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RESEARCH PAPER

# The changing nature and role of vocational education and training in Europe

Volume 2: results of a survey among European VET experts





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Volume 2

Results of a survey among European VET experts

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# Foreword

This research paper forms part of the Cedefop project *The changing nature and role of vocational education and training (VET) in Europe*.

The purpose of the project is to improve our understanding of how VET is changing in the countries belonging to the European Union (as well as Iceland and Norway). Over a three-year period (2016-18) the project will analyse how vocationally oriented education and training has changed in the past two decades (1995-2015) and, based on these results, investigate the main challenges and opportunities facing the sector today and in the future. Work is divided into six separate but interlinked themes:

- (a) the changing definition and conceptualisation of VET;
- (b) the external drivers influencing VET developments;
- (c) the role of traditional VET at upper secondary level;
- (d) VET from a lifelong learning perspective;
- (e) the role of VET at higher education levels;
- (f) scenarios outlining alternative development paths for European VET in the 21st century.

The study takes as its starting point that vocationally oriented education and training is something more than the traditional VET delivered at upper secondary level (in the form of school-based education or training, apprenticeships, or combinations of these). Due to the requirements of lifelong learning, we are able to observe diversification of VET with new institutions and stakeholders involved. We also see an expansion of VET to higher education areas, partly through reform of existing institutions, partly through the emergence of new institutions. This has been caused by factors internal to the education and training system as well as by external pressures linked to demographic, technological and economic changes.

James Joachim Calleja

Cedefop Director

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# Executive summary

This research paper discusses national definitions and conceptions of vocational education and training (VET) in European Union Member States, Iceland and Norway and describes how these definitions and conceptions have changed over the past two decades.

Between September and November 2016, Cedefop invited national VET experts to respond to a questionnaire covering the way national VET systems are understood, in the form of official definitions and overall conceptions. The outcomes of the survey demonstrate the significant diversity of European VET systems, essentially showing that all national VET systems have their particular characteristics and that we can speak of 30 (or more) genuinely national approaches to VET. This variety is also reflected in the national terms used for VET with their particular shadings of VET systems.

Despite the variety, VET is largely perceived by the experts consulted as occupations-specific education and training geared towards securing supply of skilled labour; it is also generally seen as inferior to general or academic education. In most countries, VET predominantly addresses young people, provides qualifications at the middle level of education (ISCED-11 levels 3 and 4), is financed by education budgets and coordinated by central governments. Reflecting this combination of diversity and convergence, four patterns of how VET is understood became visible: work-based or dual initial training (e.g. Denmark, Germany or Austria); initial vocational education (e.g. Bulgaria, Spain, Malta or Romania); further training (e.g. Ireland and UK-England); and as (part of) lifelong learning (e.g. France or Finland).

These patterns of national VET conceptions have been stable, despite considerable reforms in the past two decades. Many country experts reported major reforms in this period but, at the same time, underlined that they have not (yet) changed the overall conception of VET. This makes it difficult to arrive at a consistent European picture of VET development. Nevertheless, we can say for sure that some European countries, but not yet all, have bid farewell to vocational education and training conceived as dead-end initial training for skilled workers, clearly separated from general education. The past two decades have witnessed remarkable diversification of VET in terms of providers, levels and target groups, increased horizontal and vertical permeability, renewed emphasis on work-based elements, coalescence of initial and continuing VET, and hybridisation of systems and programmes. In relation to the four patterns identified, we have reason to assume there are two main trajectories of current VET conceptions:

- (a) strengthening of VET points in the direction of VET as work-based training (illustrated by Austria, Denmark or Germany), and expanding to new parts of the education and training system, in particular higher education;
- (b) diversification of VET points in the direction of VET as (part of) lifelong learning (illustrated by France or Finland).

These are not exclusive developments and countries do not move either in one or the other direction. On the contrary, both developments can be observed simultaneously. Consequently, convergence of conceptions (and systems) may take place, but only modestly.

## CHAPTER 1.

# Introduction

This research paper discusses national definitions and conceptions of vocational education and training (VET) in European Union (EU) Member States, Iceland and Norway, describes how these definitions and conceptions have changed over the past two decades and speculates about possible future trends.

Why is it important to study national definitions of VET? Is it not like studying an artefact rather than the fact? There are at least four good reasons why this is worth the effort, in particular at the beginning of a large comparative project about the changing nature of VET. First, when we speak about VET in international contexts, compare countries or provide recommendations for new VET policies or practices, we need to be clear about differences in the scope and meaning of the term. Using the same term does not guarantee that we are talking about the same concept. Second, commonly agreed international definitions tend to downplay national differences, as they necessarily either restrict or widen national understandings of VET. This becomes obvious when national reports about VET are compared to country reports from international organisations: they are rarely identical in the scope of the subject. Knowing about the differences between national and international definitions helps to avoid misunderstandings and conflicts. Third, the way we understand VET influences practical and political decisions on VET. Fourth, and following from the previous point, changes in the definition or understanding of VET can be indicative of factual changes, and therefore can guide our hypotheses for further analysis.

There are abundant studies, from as early as the 1960s when education became a policy field for international organisations that examine the differences in VET. Numerous typologies of VET systems have also been developed. However, there is little comparative research on the ideas and concepts underlying different VET systems and the terms used. Clark and Winch (2007) provide a rare attempt, noting that terminology in one country cannot easily be translated from the language of that country into another language without losing the distinct meaning attached to it. For instance, 'the term "occupation" if used as the translation of the German *Beruf* misses not only the social status and significance of that term within German society, but also the application of theoretical knowledge to practices and the responsibility that it implies' (Clarke and Winch, 2007, pp. 6-7). A proper analysis of such concepts requires examination of both the historical discourse using the concept and of the different

social, historical, institutional and political roots of the respective national VET systems. Clark and Winch were able to do this for only a small set of countries. But even if insightful country case studies could be achieved, the question of how they could be compared remains open. The approach we took was modest in terms of the country details, but extensive in terms of the number of countries covered (see details in Chapter 2).

VET takes many forms, and is certainly the least unitary of education sectors, if it can be regarded as an education sector at all. It is difficult to grasp VET as a single entity and it consistently escapes attempts to be defined as such. Even worse, features traditionally associated with VET are at risk of losing their capacity to define VET. General education usually aims to enhance skills (such as literacy or numeracy) that are useful in all occupations, whereas VET aims to develop skills for a particular set of occupations, a specific occupation or even a single enterprise. However, this distinction between generic and specific skills is much contested (Streeck, 2012). Often VET includes both general/academic and occupation-specific competences, and many countries have moved towards broader forms of vocational education. General education typically is not intended to prepare individuals for a particular occupation or occupational group, whereas VET clearly is. However, this perspective neither acknowledges the various forms of pre-vocational education nor the number of academic programmes providing access to a limited set of occupations (as in music, art, law, medicine, and other professions). The argument that runs 'If it is university education it can't be VET' is also losing ground, when we think of the increase of professional bachelor, master and doctoral degrees, dual study programmes, and the 'vocational drift' in higher education. It could be argued that, even though the conceptual distinction between (general) education and (vocational) training is blurring, it lives on in the institutional distinctions that have developed in many countries. For example, general education tends to last longer, provides a relatively standardised form of class-room teaching and usually takes place in well-established institutions such as secondary schools or universities (Grubb and Norton, 1999). However, this is a view that might have been the case until the 1990s. Today's variety of VET includes – in addition to its primary variety – conceptual and institutional formats corresponding to what we are used to in general education. It is probably this diversity, together with a nuanced though often diffuse reference to working life, which remains a common denominator for VET.

VET in Europe covers a huge range. In France, it may include a two-year apprenticeship for a master degree in corporate finance at a *grand école* with highly selective access as well as the sort of in-company training of a few hours needed to become a housekeeper in a budget hotel chain. VET is considered to

include most of the many years of alternating training and work experience needed to become a cruise ship captain as well as a course lasting a few days leading to a forklift driver licence as offered by private training organisations. In Finland, VET includes an apprenticeship to become a practical nurse at age 50, and in Scotland it includes the 'get ready to work' programme; this helps young people be better prepared for entering the world of work or further training by, for instance, improving their CV and letter writing and interview skills (which can be considered generic skills).

Differences are not only noted in terms of types of provisions, but also within supposedly similar types. As an example, what is commonly termed 'apprenticeship' differs tremendously between Germany, Italy, Finland and the UK. These differences, which have their origin in different social, historical and political backgrounds, sum up to more complex differences at system level, a complexity, which is impossible to explain satisfactorily in a single document. Alongside this diversity, there are also large differences between what countries perceive as VET in general. What is understood as VET in a particular country will depend on how the system is regarded, the parts of the system considered and individuals' particular VET experiences. This describes as much the challenge for international comparisons in VET as the methodological limits of our approach.

As we are interested in an overview of national definitions and conceptions of VET in Europe there is no way around simplifying and modelling. Key restrictions were made: first, we focused on the prevalent national conception of VET rather than its full diversity; and, second, we used predetermined descriptors to characterise VET (see below). Consequently, the results presented here, although they confirm the assumed variety within Europe, only show a limited picture of the diversity within countries: counter examples to the national VET conceptions as categorised in this publication are easily found.

After providing some details on the methodological approach in Chapter 2, the paper starts with a discussion of national terms used for VET and how they influence our understanding of it (Chapter 3). Chapter 4 compares legal definitions of VET, where they exist. The main part of the paper, Chapter 5, is dedicated to an analysis of differences in national VET conceptions and how they have changed in the past 20 years. The concluding Chapter 6 takes a look into the possible futures of VET.

## CHAPTER 2.

# Methods and data

Between September and November 2016, we asked national vocational education and training (VET) experts in all European Union (EU) Member States, as well as Iceland and Norway, to respond to a questionnaire with closed and open questions. These included what is the common term used for VET in your country; is there a single legal definition or mission statement of VET in your country? We also provided the experts with a structured framework of what we believe are key features of any VET conception (see Volume 1 and Table A4 in the annex) and asked them to discuss these features for the VET systems in their countries.

The approach could be compared with the sort of tool the police use to put together an identikit picture: we assembled national pictures of VET by using a standard set of components. It might come down to the same result as traditional modelling, but differs in approach. Traditional modelling takes differences in VET systems (usually focusing on two or three countries) as a starting point, and then presents these as potential models for other countries; we produced identikit pictures (based on a limited set of components) for each country and then we looked for similarities among them.

