>117</sup> Finnish National Board of Education (2014) *Competence-based Qualification Guide*. Publications 2013:22.

	<p>Exemption: It is possible. For example graduates of technical VET colleges (upper secondary level) can apply for recognition of prior learning, especially for basic technical courses within the first semester</p> <p>Progression: Graduates can progress to Masters level</p>
Bulgaria – Programme for massage therapist with visual impairments	<p>Entry: as for other higher education programmes</p> <p>Accumulation: progressive accumulation is not possible</p> <p>Exemption: not possible</p> <p>Progression: a follow-up Masters programme exists but it is very new</p>
Germany - Dual study programmes at universities of co-operative education	<p>Entry: possible without the HE entry qualification by taking an additional examination</p> <p>Accumulation: exceptionally possible by interrupting studies</p> <p>Exemption: not clear</p> <p>Progression: progression to Masters level</p>
Finland - The role of guidance services in completing Specialist Vocational Qualifications (Competence-based Qualifications - CBQ)	<p>Entry: no requirements</p> <p>Accumulation: yes, it is possible to accumulate modules – the programme is systematically personalised and qualifications can be achieved with no prior training</p> <p>Exemption: same as above</p> <p>Progression: progression to higher education is possible (defined and guaranteed by legislation)</p>
Italy - Istruzione Tecnica Superiore (ITS)	<p>Entry: no specific requirements</p> <p>Accumulation: not possible</p> <p>Exemption: possible on case by case basis</p> <p>Progression: possible but depends on the university</p>
Poland - State Higher Vocational Schools	<p>Entry: no specific requirements</p> <p>Accumulation: not possible</p> <p>Exemption: on case by case basis</p> <p>Progression: progression opportunities exist</p>
Portugal - Higher Professional Education Technical Courses	<p>Entry: an entry examination is required</p> <p>Accumulation: not possible</p> <p>Exemption: depends on the provider</p> <p>Progression: such opportunities exist</p>
Sweden – Higher VET programmes	<p>Entry: no specific requirements</p> <p>Accumulation: not possible</p> <p>Exemption: not possible</p> <p>Progression: recognition of the qualification as part for higher level programmes is not a requirement</p>
United Kingdom – Northern Ireland - Apprenticeship Strategy 'Securing our Success'/	<p>Entry: no specific requirements</p> <p>Accumulation: not possible</p> <p>Exemption: not clear</p> <p>Progression: there is a requirement to ensure that progression</p>

and higher level apprenticeships	opportunities exist
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Source: ICF case studies

#### 6.6.6 Quality assurance and performance-based funding

The Riga Conclusions (2015) call for the further development of quality assurance mechanisms in VET in line with the 2009 EQAVET Recommendation. However, many of the strategies developed until now focus on initial VET (EQF levels 1-4), while higher VET is not often covered.<sup>118</sup>

As discussed in other parts of this report, some higher VET programmes fall under higher education and therefore follow the same or very similar quality assurance (QA) procedures. In the area of higher education QA, important changes have been noted in the past - in particular when it comes to internal QA at institutional level. Several programmes or organisations that were analysed through the case studies demonstrate having in place internal QA mechanisms which include feedback from employers and students.

Some types of programmes analysed are rather similar to the sector of continuous VET and follow similar QA procedures. For example in two cases providers were ISO or EFQM certified.

The example below shows the internal QA processes put in place in a higher VET provider in Germany. It shows how the QA process covers different aspects: 'school-based' and work-based training, teachers and trainers, learners' feedback.

##### **Elements of internal quality management at provider level – German case study**

The following elements of higher VET provision are regularly evaluated:

- Teacher (lecturer) evaluation at the end of each course/seminar
- Course evaluation, regarding content and applicability
- Work-based learning evaluation after each three-months-period within the company
- Alumni evaluation within three years of graduation and later.
- A 'Quality-Circle', an annual meeting with students in order to discuss problems and challenges within the curricula or the general organisation of the programmes
- 'Learning venue cooperation' meetings of partner companies, Chambers and employee representatives.

Source: DE case study

In a few cases analysed, performance based funding approaches were put in place to ensure continued relevance and effectiveness of the training publicly funded. One example is described in the box below.

<sup>118</sup> The ongoing QA-HiVET project (2014-2017) aims at addressing this shortfall through the promotion and implementation of European principles on quality assurance in higher VET. It is supported by the Erasmus+ programme.