The timeframe we examined, 1995 to 2015, was the same as for the other parts of the project, although we realised that for some countries this was too short. The experts we selected for this task were required to have in-depth knowledge about their country's VET system, to have followed the domestic policy discourse on VET for a considerable time and have experience of working comparatively. They came from universities, public and private research organisations and national agencies dealing with VET. Filling in the questionnaire took the experts on average one, but occasionally two full working days. Experts were also asked to consult peers to review their assessments. In several cases we conducted additional interviews with the experts to understand better the answers provided in the survey. Unless otherwise stated, all the country information presented in this paper comes from this survey. We also consulted 'VET in Europe' country reports from Cedefop to complement the information collected and conducted further national research where needed. The analysis was carried out collectively by topic (for all countries) and group of countries (for all topics). Quantitative analysis was also carried out to support the qualitative analysis. Based on the profiles provided by national VET experts, a

hierarchical cluster-analysis for binary data was conducted both with linkage between groups and linkage within groups for exploratory purposes. However, the final classification is based on additional qualitative data (for details see Table A5 and A6 in the annex).



## CHAPTER 3.

# National terms used for VET and how they shape our understanding

It may look odd to ask people ‘What is the common term used for VET in your country?’ when there is a widely used official translation for vocational education and training (VET) in almost all European languages, as provided and continuously updated by Cedefop for many years (Cedefop, 2014b). But there is an essential difference between the work of international terminologists in this regard and our interest here. International terminologists usually start with an internationally agreed concept and its definition in one or another language and then translate this concept into other languages. Their intention – and also the benefit of their work – is standardisation of terminology and harmonisation of national concepts or systems of concepts. They aim for the best fit of the international concept in the national language in translation. In contrast, we are interested here in national concepts broadly associated with VET and the terms commonly used for these concepts at national level <sup>(1)</sup>. Hence, we address the main discourses in the countries that shape these national terms, such as those of policy-makers, the legal discourse, discourse among researchers, VET teachers and trainers and other VET practitioners.

As a starting point, we have deliberately chosen the term VET, because it is the one most frequently used by Cedefop and the European Commission, as well as in the dialogue between European countries. In this respect, our survey might have been biased as we did not test related terms such as technical and vocational education and training (TVET, used by UNESCO) or career and technical education (CET) commonly used in the US. While it is clear that TVET is frequently used in international development contexts, we have no evidence that TVET or CET are terms officially used at national level in Europe.

The difference between the international concept and the national concept is often revealed when terms are being re-translated (a common method to check the quality of translations). For instance, Cedefop translates VET into

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<sup>(1)</sup> Nevertheless it is also worth studying both the differences in approaches of international agencies (for instance UNESCO’s use of TVET and Cedefop’s or OECD’s use of VET) and the historical changes in the definitions provided (see also Volume 1).

*Berufsbildung* <sup>(2)</sup> (in German) or *yrkesutbildning* (in Swedish), which are also the most common terms used in Austria (and Germany) and Sweden and thus the best match one can get. However, ministries of education in Austria and Sweden translate *Berufsbildung* and *yrkesutbildning* on their official English websites as vocational education – accidentally or intentionally – omitting the extension ‘and training’. This could either be dismissed as quibbling or bad translation, or it could be interpreted as an indication that the Austrian and Swedish concepts of VET underline more clearly the educational aspect of VET. The country experts consulted confirmed our interpretation and provided further evidence that this was exactly how these terms are being used at national level. A similar situation applies to the terms *erhvervsuddannelse* (Danish), *kutseharidus* (Estonian), *szakképzés* (Hungarian), *kształcenie zawodowe* (Polish) or *poklicno izobraževanje* (Slovenian). But while the common Danish and Hungarian terms are correctly re-translated into VET (at least on the websites of the ministries in charge) they also emphasise initial VET (IVET) in the national context. The term *szakképzés* is clearly associated with the Hungarian apprenticeship systems and *erhvervsuddannelse* usually refers to three different paths of IVET in Denmark (CVET is referred to as *arbejdsmarkedssuddannelser*, AMU, in Denmark). Again, it could be argued that these are just inaccurate translations, and that in many European national languages it is impossible to express accurately the international concept of VET. However, our survey provides clear evidence that the common national terms used for VET in many countries denote a concept of VET which differs from the internationally intended meaning by accentuating initial education rather than a more comprehensive notion of initial and continuing education and training (see also Table A1 in the annex).

The distinction between education and training <sup>(3)</sup> is pervasive in many languages, yet with different nuances; examples are *Bildung* and *Ausbildung* in German or *kutseharidus* and *kutseõp* in Estonian. However, it is most notably countries with Romance languages that use constructions that come closest to the syntax of the English expression: *enseignement et formation professionnels* in France and Luxembourg, *Ensino e Formação Profissional* in Portuguese, *educație și formare profesională* in Romanian or *istruzione e formazione*

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<sup>(2)</sup> A previous version of Cedefop’s glossary used the more literal translation *Berufliche Aus- und Weiterbildung*, which actually comes closer to the meaning of VET, but is less frequently used.

<sup>(3)</sup> The terms ‘education’ and ‘training’ are traditionally and still widely used as shortcuts to distinguish between general and vocational as well as between initial and further learning.

*professionale* in Italian. An interesting exception is Spain. The common term used for VET in Spain (and also Cedefop's translation) is *formación profesional*. The term accentuates IVET, and is clearly associated with the English term 'training' in Spanish rather than with 'education' (*educación* in Spanish) (see Table A2 in the annex for more examples and details).

Another exceptional case is Ireland. No one would assume that the international concept of VET needs to be translated for an English-speaking country but the established term in Ireland for VET is not 'vocational education and training', but further education and training (FET). This reflects as much the emphasis on further education within the Irish VET system as it shapes the Irish understanding of the international notion of VET. In a professional or political discourse, that makes use of specialised terminology, it seems bizarre to translate from English to English. Yet, in everyday life this is a common phenomenon causing misunderstandings. For instance, first floor in the US means ground floor, whereas in Britain it means the first floor above the ground floor. In interlinguistics the phenomenon is known as false friends: we cannot exclude the occurrence of partial false friends when it comes to what is understood by VET at international or national level. Consequently, we need to be aware throughout the project that, besides system differences, there are essential differences in the national meanings of VET. Through the eyes of a German VET expert, VET in Europe is quite different from the view of a French or British expert.

Clarke and Winch give the example of at least three different interpretations of the English verb 'to train', for which other languages, for instance German, use separate terms: To train a dog (in German *abrichten*), to train someone to carry out a specific job or activity (in German *anlernen*), or to train in the sense of education for an occupation like carpentry (in German *ausbilden*) (Clarke and Winch, 2007). Training is nowadays also a widespread Anglicism in German as in many other languages, but one cannot assume that it has the same meaning as in English<sup>(4)</sup>. The key terms used for VET in Europe, for instance, vocational (in English), professional (in many Romance languages), or *beruflich* (in German) all have their specific connotations not surviving reliably in one-to-one translations. What looks like tiny shifts in meaning can have major consequences in national conceptions of VET and VET systems; this is the subject of continuing debate. For instance, in some countries and languages there is clear resistance on the side of practice-oriented higher education institutions and associations to be

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<sup>(4)</sup> The German term 'training', if not used in sports, denotes short-term further training strongly associated with a behaviourist learning approach.

associated with the term 'vocational', while this is not the case for the term 'professional'; the problem which is completely absent in other countries and their respective languages. In this context, we find it worth mentioning how Switzerland, which is not part of this study, solved the problem. The Swiss government officially translates *Berufsbildung* (respectively *formation professionnelle* and *formazione professionale*) into 'vocational and professional education and training' (VPET) <sup>(5)</sup>. In the US, the term 'vocational education' has fallen out of favour with most educators and has been more and more replaced by 'career and technical education' <sup>(6)</sup>.

To sum up: technical, standardised terms used at national level for VET do not always seem able to free themselves completely from their everyday-language origins with their particular connotations. At the same time, they reflect particular shadings of VET systems (such as focus on IVET, CVET, education or training), and for their part imply different conceptions of VET (Chapter 5).

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<sup>(5)</sup> The Federal Council, EAER, *SERI news*: <https://www.sbf.admin.ch>

<sup>(6)</sup> The glossary of education reform: *Career and technical education*:  
<http://edglossary.org/career-and-technical-education>

## CHAPTER 4.

# Legal and other official definitions of VET

When talking about definitions of VET, we refer to the sort of short paragraphs describing or explaining vocational education and training (VET) in government documents such as various forms of legislation, government reports, white papers and similar official strategy papers or national statistics. Definitions are clearly identifiable phrases aiming at explaining what is meant by VET and what its mission is. Today, most European countries have established legal acts addressing VET but the legislation differs strongly in terms of historical and institutional backgrounds and therefore we expected to find great variety and diversity among them.

The development of VET legislation in Europe is an open field still to be explored. While recent literature on the history of VET can provide interesting insights into VET legislation for individual countries, no comparative perspective has been developed so far (Berner and Gonon, 2016). In the absence of a theory we can only make some general remarks regarding the possible backgrounds for the existing diversity of legal situations. Besides forerunners in the 19th century, a period during which important legislation regarding VET were introduced was the 1930s (as in Ireland, Switzerland), followed by the late 1960s (as in Germany, Austria), while many other countries (such as those having experienced significant political system change like the transition from a communist regime to a democratic order (Gandini, 1999) or entry into the European Union) show a much shorter history of legal VET regulations. Current regulations also differ regarding the policy field from which they grew: longer existing laws on VET have their roots in labour or trade laws and not in education policy. We can assume different rationales for introducing definitions of more general concepts, such as VET, into legislation. However, going more into detail on this topic would require in-depth research on the relationship between governance of and legislation regarding VET.

In most countries under investigation the national concept of VET is not explicitly defined by a legal act (compare also Table A3 in the annex); instead, they refer to an implicit understanding of VET. For instance, in Sweden the term *yrkesutbildning* is used in several legal documents (including the national Education Act, *Skollag*, or the higher vocational education act), but often implicitly and with varying meaning in different contexts depending on the level of education (IVET or CVET). Even within these laws, there is no clearly

demarcated definition of the term. Instead the implicit understanding of VET is conveyed through the whole text: as schemes aimed at providing vocational training adapted to the requirements of the labour market while simultaneously guaranteeing eligibility for further studies (providing a combination of theoretical and practical education). While no universal definition exists, certain legal documents regulating specific parts of the VET systems are more explicit than others. The term *yrkesutbildning* is most clearly defined in the Higher Vocational Education Act 2009:128 (*Lag om Yrkeshögskolan*) as a type of education that 'should be based on knowledge generated both in the production of goods and services, and in science, designed to ensure that a high quality and professional relevance is reached, and give such theoretical, practical and experiential knowledge required to work independently and in teams to perform advanced tasks at work, characterised by both a strong relationship to practical work whilst also maintaining a theoretical anchoring, developed and conducted in collaboration between work and education [...]' (SFS 2009, p. 128, para. 6) <sup>(7)</sup>.

A particular form of these implicit definitions can also be seen in Norway and Austria, where another key term, 'apprentice', is defined instead of VET. In both countries, this could be explained by the fact that the law on vocational training emanated from previous trade and labour regulations for apprentices rather than from legislation on education. In Norway, the absence of a precise definition of VET in the Act on education, which instead concentrates on individual rights to access various education trajectories, probably reflects a 'judicialisation' of learners' interaction with the education and training system (Ure, 2015). In this way, the definition is taken for granted, and the act details the ensuing individual rights, as well as how decisions being appealed should be handled.

In those countries where a legal definition of VET exists, it can take different forms: a comprehensive and integrated definition of VET, where VET is explained as a process of the acquisition of knowledge, skills and competence or the like; a comprehensive definition of VET which defines it by naming the single sub-parts of VET (like IVET, CVET); or partial definitions of sub-parts of VET which require several related or non-related documents (see examples in Table 1).

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<sup>(7)</sup> Translated by the national expert.

Table 1. **Examples of national definitions of VET**

<b>Comprehensive and holistic definition of VET</b>	<b>Croatian Vocational Education and Training Act <sup>(a)</sup></b> Vocational education is a process of acquiring competences (knowledge, skills and competences) with the results of that process evaluated and confirmed in a procedure carried out by VET institutions.	<b>Latvian education Law <sup>(b)</sup></b> Professional education: practical and theoretical preparation for the practice of a particular profession, and for the acquisition of professional qualification and improvement of professional competence
<b>Comprehensive definition of VET defining VET by its sub-parts</b>	<b>German Vocational Education and Training Act (extract) <sup>(c)</sup></b> For the purposes of this act, the term 'vocational training' shall mean vocational training preparation, initial training, further training and retraining. [...] Initial training shall, through a systematic training programme, impart the vocational skills, knowledge and qualifications (vocational competence) necessary to engage in a form of skilled occupational activity in a changing working world. Initial training shall also enable trainees to acquire the necessary occupational experience [...].	<b>Hungarian Act on vocational education and training <sup>(d)</sup></b> Vocational training is training within or outside the school system with the aim to acquire qualification recognised by the State, listed in national vocational qualifications register (§3)... School-based vocational education and training: vocational education and training provided in the framework of public education, as defined by the act on national public education and in the vocational schools defined under the act, the participants of which are in student legal relationship with the school (§2).
<b>One or more partial definitions of sub-parts of VET</b>	<b>Examples for sub-parts of VET for which definitions exist:</b> Portuguese Decree Law No 396/2007 <sup>(e)</sup> <i>Formação inicial</i> (covering IVET) <i>Formação contínua</i> (covering higher VET and CVET) Educação e formação de adultos (CVET)	

<sup>(a)</sup> Translation provided by the Croatian Parliament (ASOO, 2009).

<sup>(b)</sup> Translation provided by the Latvian Parliament (Valsts Valodas Centrs, 2015).

<sup>(c)</sup> Translation provided by German Federal Ministry of Education and Research (BMBF, 2005).

<sup>(d)</sup> Translation provided by Translation and Terminology Centre (Ministry of National Resources, 1993).

<sup>(e)</sup> As provided by national expert.

Source: Cedefop.

Cedefop's definition of VET 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' (Cedefop, 2014b, p. 292) is an example of a comprehensive definition. We have found such a comprehensive definition mainly in countries that are trying to adopt a lifelong learning perspective in their systems and have introduced VET legislation more recently: this includes Bulgaria, Estonia, Greece, Croatia and Lithuania. This could be seen as a result of the European Commission's 'soft power' to which these countries have been more open, but it could also be simply understood as a more contemporary approach to legislation.

Different definitions, as detailed above, can also exist side-by-side and in different legal documents, making the available variety even more complex. For example, in Portugal, alongside the comprehensive definition of *formação profissional* there are also definitions available for initial education (*formação inicial*), continuing education (*formação contínua*), the latter including both higher education (VET and non-VET) and CVET (*educação e formação de adultos*). These partial definitions are more specific than the comprehensive one. Similarly, coexistence of different definitions can also occur on a regional basis, as in Spain where some regions have developed their own definition of VET in parallel to the national one.

Despite their differences, national definitions of VET frequently refer to the same key dimensions:

- (a) the knowledge base or sort of knowledge to be acquired: for example in the Netherlands, secondary VET (partial definition) refers to ‘the theoretical and practical preparation for the practice of professions’<sup>(8)</sup>; the definition in Croatia refers to ‘knowledge, skills and competences’; the one in Latvia to ‘professional competence’; and the one in Germany to ‘vocational competence’;
- (b) the destination and outcomes of VET: for example Estonia defines VET as ‘obtaining certain qualifications and applying for and retaining a certain position, and the acquisition and improvement of that system creates the prerequisites for successful professional activity’; Germany speaks of a ‘skilled occupational activity’; Austria in its amendment of the legal definition in 2015 implicitly refers to EQF level 4 of the European qualifications framework by using similar descriptors to define required graduate skills (Schlögl, 2015);
- (c) some form of occupational ethos and behaviour: the Estonian VET definition speaks of ‘a system of knowledge, skills, experience, values and behavioural norms which are required for working in a certain area of specialisation’; the German definition speaks of engagement ‘in a form of skilled occupational activity’;
- (d) the main purpose and justification of VET: in Bulgaria, VET is intended ‘to prepare citizens for participation in the economy and other spheres of public life by creating conditions for acquiring professional qualification and for its continuous improvement’; in Estonia, the purpose of VET also refers ‘to the attitudes, to the social readiness for working and to the participation in social

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<sup>(8)</sup> From the Netherlands questionnaire.



life and in the lifelong learning process'; in Germany, reference is made to 'a changing working world'.

When looking at changes in the legal definitions in the past two decades, recurrent topics have been included: permeability, access, quality and effectiveness, labour market career guidance, mobility and international cooperation. In Austria, the update of the Vocational Training Act (BAG, para. 1a) in 2015 introduced a reference to the international dimension, permeability and quality assurance. In Greece, Law 3879/2010 made a serious attempt to relate all forms of VET under the lifelong learning perspective by identifying alternative paths, networking lifelong learning institutions and ensuring transparency and quality. The Croatian definition of VET also includes a reference to quality when it states 'the results of this process are evaluated and confirmed in a procedure carried out by VET institutions'. The 1998 Education Act in Ireland makes reference on some occasions to equality of access and to promoting opportunities for adults, also in relation to gender.

The Romanian VET strategy 2016-20, Article 50, focuses on four key dimensions (Romanian Government, 2016):

- (a) 'relevance: to ensure improved matching of competences to current and future labour market demands;
- (b) access and participation: to facilitate access to VET, with a special focus on vulnerable groups and improving their participation in VET programmes, as result of a guidance and counselling process adapted to individual needs;
- (c) quality assurance: to ensure the development of a quality culture in all the governance functions of VET: developing qualifications and curriculum, organising learning process, competence evaluation and certification, training of teachers;
- (d) innovation and cooperation: to capitalise on the innovation and creativity potential and stimulating cooperation, with a focus on mobility in the workforce training and employment process.'

Definitions set down in law do not necessarily correspond to the public perception of VET. For instance, the law may express a lifelong learning perspective while the actual public perception of VET clearly is focused on upper secondary VET. This is the case in Croatia where VET is commonly understood as 'education focused on the acquisition of skills for a particular profession', and not the sort of flexible and adaptive education <sup>(9)</sup> that is defined in the legal act. Or, as Perin (2013) puts it, vocational education in Croatia is understood through

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<sup>(9)</sup> From the Croatian questionnaire.

its focus on knowledge and skills related to the profession, not on other components that make employability in modern society a basis for lifelong learning, with the need to adapt quickly to changes being the only constant in today's labour market. A similar discrepancy is addressed in Estonia where the public considers VET as practical learning and training to acquire useful knowledge and skills for certain work and not as one particular element of the education system providing learning opportunities on several levels. Also, the different types of VET (IVET and CVET), the education levels and the different opportunities provided for learning as expressed in law are not perceived as such by the Estonian public. Although there is some understanding in Estonia that VET is an evolving field in education and provides a good occupational preparation for work, it is not considered as education suitable for one's own relatives (Pärtel and Petti, 2013). In Lithuania, training providers and researchers often claim that terms used in laws do not reflect reality.

## CHAPTER 5.

# Variety and patterns of VET conceptions

### 5.1. The variety of VET and multiple VET conceptions

Various models and concepts have been developed and approached from different perspectives to help explain differences and commonalities between vocational education and training systems in Europe (see also Volume 1). For instance, Greinert took a cultural-historical approach focusing on the different roles of the State and distinguishing between a liberal market economy model with a marginal role played by the State (UK-England), a State-regulated bureaucratic model (France), and a dual-corporatist model (Germany) (Greinert, 1999).

Research into labour markets and industrial relations, such as by Maurice and colleagues (1979) emphasised differences in the role of VET due to different work organisation and distinguished between organisational space or internal labour markets (in France) and qualification space or occupational labour markets (in Germany). Differences in VET between countries also became a distinguishing feature in the 'varieties of capitalism' approach, which distinguished between liberal and coordinated market economies (Hall and Soskice, 2001). In liberal market economies (such as the US or UK), firms coordinate their activities primarily via competitive market arrangements; coordination between employers is weak, bargaining is decentralised and the general education system, in particular the higher education system, provides generic human capital assets which can then be developed and shaped through on-the-job training in enterprises. In coordinated market economies (such as Germany or Denmark) firms depend more heavily on non-market relationships to coordinate their endeavours among themselves and with other actors. There are strong trade unions and employer organisations, bargaining is coordinated at sectoral or regional levels, and firms invest in vocational training and specific skills.

These approaches have inspired more elaborated typologies but also engendered some criticism<sup>(10)</sup>. Comparisons are built on a very small set of countries (two to five countries), often restricted to IVET and reduced to a single standard of comparison (such as the role of the State, structure of work

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<sup>(10)</sup> For an overview see for example Saar and Ure, 2013; Gonon, 2016.

organisation, firm coordination). Also, it has been made clear that countries' institutional make-ups do not stick to fixed patterns, but constantly change along different trajectories (Thelen, 2014). Nevertheless, these models are useful in providing insights into the complex matter of comparing VET systems and some aspects of them are reflected in our results. This is one side of the coin. On the other side, there are arguments that give little hope for finding strong similarities between countries. National VET systems are not the sort of comprehensive entities that most of the above models would like them to be. VET can have quite different regional traditions (compare VET in the German, French and Italian parts of Switzerland), but it is also shaped by the different history of various institutions: in-company training, vocational schools, further education providers, polytechnics, programmes for the unemployed can be components of a country's VET system. Significant differences in workplaces are tremendous in Europe can also produce different roles for VET. Lundvall and Lorenz, using analysis of the EU working condition survey for EU-15, found that differences among European Member States in terms of organisational learning are dramatic and that the countries in the south of Europe are much more exposed to the competition from emerging economies than the Nordic countries where there are few Taylorist jobs left and where education systems and labour markets have adjusted to the needs of the learning economy (Lundvall and Lorenz, 2012). Given this difference in the demand for skills, differences in the VET provision should be expected.