### **Performance-based funding in ITS - Italian case study**

The Ministry of Education is the main financing institution having allocated EUR 13 million for ITS's funding.<sup>119</sup> For the year 2015, on the basis of an agreement with the Regions<sup>120</sup>, this fund is distributed according to these three criteria:

- 20% is provided to the region depending on the number of young people in the region;
- 70% is given on the basis of the number of ITS students admitted to the second year and to the final exam; and
- 10% is finally awarded to those ITS that were positively evaluated in the previous year.

The evaluations of ITS are undertaken annually and are based on a set of indicators. Five main indicators were developed, each of them is composed of sub-indicators:

- Attractiveness: measures the interest of young people/ potential students in the course
- Employability: measures the employment status of graduates after six and twelve months after the end of the course
- Work-based learning: amount of time spent in companies and relevance of the companies with the course (to be relevant a company must work in a sector linked to the course).
- Active participation: takes into account the number of classes held by teachers coming from industry and university and of classes held in laboratory
- Inter-regional nets: measures the extent to which ITS manage to create opportunities for students beyond regional borders (e.g. whether traineeships are done in other regions or abroad or teachers comes from non-local industry or institution).

Source: IT case study

Some further examples are presented in table 22 below:

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<sup>119</sup> Legge 27 dicembre 2006, n. 296 "Disposizioni per la formazione del bilancio annuale e pluriennale dello Stato (legge finanziaria 2007)", art. 1, comma 875.

<sup>120</sup> Presidenza del Consiglio dei Ministri (2014). *Accordo conferenza unificata del 5 agosto 2014: Sistema di monitoraggio e valutazione ITS*. This agreement was considered as a pilot and it will be renegotiated or confirmed.

Table 22. Quality assurance measures

Case study	Quality assurance measures
Austria - Dual Study Programmes at Universities of Applied Science	External QA in line with the higher education regulations (programme accreditation) Internal QA: quality management system that includes systematic student feedback
Germany - Dual study programmes at universities of co-operative education	External and internal QA are compliant with ISO 9001. External QA also done to accredit (and re-accredit) programmes, it includes regular quality audits
Finland - The role of guidance services in completing Specialist Vocational Qualifications (Competence-based Qualifications - CBQ)	External: as part of EFQM as well as nationwide evaluations of learning outcomes, which are conducted yearly by the Finnish Board of education, and are a form of systematic reviewing and renewing of the vocational requirements. Internal: the provider analysed implements the EFQM QM system for their overall educational and training activities and processes.
France - The role of Chambers of Commerce and Industry (CCI) in the delivery of higher VET	External: higher VET programmes supported by CCIs are subject to an accreditation, based on procedures defined at the national level. Internal: varies depending on the provider
Italy - Istruzione Tecnica Superiore (ITS)	External: based on a performance-based management system – see above.
Poland - State Higher Vocational Schools	Internal: State Higher Vocational Schools are required to have an internal quality assurance system, supervised by a rector. Whereas the QA system is the same as for universities, certain criteria related to conducting practical profile that result from the relevant regulations are slightly different. This concerns a different way of assessing vocational practices and cooperation with employers, involving employers in curricula design and tutoring.
Portugal - Higher Professional Education Technical Courses	Internal evaluation is performed by the polytechnic higher education institution based on parameters yet to be defined by the accompanying commission. The external evaluation will be carried out by the Directorate-General of Higher Education based on parameters also to be defined by the accompanying Commission. These are still in development
Sweden – Higher VET programmes	External: The Swedish National Agency for Higher Vocational Education monitors and audits education providers and training courses i.e. through inspections. See above for performance based funding

Source: ICF case studies

## **6.7 Barriers and challenges for development of higher VET**

Higher VET is fairly well developed in many countries and mostly growing as shown in earlier sections of this report. But there are important barriers to its development in certain countries.

The most frequently cited issue is the image of the sector. It is often seen as a 'second best' choice for those who were not accepted to traditional academic universities (mentioned in CZ, HU or SK). In Germany the fact that the permeability between higher VET and higher education is limited is seen as a negative signal to potential learners. This is also noted in some Nordic countries (DK, SE).

Country researchers also reported that there is also an issue with general awareness and understanding of these qualifications, especially when they have been recently introduced (IT, EE, LU). Low level of understanding of the purpose and focus of these qualifications and in particular lack of an image about what they are worth on the labour market can negatively affect participation.

Where higher VET 'competes' for the same learners as higher education, the issue of image and second choice is often noted. On the other hand there are countries where higher VET providers serve a different audience, including people who are higher education graduates (e.g. FI).

Another key challenge discussed is the relationship between higher VET and higher education and in particular permeability between the two sectors, for example:

- In Austria VET college graduates often fail to receive adequate recognition of prior learning for their VET college qualifications at higher education institutions. Furthermore, vocational qualifications (e.g. master craftsmen exam) are often not recognised at all by higher education institutions, especially the universities.
- In the French Speaking Community of Belgium-FR and Belgium-NL the fact that there is no modular recognition/validation of units of learning when transferring from a system to another (i.e. from a PES certification of training to University colleges) hinders the access of learners to higher education.

Similar issues are also noted in Bulgaria, Germany or Croatia.

Another issue linked to the relationship with higher education is the lack of clear profiling of the higher VET programmes compared to higher education ones. For example in Spain it was noted that programmes in the same fields of studies exist in both segments and it is not clear to learners what the difference is. The lack of clarity over what the profile of higher VET is was also noted in Lithuania.

A third relatively commonly mentioned issue is the oversupply of graduates from certain fields and linked to that their low transition to the labour market. While overall higher VET tends to have good results when it comes to employment transition - this is not the case in all countries and in all sectors (BG, CY, HU).

In Finland the complexity of the higher VET supply (over 400 qualifications) was mentioned as an obstacle.

Country reports also mentioned issues related to the education system and its regulation, for example:

- the decentralised governance of certain parts of higher VET in Germany means that it is difficult to implement initiatives spurred at national level as the sector is governed at the level of Landers;
- the process of updating qualifications and programmes was seen as lengthy in Finland;
- deregulation of certain professions is seen as a threat to the provision of Master Craftsperson qualifications in Croatia;

- complex governance and funding system were noted in Hungary;
- large number of providers is a challenge in the Netherlands;
- the government commitment for funding of a specific programme being limited in duration (2 years) creating instability in the sector in Sweden;
- funding mechanisms to make higher VET (but VET in general) more responsive to labour market needs were noted in the UK.

Lack of work placements for higher VET students was noted in AT, EE, IT, LT, SE and UK.

Finally in a few countries the issue of social inclusion of specific groups was seen as insufficient (BE-NL and SE) and drop-out rates as too high (BE-NL and HU).

## **7 Conclusions and recommendations**

### **7.1 Conclusions**

There is no consensus on the definition of higher VET. Higher VET does not correspond exactly to any of the segments of education and training. Depending on the country, higher VET can overlap with higher education (covered by the European Higher Education Area - EHEA), post-secondary non-tertiary education, continuous vocational education and training or other segments of adult learning.

Higher VET is also not a homogeneous area. There is a great deal of diversity within this field. It could be questioned whether it is meaningful to analyse this field as a single group of qualifications when in reality it encompasses very different types of programmes and qualifications.

So far there is no consensus on how to define higher VET. Higher VET is not a clearly defined segment of the education and training system in most of the EU countries. The understanding of what represents higher VET varies greatly. In some countries the understanding is relatively narrow and refers to post-secondary VET not covered by the EHEA, in others it also embraces programmes and qualifications covered by the EHEA and in some countries also provision that is part of adult learning or CVET (within and outside the formal system). In all of the countries analysed the researchers identified some programmes or qualifications that were considered as higher VET (based on 'national perception'). However when looked at together, higher VET does not represent a homogeneous segment of education and training.

The field of higher VET could be defined as follows:

- Higher VET leads to qualifications that are at EQF level 5 and above; and
- The qualifications have a clear professional or vocational orientation.

The VET dimension is much more blurred than the level dimension. A broad and a narrow approach have been discussed in this study. According to a broad understanding, professional qualifications offered in higher education (covered by the EHEA) could be considered as higher VET. This concerns in particular the short cycle programmes and the professional Bachelor and possibly Professional Master degrees.

According to the narrow understanding, the definition of higher VET could only concern those types of qualifications that are not covered by the EHEA. Therefore excluding the short cycle and professional Bachelor and Master degrees.

The study proposed a broad as well as a more narrow understanding of what higher VET is. In both cases the definition of higher VET can be linked to:

- A level; and the
- Vocational or professional nature of the qualification.

When it comes to the level dimension, there is a general agreement that this should be based on EQF levels. Higher VET concerns qualifications that are at the EQF levels 5, 6, 7 and/or 8. The ISCED levels are not fully suitable for this purpose as they do not truly reflect a hierarchy of learning outcomes. The level dimension of the definition of higher VET is rather consensual.