Although the set of descriptors offered to describe VET was quite limited, no two countries in Europe have the same conception. As a consequence, the common denominator for VET in Europe is also quite limited. Nevertheless, in almost all European countries, VET, in terms of its dominant conception, is perceived by the national experts consulted as occupation-specific education and training geared towards securing supply of skilled labour and inferior to general or academic education. In most countries it predominantly addresses young people (IVET), providing qualifications at the middle level of education (ISCED-11 levels 3-4), financed from education budgets and coordinated by central governments (compare Table 2 and Table A4 in the annex).

Table 2. The 10 features of VET conceptions most/least frequently referred to

Top 10		Lowest 10	
30	Occupation-specific (5.1)	4	Low coordination – industry-led (15.1)
30	Middle level of education (7.2.)	5	Specific occupational rights (9.4)
30	High coordination – State-led (15.3)	5	Funding: mainly by companies (12.1)
30	Securing supply of skilled labour (17.1)	5	Identity/status: worker (13.3)
29	Adolescent/young people (8.3)	7	Higher or equal to general education (11.1)
29	Funding: mainly education budget (12.2)	7	High coordination – led by organised business (15.2)
29	Entry into working life/entry level (16.1)	8	Mainly on-the-job/work-based learning (4.1)
28	Key providers: schools (10.2)	8	Specific occupational or/professional ethos (6.2)
28	Lower than general education (11.2)	8	Mainly lower level (7.1)
28	Identity/status: student (13.1)	9	Funding: labour market/social budget (12.3)

NB: n= 37 (some countries reported two dominant conceptions), e.g. '30 out of 37 VET conceptions were characterised as occupation-specific in terms of learning outcomes'.

Source: Cedefop.

There are interesting exceptions to what might be considered a general rule of VET in Europe (occupation-related, lower esteem, securing supply of skilled labour). VET in Finland is today considered equal to general education and previous dead-ends have ceased to exist <sup>(11)</sup>. With the introduction of a new law in 1998 the vocational track has given eligibility to access polytechnics and universities, making VET equal to general upper secondary education as a pathway to higher education <sup>(12)</sup>. School-based VET in Austria, which was described as a separate but equally important conception as company-based VET, is also perceived as equal to, or even higher than, general education. Although there are different types of vocational school in Austria, school-based VET is strongly associated with the so-called higher technical and vocational colleges (short form: VET colleges). These are rated higher than academic education because, in addition to the school-leaving certificate providing access to higher education (as provided by the general track), graduates obtain a VET diploma, which is well recognised by industry (although there are differences between occupational fields and industries). VET college programmes last for five

<sup>(11)</sup> Country questionnaire. See also Stenström and Virolainen, 2016.

<sup>(12)</sup> The Finnish language does not distinguish between vocational and professional. The Finnish word *ammattilinen* may be understood as professional or vocational. In some educational systems those terms are associated to different strands, but the Finnish language does not support that distinction.

years while academic upper secondary school programmes last only four years and many colleges are perceived as more demanding than the academic track due higher workload. This has also been acknowledged in education statistics: Lower grades (the first three years) of VET colleges are classified as ISCED level 3, the same as academic schools. But higher grades (years 4 and 5) of VET colleges were classified as level 4 already in ISCED-97, and are now classified as level 5 in ISCED-11 (Lassnigg, 2013).

Many European countries have VET qualifications that are rated higher than general upper secondary education; many also have education policy that stresses the parity of esteem between general and vocational education, although this has not yet resulted in equal ranking of general and vocational education in most cases. What we highlight by the example of Finland and school-based VET in Austria is that there are national examples of dominant understandings of VET where VET is regarded as equal or even as higher than general education for the same age cohort.

The notion that VET is always occupation-related should also be treated with caution when the full variety of VET conceptions in Europe is considered. VET in Ireland is understood as further education and training (FET) and adult literacy and community education, regarded as liberal (adult) education (as opposed to VET) in most countries, forms part of the Irish notion of FET. The Irish idea of VET both ranges from vocational preparation to occupation-specific awards and includes non-occupation-related forms of education.

Other countries besides Ireland stated that their idea of VET is not associated with a particular level of occupational specificity, but includes forms of education and training that are both occupation-specific and related to broad occupational fields (the case in France, Italy, Croatia, Cyprus, Luxembourg and the Netherlands). In most countries, however, VET is perceived as occupation-specific: numbers occasionally reported range from 200 to 800 different occupations offered in a country; job-specific training was also mentioned. School-based VET in Austria, Sweden and UK-England, along with VET in Bulgaria and Norway, were characterised as being related to broader vocational fields<sup>(13)</sup>. This coincides with the fact that VET in these conceptions is viewed as broad preparation for individuals for the changing requirements of working life

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<sup>(13)</sup> Theme 3 of *The changing nature and role of VET in Europe* project will provide systematic information about the increase/decrease of occupation specificity in the past two decades. Information in theme 1 is scarce: Norway and Germany reduced the number of occupations/fields of programmes; Hungary increased them.

rather than as a means to secure the supply of labour (or at least in addition to the latter).

Even though we asked for the most dominant conception of VET <sup>(14)</sup> it was appreciated that often there is no unitary understanding; multiple conceptions of VET exist within a country. In Ireland, Cyprus, Portugal and Sweden, IVET and CVET were seen as falling into two equally dominant conceptions. Similarly, for Austria and UK-England two divergent, but equally important, conceptions, were reported, one associated with apprenticeship and another one with school-based VET. In these cases, two VET identikit pictures were produced and analysed separately. In other cases, VET was often described as fragmented, so we followed the dominant part, disregarding the others, as with Italy. 'In Italy, the term VET tends to be "reserved" for programmes primarily under the remit of the Ministry of Labour and the regions and autonomous provinces, while technical and vocational school programmes are considered to be part of the 'education system' under the Ministry of Education remit' (Cedefop, 2014a, p. 23).

In several cases, in particular in smaller countries and those where enrolment figures in VET are low, one dominant and unitary conception of VET was reported. With the exception of UK-England (and perhaps Ireland) VET is understood in most European countries as a particular subsector of the education system, comprising a particular set of (formal) education programmes provided by respective institutions. National conceptions of VET are generally narrower than, for instance, Cedefop's definition suggests <sup>(15)</sup>.

## 5.2. Patterns of VET conceptions

Although starting from a completely different point of view and using different methods from the above models, Germany, France and UK-England show quite distinct conceptions of VET. However, they cannot be regarded as universal country models for VET in Europe. Only a few countries come close to the conceptions found in these three, while most countries show a different conception of VET.

The dominant German understanding of VET shows similarities to that in Denmark and to Austria's and Slovakia's work-based conception of VET. There

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<sup>(14)</sup> We did not further specify 'dominant', but made clear that we are interested in what people think is key for VET in their country rather than what VET can also be.

<sup>(15)</sup> Clear evidence for this is also the fact that Cedefop's country portraits sometimes subsume parts of the education system under VET, which are not conceived as VET in the national understanding as in the case described for Italy above.

are also some similarities between France and Italy and Ireland, while UK-England seems to resemble only Cyprus in this respect. Most European countries are predominantly school-based and State-regulated, as in France, and thus could be placed into one group. Yet our analysis did not single out France for its pronounced State regulation, but for its diversity regards VET and the particular lifelong learning perspective.

We found more than 30 different conceptions of VET in Europe, and if we had asked not just for the most dominant, we probably would have found a substantially higher number. However, within this variety, four patterns became visible which are summarised in Table 3: VET understood as work-based or dual initial training; initial vocational education; further training; and as (part of) lifelong learning. The aim of presenting these patterns is to show some commonalities between countries within this huge diversity. It is not our intention, and we also do not have the means, to provide a new typology of VET systems.

#### **5.2.1. VET understood as work-based or dual initial training**

In Germany the main pillar of VET is still the dual system (apprenticeship system) despite the pressure under which it has come in the past decade. This understanding is strongly related to a traditional logic of professional education, where trades organise training for the next generation. VET is considered to be based on practical knowledge and 'learning by doing' for young people who are usually recognised as apprentices (a particular social/legal status). The main reference persons are in-company trainer (masters) and not school teachers. The main goal from the learners' point of view is to become members of an occupation, which often goes hand-in-hand with occupational rights and the development of occupational ethos. This type of VET conception is further characterised by substantial contributions by companies, both financially and as the place of learning (considered often as more important than school). Coordination between employers (and between employer organisations and trade unions) is high; they feel responsible for the system, as in chambers being responsible for organising final exams. The key unit of organisation is the *Beruf*, which is often referred to as *Berufsprinzip* (Reuling, 1998) or *Berufskonzept* (Deissinger, 1998) (the concept of an occupation/profession). Although VET has expanded to lower and higher levels over recent decades, as well as opened up, it is mainly associated with the middle level of education (ISCED-11 levels 3 and 4), with restricted access to higher education. In this conception, VET is justified by securing the supply of skilled labour and with promoting business innovation and growth. If reduced to a formula it would be: initial skilled worker training,



duality of learning sites, and organised around occupations. If personified it would be: craftsman.

Although there are variations within this conception, and some dissolutions at its periphery (e.g. companies as learning sites being replaced by workshops at schools or training centres) it is a relatively well-demarcated and homogenous picture of VET with a distinct identity <sup>(16)</sup>. But despite the growing trend towards workplace learning in Europe (Chapter 6) this is the dominant picture of VET only in a few other countries besides Germany: we find this understanding also in Austria, but only side-by-side with an equally dominant school-based conception of VET. We find it in Denmark, where apprenticeship is the only form of IVET. Although a dual system was introduced in Slovakia only recently by the reforming Act 61/2015 on VET, the Slovakian country experts acknowledge it as forming a VET conception of its own: 'Two parallel conceptions of VET are now present in Slovakia: "traditional" VET, where theoretical part is realised in school premises and practical training takes place in school-owned or school-managed training sites, and the newly introduced work-based type, where practical training is realised exclusively in employers' premises based on contracts concluded between employer and learner and employer and school'. In Hungary, the conception of VET comes close to this but still shows important differences. Despite the growing influence of the chamber of commerce in recent years in Hungary, the VET system is State-led and State financed (by labour market budgets) and learners are regarded as students: only for the periods in a company do they share the rights of employees under the labour code. Differences exist also in entry age, which is particularly young in Austria and Hungary (age 15 to 16), and higher in Germany (19 to early 20s). The average age for entering IVET in Denmark is approximately 24, with 30% of entrants above 25. Nevertheless, *erhvervsuddannelse* is considered to be youth education (upper secondary education).

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<sup>(16)</sup> To complete the picture for Germany, we need to add that programmes based on the dual principle also exist at higher education level, and in parallel to the dual system there is a wide range of school-based programmes (ISCED levels 3 and 4), which differ in terms of entry requirements, focus, types and levels of qualifications.

Table 3. **Overview of different VET conceptions prevalent in Europe**

<p><b>1. VET understood as work-based/dual initial training</b>                  identified in Denmark, Germany, Hungary, Austria (apprenticeship), and Slovakia (apprenticeship); and to some degree in Iceland and UK-England (apprenticeship)</p>	<p>VET is considered to be based on practical knowledge and 'learning by doing' for young people (recognised as apprentices) to become members of an occupation/profession (initiation) with distinct occupational or professional ethos and occupational rights. Substantial contribution by companies (financially and as place of learning, equal or more important than the school) and strong coordination between employers (and trade unions) are presupposed in this conception of VET. It is clearly associated with middle level of education (ISCED-11 levels 3-4) without or with restricted access rights to higher education. An employer perspective is dominant in so far as VET's main purpose is to secure the supply of skilled labour and to foster business innovation and growth.</p>
<p><b>2. VET understood as initial vocational education</b></p>	<p>VET is understood as a particular part of initial education, where schools financed and governed by the State are the main place of learning and learners are regarded as students. Despite the large variations within this type two patterns can be distinguished.</p>
<p>2a. <b>Vocationally oriented school education</b>                  identified in Belgium-Flanders, Bulgaria, Spain, Malta, Austria (school), Romania and Slovenia, and to some degree in Czech Republic, Estonia, Latvia, Lithuania, Slovakia (school), Sweden (school)</p>	<p>'Vocationally oriented school education' which is discipline-based, mainly takes place in classrooms (although there are work-based elements as well) and teacher-student relations are the normal case. VET is not necessarily occupation-specific, but can also aim at broader vocational fields, is targeted at middle and higher levels (ISCED-11 levels 3-5), addresses young people (15-19), and provides access to higher education. Individual or societal perspectives are more evident, for instance individual progression and personal growth is rated more important than securing supply of skilled labour.</p>
<p>2b. <b>Varied occupation-oriented upper and post-secondary education</b>                  identified in Croatia, Cyprus (IVET), Luxembourg, Netherlands, Poland and Portugal; and to some degree in Greece, Ireland (VE), Norway, Sweden (post-sec.)</p>	<p>A broad range of more occupation-specific education, addressing also young adults (18-24) for which securing the supply of skilled labour and entry into working life is rated higher. It is more diverse than type 2a in many other aspects: levels of education span from low to high, and so do skill levels (semi-skilled workers and skilled workers); types of providers, instructions and learning approaches can be diverse. School-based and work-based options may form part of one system.</p>

<p><b>3. VET understood as further training</b> identified in UK-England, Ireland (VT) and Cyprus (CVET)</p>	<p>VET is understood as mainly on-the-job further training for all age groups (but with high shares of older learners) at various levels (including lower levels, such as ISCED-11 level 2) to become semi-skilled, skilled workers or professionals (with no specific occupational rights) offered by a wider range of further and higher education providers. Programmes for the unemployed or second-chance programmes form part of this understanding. Entry into working life or employability is seen as more important than occupational identity. Employers' views dominate and VET is regarded as a means to secure supply of skilled labour and promote innovation and economic growth.</p>
<p><b>4. VET understood as (part of) lifelong learning</b> identified in France and Finland; and to some degree in, Ireland (VT), Greece, Croatia, Italy and Luxembourg</p>	<p>VET is understood as the (organised) coexistence of a diverse set of learning approaches (disciplinary- or experienced-based), learning sites, education and skill levels addressed (semi-skilled, skilled and professional), age groups, status of learners (apprentices or students), types of providers (school, companies, higher education), types of instructors (teachers, trainers, masters), as regards the learning outcomes (both occupation-specific and broader vocational field oriented, but also pre-vocational) and types of qualifications (occupational, educational). Consequently, VET is associated with various (also more balanced) purposes including equity and inclusion, and IVET and CVET form part of one conception of VET in the form of lifelong learning.</p>

Source: Cedefop, based on expert survey from theme 1 of *The changing nature and role of VET in Europe* project (2016) and cluster analysis. See also Tables A5 and A6 in the annex.

### 5.2.2. VET understood as initial vocational education

In most European countries VET is understood as a particular part of school-dominated initial education systems. However, within this large group there are notable differences. While we could distinguish diverse subgroups, our data suggest at least two distinctive patterns within this large group: theory-based education programmes with some practical dimensions at upper secondary level for young people, which may lead to a job but more often are used as an alternative to general education to access higher or further education; and a large variety of programmes (both school and work-based), at diverse levels (pre-vocational as well as post-secondary), for a more diverse target group (adolescents and young adults), but which still come under the single umbrella, State-financed school system. Below we describe the two subtypes in more detail.

#### 5.2.2.1. VET understood as vocationally oriented school education

This conception is well illustrated school-based VET in Bulgaria, Austria, Romania, Slovenia and Sweden. VET in these cases is understood as a particular upper secondary school track forming part of initial education and providing an alternative to general education. Schools are the main place of learning, and are financed and governed by the State. Consequently, learners are exclusively regarded as students, learning is discipline-based, mainly takes

place in classrooms (although there are work-based elements as well) and teacher-student relations are the normal case. In these VET is conceived as a theory-based education programme with practical dimensions. It is associated with middle and higher levels (ISCED-11 levels 3 to 5), the provisions of either educational or occupational qualifications, and access rights to higher education. Aiming at broader vocational fields, personal growth and individual advancement is rated more important than securing a supply of skilled labour.

Country experts described VET in Romania as 'IVET, part of the education system, providing pathways between different levels of learning and between VET and more academic tracks and focusing on easing progression and avoiding dead ends. Reflecting the double role of VET in promoting economic as well as social development, IVET's main goals are to ensure students' personal and professional development and equal opportunities to access IVET [...]'. In Bulgaria, the legal basis for VET, the Vocational Education and Training Act (VETA), dates back to 1999. Since then VETA has been changed many times, though this has not led to significant changes in the conceptualisation of VET. Since its beginning, Bulgarian VET has been predominantly school-based, State-funded (educational budget), highly centralised in terms of governance, characterised by instruction-centred learning, with key providers being vocational secondary schools for IVET and centres for vocational education and training for CVET.

Sweden has two dominant conceptions of VET, referring to upper secondary school vocational education (IVET) and post-upper secondary school vocational education (CVET). These two conceptions are more or less equally referred to in public discourse. They are, in practice, independent from each other as they refer to different VET subsystems. There are multiple other sub-strands, which are part of the overall VET system (such as *Komvux*, *folkhögskola*, *arbetsmarknadspolitiska program*, etc.), but these are generally not referred to by the term VET (*yrkesutbildning*) in public discourse. The dominant discourse revolves around conceptions of VET as theory-based education programmes with practical dimensions.

#### 5.2.2.2. *Varied occupation-oriented upper and post-secondary education*

As with the previous category, the key characteristics of this type are: State-financed, State-regulated and school-oriented. However, there are differences that justify distinguishing between the two types: this type is more likely to be occupation-specific and to address young adults (18-24 years old); it is provided by institutions other than schools; securing the supply of skilled labour and the entry into working life is rated higher than individual growth; levels of education span from low to high, and so do skill levels (semi-skilled workers and skilled

workers); learning approaches can be diverse, work-based (if they exist); and school-based programmes form part of the same system and are conceived as one conception.

In the Netherlands, pedagogical and didactical approaches and methods are diverse; VET schools provide both school- (mainly class-room based) and work-based pathways (mainly on-the-job training), the focus can either be on a specific profession or on the chosen broader vocational field. In Norway, there is also a work-based and school-based VET track. But the fact that both variations of VET are covered by the same paragraphs of education law and are integrated in officially recognised upper secondary education, speaks against their constituting two distinct conceptions of VET. An apprenticeship certificate is often perceived as more relevant for a specific job than a 'leaving certificate of upper secondary vocational education', yet such perceptions of differences do not add up to two distinct conceptions of VET. When some vocational programmes are not able to offer apprenticeship training to all students, those who cannot start such training will follow a school-based VET trajectory towards the 'leaving certificate'. This fluidity within VET programmes of upper secondary education further sustains the appreciation that one single conception of VET prevails. Still, the Norwegian perception of VET has shifted towards considering it strongly related to the public education system and less a realm structured by the social partners (sparked by a VET reform in 1994 which, for the first time, integrated apprenticeship training in the public education system).

In Cyprus, where enrolment in VET is particularly low, secondary technical and vocational education offers two orientations: practical and theoretical. Here learning outcomes can be both occupation-specific (practical) and oriented towards a broader occupational field. In Greece, initial vocational education is provided within the formal education system in the second cycle of secondary education at vocational lyceum and vocational schools, and also outside the formal education system in vocational training schools, vocational training institutes and centres for lifelong learning and colleges. Vocational education in Ireland includes post leaving certificate (leaving certificate vocational programme, leaving certificate applied) awards and qualifications, second-chance education, adult learning, community education, and can be both vocational and academic.

Croatia has a high share of VET students at upper secondary level (comparable to Belgium, Czech Republic, Austria or Slovakia), with most learners in four-year programmes. According to the public, VET is predominantly perceived as a programme for secondary (high) school. However, VET provision is quite diverse, including study programmes at colleges and professional studies (for continuing education after graduating from vocational schools), and ranges

from EQF level 2 to 7. All VET programmes combine professional and general competences, to varying degrees; most include mandatory work experience (duration varies with different types of VET programme) (Cedefop, 2015). During the past 10 to 15 years VET has become less specialised, more adapted to the needs of students and the labour market (including more chambers and companies). Also, VET and adult education moved closer together, for instance when the Agency for Vocational Education and Training and Adult Education was established.

### **5.2.3. VET understood as (further) training**

VET predominantly understood as (further) training seems to be a special case, which we found only in UK-England and, to some degree, in Ireland and Cyprus. In all three countries, a conception of VET as training was described in addition to one interpreting VET as (school-based) education. In Cyprus, the notion of CVET includes two distinct categories of target group: the employed and vulnerable groups, and the economically inactive and unemployed. This distinction between the two concepts is reflected in both the 1974 and 1999 Laws establishing the Human Resources Authority as a non-governmental organisation and the main dominant provider of (non-school-based) VET for adults. In Ireland, the notion of vocational training includes apprenticeships<sup>(17)</sup>, on-the-job training, continuing professional development, internships, training programmes and labour activation schemes<sup>(18)</sup>. The diversity of Irish VET provision makes it difficult to portray a clear identity. The term FET (further education and training) is used as the catch-all conception of VET by society as a whole. The VET sector is regarded by stakeholders as being less clearly defined and of lower status than higher education (McGuinness et al., 2014). This echoes wider social norms but was also seen as relating to the diversity of VET in terms of 'provision and perceptions of current provision' (McGuinness et al., 2014). The distinction in education and training, as separate conceptions, is also visible in UK-England, but with deliberate blurring of boundaries. What the conception of VET as (further) training shares in these countries is that, although VET is open to all age groups, it mainly addresses older learners, includes provision at lower levels (ISCED 2), and

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<sup>(17)</sup> There is a sharp difference between the Irish and English apprenticeship systems. The former can be regarded as advanced apprenticeships in a few occupations sharing many features of what we described for Germany. The majority of English apprenticeships (although there are some advanced apprenticeships, such as in engineering) are low-level.