The second dimension is the vocational nature of programmes or qualifications. This is much less clear and more difficult to delimitate. Many traditional academic qualifications are also clearly linked to defined professions (such as architecture or medical professions). Broadly speaking the study suggests that the following three categories of qualifications can be defined at these EQF levels:

- Academic qualifications which are aligned with the EHEA and which are clearly not higher VET (academic Bachelor, Master and Doctoral degrees;

- Professional or vocational qualifications that are aligned with the EHEA such as short cycle programmes or professional Bachelor and Masters degrees. In a broad understanding of higher VET, these types of programmes are included;
- All other professional and vocational programmes and qualifications at these levels that are outside the EHEA. In a more narrow view of what higher VET is, only these types of programmes and qualifications are included. This group of qualifications and programmes has other sub-groups. In particular one could differentiate between those programmes that are part of formal education and training and those that are not.

One important difficulty in delimitating higher VET is that most national qualifications frameworks do not yet involve qualifications awarded outside the formal education and training. There are many qualifications and qualifications types, mostly vocational or professional, offered outside formal education and training systems. However as these are not aligned with NQFs it is not possible to judge whether they are 'higher'.

The findings of this study would probably be different if more CVET qualifications were included in NQFs.

Where non-higher education programmes are aligned with NQFs they are mostly at levels 5 and 6.

Most of the programmes examined in this report form part of the more traditional education and training provision that is part of the formal system. Only a small number of types of programmes from outside the formal system were referred to by interviewees. Many NQFs are still in the process of implementation and the inclusion of qualifications from outside the formal sector is planned for the future. Therefore it is likely that there are many more types of programmes that could qualify as higher VET than those covered by this study. The situation regarding the definition and characteristics of higher VET could look very differently in few years' time if countries' pursue including non-traditional qualifications.

In those cases where higher VET is already linked to NQF levels it appears that this is mostly at the levels corresponding to EQF level 5 and to a lesser extent levels 6 and above. There are not many VET qualifications so far that are not covered by the EHEA and that would be included in NQFs at higher levels than the one linked to EQF level 6.

Higher VET programmes are often developed by providers who are also responsible for the assessment of learners and awarding of qualifications. Higher VET programmes are usually developed in cooperation with employers, frequently involve some form of WBL and teachers are often required to have prior professional experience in the field.

When it comes to the characteristics of higher VET the following key trends have been identified:

- In most cases the qualifications identified are awarded by the education and training providers. This is mostly the case for those qualifications that are part of the EHEA. Other types of qualifications can be awarded by a Ministry (some formal CVET qualifications) or representatives of employers or of sectors (for example Master-crafts person qualifications);
- Higher VET programmes in nearly all cases analysed receive public funding. However, many are also privately co-funded by individuals or to a lesser extent companies.
- Most of the higher VET programmes not covered by the EHEA follow an accreditation scheme. A minority of cases analysed follow other quality assurance arrangements. In all programmes analysed some form of quality assurance exists.

- Many institutions providing higher VET also provide other types of education and training programmes. Therefore higher VET does not have a shared identity with a certain type of providers.
- The training programmes are in most cases designed by the providers, often in close cooperation with business representatives. The programmes are linked to occupational profiles for those qualifications that are not covered by the EHEA.
- The main purpose of the programmes and qualifications analysed is preparation for entry to employment (entry qualifications) together with up-skilling and re-skilling (top-up qualifications).
- Many of the programmes analysed are also offered as part-time studies. The majority integrate WBL.
- The teachers and trainers are more often required to have professional experience than in other programmes at these levels. In particular, the teaching is more often delivered by practitioners than in programmes covered by the EHEA.

The main types of higher VET programmes or qualifications are:

- If taking the narrow understanding of higher VET:
  - Post-secondary programmes outside higher education (not covered by EHEA) at ISCED 2011 levels 4 or 5. These programmes or qualifications have various names and durations but they are very clearly VET focused and they are often aimed at upper-secondary graduates as first vocational qualification or an additional vocational qualification;
  - Qualifications acquired based on the recognition of non-formal and informal learning (competence tests) which can also, in some cases, be prepared through a programme. This is typically the case of the Master-crafts person qualifications but also other continuous VET qualifications;
  - Various CVET programmes or qualifications outside the formal system.
- If taking the broad understanding of higher VET, in addition to those mentioned above the following programmes or qualifications are included:
  - Short cycle higher education;
  - Professional Bachelor and Professional Master degrees;
  - Dual studies (apprenticeships or alternance) at Bachelor or Master level (or even at Doctoral level).