<sup>(18)</sup> The concepts 'vocational education' and 'vocational training' in Ireland are generally equal in status (and in practice); neither dominates.

progression to higher education is generally low. The emphasis is on employability and entry to, or staying in, working life.

#### **5.2.4. VET understood as (part of) lifelong learning**

This type of VET can be best illustrated by France and Finland, though other countries seem to be moving into the same direction (see also Chapter 6). France, from quite early on, has stretched the idea of apprenticeship from a particular skill level to various levels, making it a particular approach rather than a specific programme (which is how it is considered in Denmark, Germany and Austria). A national system of validation of prior learning has gained broad public recognition and, together with the qualifications framework, is conceived as a 'system' of provision rather than a market of provision, as in the case of the UK. Traditionally, IVET and CVET for adults were seen as separate in France but, due to the new paradigm of lifelong learning, are now more often presented together. The French law speaks of 'lifelong learning VET' as if this were one notion. The peculiarity of this conception is a unified vision of the coexistence of a diverse set of learning approaches, learning sites, education levels or skill levels, age groups, status of learners, types of providers, types of instructors, and types of qualifications.

Italy shares with France much of this coexistence of different VET provisions (such as also having apprenticeships at various levels and forms), but in a fragmented way. In Finland, VET is defined as part of the Finnish education system and is centrally managed. It could therefore be simply classified as vocationally oriented school education (type 2) but there are several features qualifying the approach also as a lifelong learning conception of VET. Finland distinguishes basic VET and adult VET, but the two areas act in concert in one system. The main difference is that basic VET is degree or school-orientated whereas adult VET is based on vocational skills demonstration. This means that instead of going to school, a person having acquired vocational skills throughout working life may earn a degree by demonstrating those skills. Both pathways lead to the same qualification and are mostly managed under the same administration, so the difference is not that significant. Finland has also raised the general education component of VET and since 1998 all VET graduates have been eligible to access polytechnics and universities. As a consequence, the status of VET has been raised and has become equal to general upper secondary education (which is probably the most important difference from France in terms of its conception). Some countries are working towards the conception of VET as lifelong learning, such as Greece, Croatia, Cyprus, Latvia, Lithuania, Portugal and Romania (see also Chapter 6).

## CHAPTER 6.

# Changing patterns and future conceptions of VET

Various developments were reported for several European countries which have the potential to alter the conception of vocational education and training (VET) both at national level and internationally. Many of these trends are familiar and have been previously discussed under their own headings: vocationalisation, diversification, academisation, individualisation, pluralisation and hybridisation. In the following we discuss major changes as reported by the country experts and try to summarise them. Then we extrapolate these trends and discuss possible future conceptions of VET.

Many south, south-east, and also some north European countries, have experienced, and expect for the future, increased emphasis on practical knowledge in curricula and learning approaches as well as a strengthening of the work-based aspect of VET: examples are Estonia, Greece, Spain, Portugal and Slovenia. This is particularly the case for countries with a school-based conception of VET. At system level, this could take the form of implementing apprenticeship programmes (reported by quite a number of countries) or expanding apprenticeship programmes to higher levels (as in Germany, France and Italy). At a governance level, this includes a more prominent role given to employers' and/or industry representatives (Hungary and UK-England), often in the framework of social partnership (Croatia, Lithuania and Malta), or the attempt to strengthen participation of enterprises in the financing of VET.

This tendency of increasing the labour market relevance of curricula and practice orientation has, for a long time, been described as vocational drift or vocationalisation in the case of general and higher education<sup>(19)</sup>. In our data, we also found examples for this classical use of the term. For instance, Malta, which has experienced growth in VET student numbers and qualifications levels, reported over the past five years the successful reintroduction of VET subjects in lower secondary education (ages 13-15 years) and there are currently plans to extend the provision of VET and applied subjects in lower secondary in the near future. However, what we observe is (re-)vocationalisation of VET, although this

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<sup>(19)</sup> For vocational drift/vocationalisation in higher education see *Theme 5: VET in higher education* (forthcoming). For vocationalisation of secondary education see, for instance, Lauglo and Maclean, 2005.



may sound paradoxical. What we mean is a strengthening of the profile or the essence of VET, an increased awareness for constituting elements: VET is apparently becoming more vocational in many European countries.

Many countries reported new VET pathways for adults, for example in Denmark (EUV), in Croatia (post-academic employment preparation at universities) and in Malta (on post-compulsory secondary level) or simply an increase in adult learners in existing VET programmes (in Estonia, Ireland and Finland). This often goes hand-in-hand with increased emphasis on the accreditation of prior learning (in France, Finland, Norway) and is frequently related to the implementation of European lifelong learning policy <sup>(20)</sup>. Some country experts reported and anticipated an increase in targeted VET programmes for labour market retraining, such as in Lithuania, where new programmes for unemployed adults have been established. VET was frequently quoted as a means to combat unemployment. Other examples for the widening of VET include new options for disadvantaged and disabled persons, such as the integrative apprenticeship in Austria. Examples were also provided for expansion of VET at lower ages: Portugal reported the introduction of training offers allowing people younger than 16 to choose a VET path.

In the past 20 years there has been strong diversification of VET regarding its provisions and target groups (as defined in terms of age, skill levels, and special needs). Most noteworthy is the simultaneous expansion of VET, which traditionally is still focused on middle skill levels, to higher and lower levels. As a particular form of diversification, we could also refer to modularisation (Luxembourg, Austria, Slovenia) and individualisation of VET (Denmark, Finland). Again, this is not exclusive to VET, as we see modularisation and individualisation also in general and higher education.

Another particular form of diversification can be observed in access to higher education (vertical permeability). New pathways into higher education were frequently reported as major changes that took place in the past two decades. Issues of access to higher education through vocational qualifications are specifically addressed in countries that have long-standing traditions of VET: Denmark, Germany, France, Austria and UK-England. German VET now gives access to higher education to vocationally qualified applicants like *Meister*, *Techniker* or *Fachwirt*, if they have proof of relevant occupational experience, pass an aptitude test or successfully complete a probationary year of studies. In many other countries, higher education institutions are already major providers of

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<sup>(20)</sup> As counter example, UK-England reports that funding has been withdrawn from VET participants at age 24+, but VET in the country traditionally addresses adults.

VET but even in countries where this is traditionally not the case (Germany, France) the importance of higher education institutions for VET is increasing. In UK-England, advanced apprenticeships are strongly promoted and more high-level training will probably be subsumed under the apprenticeship banner. Specific post-academic programmes intended to increase the labour-market chances of graduates from traditional academic programmes are being introduced in Croatia. Some of these trends may well be described as academic drift or academisation <sup>(21)</sup>, others may be better explained as trends towards higher (but not necessarily academic) qualifications.

Increased diversity demands integration or new forms of coherence. This is observed when national qualifications frameworks are introduced not only as a tool for improved international comparison, but also as a means for improved coherence at national level. We can see various forms of coalescence and hybridisation at system and programme level. For instance, already established in France, and in process in Greece and Cyprus, IVET and CVET have been subsumed under the umbrella of lifelong learning, while not denying their particular identity as distinct entities. In Cyprus, the fragmented public understanding of VET (in terms of IVET and CVET) is currently also reflected in the absence of comprehensive legislation on VET. However, the lifelong learning strategies (2007-13 and 2014-20) have the potential to contribute to a more comprehensive concept of VET <sup>(22)</sup>. In Greece, the conception of VET has constantly been based on the two subsystems of IVET and CVET, which were addressed separately by different laws for several years between 1992 and 2010; Law 3879/2010 made a serious attempt to integrate all forms of VET under a lifelong learning perspective by identifying alternative paths, networking lifelong learning institutions and ensuring transparency and quality <sup>(23)</sup>. Wallonia we is currently merging two historically different forms of alternate training <sup>(24)</sup>.

Changes have also occurred in respect of the parity of esteem between VET and general education (reported by 16 countries). Countries with traditionally dominant general education have tried to raise the comparably low esteem of

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<sup>(21)</sup> See theme 5 'VET in higher education'.

<sup>(22)</sup> From the Cypriot questionnaire.

<sup>(23)</sup> From the Greek questionnaire.

<sup>(24)</sup> The Minister for Employment and Training described these tracks now becoming one in 2015 as: 'These are two worlds and two different philosophies. The pathways, the structures, the apprenticeship contracts, funding or incentives are not identical. This leads to sterile competition between learners, training organisations and even businesses.' <http://www.lesoir.be/876796/article/actualite/belgique/2015-05-12/uncontrat-unique-pour-formation-en-alternance-en-wallonie-et-bruxelles>

VET, while those with traditionally well-established dual VET conceptions have tried to stop decline of esteem (Denmark, Austria). However, with a few exceptions, these attempts are not reported to have been successful. In Spain, several important legislative and societal changes have taken place in VET in the past 20 to 25 years and the social perception of VET studies has significantly increased, not only among students but also within Spanish society in general. Finland has shown a steady increase in VET enrolments in the past 10 years. Two developments have had a crucial impact on the current status of VET in Finland, as Stenström and Virolainen explain: 'First, the general education component within VET was developed along a continuous pedagogical renewal. [...] Second, higher and further education opportunities have also been created from VET' (Stenström and Virolainen, 2016). They also refer to the following facts to explain the increased parity of esteem of VET: IVET has been oriented more clearly toward the world of work during the past decade; skills competitions, like the annual Finnish National Skills Competition, Taitaja, have increased the popularity of VET; and the higher education eligibility has been provided by VET (Stenström and Virolainen, 2016).

While most countries have followed the trend towards learning outcomes for describing VET programmes and qualifications, there is no unitary trend as regards the specificity of learning outcomes. There are countries where the number of modules and qualifications were or will be reduced, eventually reducing the specificity of learning outcomes in VET (such as Norway and UK-England). For others, an increase in the degree of detail in which learning outcomes are specified was reported. While this could lead to an assumed convergence (generic programmes become more specific as occupation-specific programmes become broader), it could be interpreted just as increased pluralism in VET (coexistence and increasing variety of specific and generic programmes). We will have to look more closely at whether a reduction in the number of programmes/qualifications is due to a reduction in occupational profiles (occupations disappearing, hybridisation of occupations) or the merging of programmes to target a broader group of occupations.

If we have to summarise these various developments, we could refer to expansion and diversification of VET and to strengthening or intensification of VET (in the sense of renewed emphasis or renaissance of values and elements related to it) taking place simultaneously. We illustrate these developments by making use of the three perspectives introduced and discussed in Volume 1 (Table 4).

Table 4. **Changes in VET reported for the past 20 years**

	<b>Expansion and diversification</b>	<b>Strengthening and intensification</b>
Epistemological/pedagogical perspective on VET	<ul style="list-style-type: none"> <li>• increasing pluralism of forms of VET (unified, dual, trial)</li> <li>• increase of third learning sites</li> <li>• individualisation (e.g. individualised pathways, heterogeneous groups)</li> </ul>	<ul style="list-style-type: none"> <li>• increasing work-based elements (e.g. internships) in school-based VET</li> <li>• more practice-oriented curricula</li> </ul>
Education system perspective on VET	<ul style="list-style-type: none"> <li>• expanding apprenticeships to lower and higher levels</li> <li>• increase in higher VET</li> <li>• new VET providers (e.g. liberal education institutions)</li> <li>• modularisation</li> </ul>	<ul style="list-style-type: none"> <li>• renewed emphasis on apprenticeship</li> <li>• reduction in number of profiles/broadening profiles (*)</li> <li>• merging of IVET/CVET</li> </ul>
Socioeconomic/labour market perspective on VET	<ul style="list-style-type: none"> <li>• VET spreading to lower and higher skill levels</li> <li>• various new/additional purposes of VET (e.g. equity, combat youth unemployment)</li> </ul>	<ul style="list-style-type: none"> <li>• fostering employer engagement</li> <li>• strengthening role of social partners</li> </ul>

(\*) This could be regarded either as expansion (making programmes more general) or strengthening (reshaping the profile of programmes, e.g. caused by hybridisation of occupations).

Source: Cedefop.

We believe that patterns of national VET conceptions have been stable despite considerable reforms in the past two decades. Many country experts reported major reforms in this period but indicated that they have not (yet) changed the overall conception of VET. For instance, in Germany a major reform of the Vocational Training Act supported international mobility and recognition of prior learning (Sondermann, 2005), Bulgaria introduced a systematic approach for validation in VET, Cyprus comprehensively reformed the curriculum of secondary technical and vocational education, and the Danish VET system undertook several reforms since the 1990s to make VET more attractive, to simplify the structure and to allow for individualisation of programmes. In none of these cases has the overall conception of VET changed. UK- England, following the Leitch Review in 2006 (HM Treasury, 2006), introduced reforms to make the system more demand side oriented. Continuing actions include: greater use of labour market intelligence to guide decisions on learning investments; a preference for using apprenticeships as the main form of IVET; using employer-routed funding or joint investment to ensure that employers invest in training that will yield a return rather than that ‘freely’ available from training providers; and the introduction of an apprenticeship levy from 2017 where employers with a wage bill over GBP 3 million will pay a levy that they can reclaim if they deliver apprenticeships. While such reforms may alter the conception of VET in one or another way, it remains a particular UK approach to VET, different from many continental approaches.

A change in the perception of VET due to system reforms was reported for Sweden, but with negative consequences. Sweden removed the requirement for vocational programmes in upper secondary schools to provide basic eligibility for higher education, making it voluntary for students to choose whether or not to obtain the required qualifications to access universities. Although this reform was undertaken in 2011 to combat the perceived decline in status of vocational education, interest in IVET programmes has declined since then, which may be an indication the reform has contributed to a more negative conception of VET. Prior to the 2011 change, the most significant reform in terms of the conception of VET was in 1994, transferring IVET programmes from vocational schools to general schools and leading to an emphasis on general vocational skills rather than specific ones. This may have contributed to the development of the relatively negative image of VET as low-status education programmes, which the 2011 reform sought to combat.

Information about such national reforms is important in understanding the direction and pace of change. However, *yrkesutbildning* in Sweden was conceived as vocational-oriented school education before and after the reforms (although with changing components, such as the status and occupational specificity of programmes). A question of particular interest is: when do these modifications add up to major changes that constitute a new or different conception of VET? How does a new national VET discourse emerge?

The concurrence of expansion and strengthening of VET makes it difficult to arrive at a consistent European picture of VET development. However, with the four patterns of conceptions of VET described in Chapter 5, we have reason to assume there are two main trajectories of current VET conceptions. The strengthening of VET points in the direction of VET as work-based training as illustrated by Denmark, Germany and Austria but without its current focus on initial training. The diversification of VET points in the direction of VET understood as (part of) lifelong learning illustrated by France or Finland. It is crucial to see that these are not exclusive developments and countries do not move either in one or the other direction. Both can be observed simultaneously, so convergence of conceptions (and systems) may take place, but only modestly.

We can illustrate this trend towards understanding VET as lifelong learning through the example of Lithuania: 'The biggest change in the conception of VET in Lithuania is related to the introduction of the concept of lifelong learning and implementation of the corresponding reforms: introduction of the Lithuanian qualifications framework, occupational standards, national modular VET curricula, alternative pathway of dual apprenticeship, sectoral practical training centres. This reform is currently changing the concept of VET in several directions:

strengthening the understanding that VET has a lifelong learning dimension; intensifying relationships between VET and the world of work (dual apprenticeship, possibility for enterprises to become stakeholders in public VET schools, introduction of sectoral practical training centres, active participation of employers in the development of occupational standards and national modular VET curricula); increasing user-friendliness of VET to learners (expanding choice of VET programmes and pathways through introduction of apprenticeship and modularisation).’<sup>(25)</sup> Other countries such as Greece, Cyprus, Latvia, Portugal and Romania could equally well illustrate this trend. It seems only a matter of time until national reforms in these countries entail a substantially different conception of VET, as identified for France and Finland.

Indications for the trends discussed above have been traced for the past two decades by the experts consulted, but were frequently extrapolated to the future and also expressed as expected changes. We can now paint a picture of the changing role of VET in the past two decades and also to look into the future (Table 5). We can say for sure that some European countries, but not yet all, have bid farewell to VET conceived as ‘dead-end’ initial training for skilled workers, clearly separated from general education. In the past two decades, we have witnessed diversification of VET in terms of providers, levels and target groups, increased horizontal and vertical permeability, renewed emphasis on work-based elements, a coalescence of IVET and CVET, a hybridisation of systems and programmes, and emergence of a new discourse of VET as a means of avoiding youth unemployment, in addition to its traditional purpose of securing the supply of skilled labour. The future of European VET is likely to be even more pluralistic. We might expect a future for VET in which a multitude of different learning approaches exist, in which VET is provided at all levels by a variety of different providers and in which VET serves multiple functions. This continuing transformation of VET may be accompanied by an impending risk of fragmentation and polarisation (in terms of conflicting approaches to VET) due to the increased diversity.

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<sup>(25)</sup> From the Lithuanian questionnaire.

Table 5. **The changing role of VET**

	<b>PAST (before 1995)</b>	<b>PRESENT (1995-2015)</b>	<b>FUTURE (after 2015)</b>
<b>Epistemological/ pedagogical perspective on VET</b>	On the job; job-specific; behaviourist; separating general from vocational	Increased work-based learning; crossing boundaries (general – vocational; school – workplace)	Multitude of learning approaches; coexistence of occupation-specific and broader learning outcomes, increased work-based learning
<b>Education system perspective on VET</b>	Dead-end programmes, restricted to medium levels; VET provided by schools and companies; ‘VET as IVET’	Increased permeability; VET also at higher levels; diversification of providers and programmes; geared for work and education; IVET and CVET	VET at all levels, but risk of polarisation; variety of providers; VET as lifelong learning, risk of fragmentation
<b>Socioeconomic/ labour market perspective on VET</b>	Preparing for job entry; serving employer interest; securing skilled labour	Securing skilled labour and promoting innovation and growth; employability/avoiding unemployment	Multipurpose/pluralist VET (including equity and equality issues)

Source: Cedefop.

The aim of this paper has been to scrutinise existing national definitions and conceptions of VET and changes over time, to guide our hypothesis for further analysis. It is neither a new typology of VET systems nor a forecast for the role of VET in Europe. The approach taken is not suitable for a comprehensive comparison of systems, for several reasons. First, we are focused on national notions of VET independent of the national education system and its socioeconomic context, disregarding also simple comparative indicators such as the importance of VET in terms of enrolment figures. Second, our approach has been selective and reductionist from the beginning, because we intentionally did not take into account the full diversity of VET at national level. This would have gone far beyond the scope of the study and would have been only manageable for a smaller set of countries. Finally, we cannot automatically extrapolate from changes of conceptions to changes of systems.

Despite these limits, the innovative approach taken here has produced original research and provided a promising starting point for the future work in the Cedefop project *The changing role and nature of VET*. The research activities still to come will provide evidence that there is some congruence between discourse and system change and will corroborate some of the hypotheses developed here. We will look into detail of academic and vocational drift and try to prove the expansion and diversification hypothesis (theme 5), explore how VET is understood as lifelong learning and whether a merging of IVET and CVET takes place (theme 4), and investigate the trend towards work-based learning and the

reasons for increase or decrease in VET programmes (and enrolment in these programmes) at upper secondary level (theme 3).

Apart from the work in the subsequent themes, the approach presented here could be further elaborated in at least two ways. It would be interesting to follow, at national level, alternative conceptions to see whether they compete with or complement the dominant conceptions discussed here. It would also be worth taking a broader view and look at the overall developments of education systems, of which VET is a part, rather than doing this exclusively for VET.



## List of abbreviations

AMU	<i>arbejdsmarkedsuddannelser</i> (DK); continuing vocational education and training
CVET	continuing vocational education and training
EU	European Union
EUV	<i>Erhvervsuddannelse</i> (DK); vocational education and training
FET	further education and training
ISCED	international standard classification of education
IVET	initial vocational education and training
TVET	technical and vocational education and training
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VE	vocational education
VET	vocational education and training
VPET	vocational and professional education and training
VT	vocational training

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# ANNEX

Table A1. National terms used for VET, literal and official translations

	Common term used for VET	Literal English translation	Official translation (*)
AT	<i>Berufsbildung</i>	Vocational education	Vocational training
BE-fl	<i>Beroepsopleiding</i>	Vocational education	
BG	<i>Професионално образование и обучение</i>	Vocational education and training	Vocational education and training
CY	<i>Επαγγελματική εκπαίδευση και κατάρτιση</i>	Professional education and training	Vocational education and training
CZ	<i>odborné vzdělávání a příprava</i>	Vocational education and preparation	Vocational education and training
DE	<i>Berufsbildung</i>	Vocational education	Vocational education and training
DK	<i>Erhvervsuddannelse</i>	Vocational education	Vocational education and training
EE	<i>Kutseharidus/Kutseõpe</i>	Vocational education/training	Vocational education/training
EL	<i>Επαγγελματική εκπαίδευση και κατάρτιση</i>		Vocational training
ES	<i>Formación profesional</i>	Vocational training	Vocational training
FI	<i>Ammatillinen koulutus</i>	Vocational (occupational, professional) education (training, schooling)	Vocational education and training
FR	<i>Enseignement et formation professionnels</i>	Vocational education and training	Vocational education and training
HR	<i>Strukovno obrazovanje i osposobljavanje</i>	Vocational education and training	Vocational education and training
HU	<i>Szakképzés</i>	Vocational training	Vocational education and training
IE	Further education and training	Further education and training	Further education and training
IS	<i>Starfsmenntun/starfsnám</i>	Education for an occupation	Vocational education and training
IT	<i>Istruzione e formazione professionale (IeFP)</i>	Vocational education and training	Vocational education and training
LT	<i>Profesinis rengimas/profesinis mokymas</i>	Vocational education and training	No official translation or not provided
LU	<i>Enseignement et formation professionnels</i>	vocational education and training	No official translation or not provided
LV	<i>Profesionālā izglītība</i>	Vocational education	Vocational education
MT	<i>L-educazzjoni u t-taħriġ vokazzjonali</i>	Vocational education and training	Vocational education and training
NL	<i>beroepsopleiding</i>	Vocational education	Vocational education
NO	<i>Fag- og yrkesopplæring</i>	Training for a trade/training for an occupation	Vocational education and training
PL	<i>Kształcenie zawodowe</i>	Professional education	Vocational education
PT	<i>Formação profissional/ensino e formação profissional</i>	Professional training/professional education and training	No official translation or not provided
RO	<i>Educație și formare profesională</i>	Vocational education and training	Vocational education and training

<b>SE</b>	<i>Yrkesutbildning</i>	Vocational education	Vocational education
<b>SI</b>	<i>Poklicno izobraževanje</i>	Vocational education	No official translation or not provided
<b>SK</b>	<i>Odborné vzdelávanie a príprava</i>	Vocational education and preparation	Vocational education and training
<b>UK-England</b>	<i>Further education and training</i>	Further education and training	Further education and training

(\*) As in law, websites of ministries or the like.