In 2013 there were at least 4.8million persons enrolled in programmes that were classified in ISCED 2011 as vocationally oriented. This number is likely to be underestimated because many countries did not differentiate programme orientation for certain types of qualifications. This number represents an important share of post-secondary enrolment.

The vast majority of post-secondary non-tertiary programmes and short cycle programmes are vocationally oriented.

The actual numbers are likely to be even higher as these statistics do not include CVET programmes at higher levels.

Higher VET attracts substantial number of learners. In many EU countries the numbers of people attending higher VET courses in post-secondary non-tertiary education, short cycles but also professional bachelor degrees is relatively important. Post-secondary non-tertiary programmes and short cycles programmes are nearly exclusively professionally oriented and can be considered as higher VET. In 2013, there were roughly 4.8 million persons enrolled in programmes that could be considered, according to their ISCED 2011 classification, as higher VET. This actually represents 20% of total enrolment in post-secondary education and training at ISCED levels 4, 5, 6 and 7 (excluding level 8 – doctoral studies and equivalent). This relates

to the broad definition of higher VET. In reality this figure is likely to be even higher because:

- Many countries which have professional Bachelor degrees did not make a distinction between professional and academic programmes when supplying the statistics to the dataset; and
- Germany, which has an important number of students enrolled in professional bachelor courses, classified these programmes as academic and not as professional.

The statistics only include the more traditional higher VET programmes (post-secondary non-tertiary, short cycle and professional bachelor and master degrees). The statistics do not include the whole sector of continuous VET.

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There are important inconsistencies in how certain countries allocate programmes at ISCED levels 6 and 7 to the professional and academic orientation. This means that the figures for higher VET are underestimated.

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So far, several countries, even those which do have a binary system in higher education, did not make the distinction between academic and Professional Bachelor and Master Degrees when providing the data. This is for example the case in the Netherlands and Austria which both have professional Bachelor degrees that are clearly distinct from the academic tracks.

The way in which countries allocated programmes to vocational and academic orientation is also not homogeneous. Similar types of programmes are placed in different categories. For example:

- Germany has allocated Professional Bachelor degrees to the academic category while other countries, such as Belgium-FR and Belgium-NL or Denmark allocate them to the professional category;
- Regarding Masters' degrees France considers that all Master degrees in the field of health and pharmacy, those from business schools and engineering schools are professional. Other countries however do not make this distinction.

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Higher VET is much more developed in some countries than in others. There are also no clear trends when it comes to whether higher VET is growing or declining.

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There are very important differences between countries with some countries having a really strong higher VET pillar and in others this provision being nearly inexistent.

Higher VET is a growing form of education and training in most EU countries but there are also countries which have seen a decline or stagnation in the number of participants. It seems that the main reasons for growth are linked to:

- Growing numbers of young people who after secondary education wish to continue further studies;
- Relatively good employment opportunities of higher VET graduates in many countries;
- Demand from the side of the labour market stimulating the development of these shorter programmes that are more professionally oriented.

The decline on the other hand is mostly explained by expansion of higher education which takes in learners who used to enrol in higher VET, combined with demographic decline.

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The main trends shaping higher VET are: the evolving relationship with the rest of the education system, growing demand that is in many countries linked to good employment outcomes, strengthening of WBL programmes. The challenges are linked

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to these trends as well and concern mostly the ambiguous relationship with higher education when it comes to competition for students, absence of clear positioning and limited recognition of higher VET in higher education.

The main trends influencing the evolution of higher VET are:

- Clarification of the position of higher VET in the rest of the education system. The development of NQFs led to discussions about the relationship between higher VET and other qualifications, in particular those from higher education covered by the EHEA;
- Growing demand from the side of learners and employers linked to mostly positive employment prospects though the trend here is not unanimous;
- Development of work-based learning programmes at higher levels. This is linked to the growing recognition of the benefits of work-based learning for employability but also development of professional identity.

The main challenges for further development of higher VET are:

- A certain form of competition for learners with higher education which means that higher VET is sometimes seen as a second choice. However many higher VET programmes actually serve a population that is not otherwise attracted to academic education. For example many of these programmes target groups that are under-represented in higher education;
- Linked to the above, a lack of clear positioning and profiling of higher VET programmes. This is linked to the fact that higher VET is often offered by providers that also offer other types of programmes (initial VET or higher education). Depending on the country and the tradition it is not always clear to the learners how the programmes differ;
- Lack of recognition of higher VET qualifications for exemption from higher education. While this is improving regarding the recognition of for example Professional Bachelors, there is improvement to be made to recognise short-cycle programmes and post-secondary non-tertiary programmes for progression.

## **7.2 Recommendations**

Based on these findings the following main recommendations can be made.

Recommendation 1: Member States and the European Commission should develop the policy agenda aiming to strengthen higher VET. Higher VET programmes and qualifications offer an opportunity to upgrade ones' skills and competence and to achieve work-relevant qualifications for a varied target group. There is a need for countries to diversify the offer of education and training opportunities at higher levels and to ensure its labour market relevance.

The study shows that higher VET programmes offer training opportunities that lead to employment. They frequently integrate components of WBL and the teaching is often delivered by people with professional experience in the sector. Employers or their representatives are frequently involved in the design of higher VET programmes. These features of higher VET make it an attractive pathway in those countries where the segment is clearly defined and understood. There is however strong potential to further develop this portfolio of programmes and qualifications in many countries.

Recommendation 2: Use the term 'professional education at higher levels' or 'higher professional education' rather than the term 'vocational education and training at higher levels'.

Reflect on whether this field should be referred to as a discrete sector.

The term 'higher VET' is not well understood by most persons and it could be negatively perceived. Use of the term 'professional education at higher levels' might resonate better with different audiences. Given that higher VET sometimes has a blurred or even negative image, the choice of the term 'professional' might be better perceived.

If EU cooperation should focus on the area of higher VET it may be more meaningful to select specific parts of higher VET only to ensure that the discussions and analysis are focused and based on a common understanding.

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Recommendation 3: Further research is needed to better understand the extent to which the qualifications not covered by this study could be seen as higher VET.

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There is still a lack of information on the area of qualifications and programmes that are outside higher education (i.e. not covered by the EHEA) and which are also outside the formal education and training system and not linked to an EQF level. As this study focused on programmes and qualifications at EQF level 5 and above, it was not possible to explore these qualifications since they do not have a level attached to them yet.

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Recommendation 4: Support cooperation among countries on how to integrate higher qualifications that are outside the formal education and training system into NQFs and how to position them in the education and training systems.

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Most NQFs do not yet include qualifications outside the formal education and training system. This means that in many countries the programmes and qualifications offered outside formal education and training are not yet perceived as being part of higher VET. The inclusion of these qualifications into NQFs is likely to create discussions about the relationship between these qualifications and the rest of the education and training system. There is scope for further cooperation across countries to develop a common approach to how to position these qualifications vis-à-vis the rest of the education and training system.

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Recommendation 5: Develop activities to improve the evidence base about the different groups of qualifications and programmes that fall under higher VET. In particular those sub-groups that are outside the EHEA. Such further work could contribute to the development of an identity within the sector.

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This study provides a first overview of the area of higher VET. It has shown that it is not a homogeneous area and that various types of programmes and qualifications are covered by this broad term. The main types could be further explored. In particular, there is potential to improve the understanding of the sector of post-secondary VET not covered by the EHEA and the field of higher VET types outside the formal system.

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Recommendation 6: Improve data collection on higher VET. Beyond participation data improve the availability of evidence about employment outcomes of higher VET.

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There is little evidence about the outcomes of higher VET programmes but where these exist, the studies show positive results. Most countries have very little hard data on this field of education and training. In particular there is very little data on the programmes and qualifications outside the higher education area and formal post-secondary VET.

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Recommendation 7: Support mutual learning on issues that are commonly recognised by several countries. Promote innovative models of higher VET by peer-learning or study visits. Ensure these exchanges are based on an evidence-based review of the example being discussed.

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In several countries higher VET is undergoing similar trends and facing similar challenges. The issues of the relationship with higher education, recognition of

learning outcomes and credit for progression or the need for higher VET to gain a clearer profile as compared to academic higher education are relatively common. There is scope for countries and practitioners to further exchange on how to address these issues.

Some countries are developing rather innovative types of programmes or quality assurance and governance approaches in the field of higher VET. For example the partly performance-based funded system of VET colleges in Sweden or the apprenticeships even at Doctoral level in Italy but also other dual models at high levels (e.g. Austria, Germany, France, UK) could be inspiring for other countries.

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