Source: Cedefop.

Table A2. **Additional information and explanation for terms used (selected countries)**

	National terms	Explanations
AT	<i>Berufsbildung</i>	The term <i>Berufsausbildung</i> (vocational training) emphasises initial VET and is clearly associated with the apprenticeship systems. The common term <i>Berufsbildung</i> is slightly broader, but most people would still not associate continuing vocational training with the term.
BE-fl	<i>Beroepsonderwijs</i>	<i>Beroepsonderwijs</i> is more often associated with education in secondary education.
CY	<i>Επαγγελματική εκπαίδευση και κατάρτιση</i>	As there are no distinct words in Greek, the term ‘vocational’ can have three different meanings: professional, vocational and occupational.
CZ	<i>odborné vzdělávání a příprava</i>	The term <i>odborné vzdělávání</i> is literally translated as ‘vocational education’. The term <i>příprava</i> is officially translated as ‘training’, however, the literal English translation of the word is ‘preparation’. This implies the understanding of VET as a line of learning with a major objective in preparing the learner for a future profession. Also, the term <i>příprava</i> ‘preparation’ is used to indicate a practice-oriented dimension that is complementary to the concept of <i>vzdělávání</i> ‘education’ that implies theoretical learning
DE	<i>Berufsbildung</i>	The often used term <i>Berufsausbildung</i> emphasises IVET and is clearly associated with the dual system of apprenticeship.
DK	<i>Erhvervsuddannelse</i>	The term <i>erhvervsuddannelse</i> normally refers to IVET and includes three different paths: EUD for young people, EUV for adults (above 25 years of age) and EUX, which is a combined vocational and general upper secondary education. CVET (in the formal education system) is referred to as <i>Arbejdsmarkedsuddannelser</i> (AMU).
EE	<i>Kutseharidus/ Kutseõpe</i>	The Ministry of Education and Research uses the term <i>kutseharidus</i> and the English translation ‘vocational education’ on this website. The same term is also used in the Republic of Estonia education Act. The term <i>kutseõpe</i> means vocational training (Vocational Educational Institutions Act, 2013, §2).
EL	<i>Επαγγελματική Εκπαίδευση και Κατάρτιση</i>	The common term used is vocational education and training (VET), but the legal framework for the provision of VET in Greece is set by the laws regulating initial vocational training and continuing vocational training. Since the enactment of Law 3879/2010 on lifelong learning, these two components of VET, initial and continuing vocational training, have been treated in the framework of the national holistic strategy on lifelong learning.
ES	<i>Formación profesional</i>	The national term <i>formación profesional</i> emphasises IVET, and it is clearly associated with the English term ‘training’ rather than with ‘education’ ( <i>educación</i> in Spanish). Typically, most people would associate the concept of <i>formación profesional</i> to IVET, and not to CVET.
FI	<i>Ammatillinen koulutus</i>	<i>Ammatillinen koulutus</i> refers more to education than training. It also important that in Finnish the word <i>ammattillinen</i> may be understood as professional or vocational. In the education system these are separated into different strands but the language does not support that distinction.
FR	<i>Enseignement et formation professionnels</i>	Traditionally, IVET and CVET for adults have been presented separately. Because of the new paradigm of lifelong learning they are increasingly presented together.
HR	<i>Strukovno obrazovanje i osposobljavanje</i>	The term <i>strukovno obrazovanje i osposobljavanje</i> emphasises both education and training, but the additional aspect of adult education is normally added.



	National terms	Explanations
HU	<i>Szakképzés</i>	Vocational training is the unambiguous Hungarian equivalent of vocational education and training. The term <i>szakképzés</i> (vocational training) emphasises IVET and is clearly associated with the apprenticeship systems.
IE	Further education and training	VET in Ireland is generally referred to as FET (further education and training). In reality this covers vocational education (often described as further education) which includes post leaving certificate awards and qualifications, second-chance education, adult learning, community education, and vocational training, which includes apprenticeships, on-the-job training, internships, training programmes, labour activation schemes.
IT	<i>Istruzione e formazione professionale (IeFP)</i>	Before the 2003 reform, the Italian expression for IeFP was FP (that is vocational training) but according to the 2001 Constitutional Reform the name was changed to include also the vocational and technical five-year programmes of upper secondary education). In 2007 the five-year upper secondary education programmes returned to the education system, but the name (IeFP) remained.
LT	<i>Profesinis rengimas/profesinis mokymas</i>	The term <i>profesinis rengimas</i> encompasses all areas of vocational education and training (initial, continuing, higher education) whereas the term <i>profesinis mokymas</i> is more focused on the organisation and didactics of training. However, this dualism is noticed only in discussions by experts. <i>Profesinis mokymas</i> which fully corresponds to vocational education and training is more commonly used.
LV	<i>Profesionālā izglītība</i>	The term <i>profesionālā izglītība</i> (vocational education) is used to describe vocational education, further and in-service training, and formal education from level two to seven according to the Latvian qualification framework, Vocational Education Law (Article 5), Education Law (Article 6) and professional standards.
MT	<i>L-edukazzjoni u t-taħriġ vokazzjonali</i>	Although the Maltese language often tends to be limited in vocabulary and many times one Maltese word tends to cover a wider meaning than the literal translation in another language, this is not the case with the term used for vocational education and training, where both the separate words and phrase as a whole do not reflect any particularly different meaning.
NL	<i>Beroepsonderwijs</i>	The general term used for VET is <i>beroepsonderwijs</i> . Vocational education is divided into three types of school. When spoken about vocational education refers in most cases to the Mbo ( <i>Middelbaar beroepsonderwijs</i> , secondary vocational education).
NO	<i>Fag- og yrkesopplæring</i>	Like the English term, 'vocational education' alludes to VET playing out in an education context (even school), while 'vocational training' hints at how a vocation (or occupation) is constituted at the workplace.
PL	<i>Kształcenie zawodowe</i>	The Polish understanding of <i>kształcenie zawodowe</i> is close to the English term VET. It includes both initial and continuing stages; the common understanding is connected with the secondary education and post-secondary education at non-higher level, although there are also State higher education Institutions dedicated to vocational education (Law on higher education of 2005).
PT	<i>Formação profissional/ensino e formação profissional</i>	Both terms <i>formação profissional</i> (professional training) or <i>ensino e formação profissional</i> (vocational education and training) have the same meaning in Portugal. However, the term <i>formação profissional</i> is the most common for historical reasons. When the system started to be implemented in Portugal there was a need to distinguish it from regular education and that is why it does not include the term 'education'.

	National terms	Explanations
RO	<i>Educație și formare profesională</i>	The term <i>educație și formare profesională</i> (EFP) is used in official documents (e.g. VET strategy 2016-20) when referring to both initial and continuing VET. In a broader sense, the term is also used when referring to the whole education system (e.g. in the Law of national education). The term <i>formare profesională</i> , translated as 'vocational training', is also commonly used when referring to both IVET and CVET (especially because many people would not associate CVET with the term <i>educație și formare profesională</i> ).
SE	yrkesutbildning	The term <i>yrkesutbildning</i> emphasises the 'education' aspect more clearly than the 'training' aspect of VET and is most commonly associated with initial and advanced vocational education and training conducted in the public school system at high-school level, and the post-high school programmes offered by the Agency for Higher Vocational Education ( <i>yrkeshögskolan</i> ).
SI	Poklicno izobraževanje	In Slovenian it is more common to use term education than training. The former denotes the formal education system, which also gives the professional qualifications related to the professional standard, the degree of education.
UK-England	Further education and training	There is no one common term. Vocational skills, further education, skills, all tend to be used interchangeably. The Department for Business Innovation and Skills (BIS) and Department for Education (DfE) refer to 'further education and training'. But the situation tends to be fluid. All skills policy will be transferred to DfE in the near future which may affect the official terminology.

Source: Cedefop.

Table A3. **Existence (yes or no) of legal definitions of VET and explanation (selected countries)**

		Explanations
AT	N	<i>Berufsbildung</i> , though commonly used, is not defined by any law. The term <i>Berufsausbildung</i> is implicitly defined as it is the title of the law regulating the apprenticeship system.
BG	Y	The main purpose of VET is to prepare 'the citizens for realisation in the economy and the other spheres of public life by creating conditions for acquiring professional qualification and for its continuous improvement' (Article 2, VETA). The system of vocational education and training includes vocational orientation, vocational training, vocational education as well as validation of professional knowledge, skills and competences (Article 4, VETA). Vocational training 'shall ensure the acquisition of qualification for a profession or part of a profession, as well as its improvement'. Vocational education 'shall ensure the acquisition of the general education minimum for secondary education and the acquisition of a qualification for a profession' (Article 5 (3), VETA).
CY	N	The series of education laws on pre-primary, primary, secondary general and secondary technical and vocational institutions (Nos: 5/71, 56/83, 123/85 and 154 (I)/99) do not provide a legal definition of VET. A definition is not provided in the original Apprenticeship Law of 1966 (No 13/66) nor in the reformed new modern apprenticeship (NMA) programme. No definition was provided in the 2012 establishment of post-secondary VET institutes (MIEEK). The only VET-relevant legislation is the 1999 Human Resource Development Law (Law 125(I)/1999, as amended up to 2007) which establishes the Human Resource Development Authority (HRDA) as the only authority with competence and power in training, including continuing VET. This law provides a 'training' definition which explicitly excludes school-based education: 'the planned, systematic process of initial learning, retraining and further training of individuals, leading to effective performance of work through the acquisition, development and improvement of knowledge and skills or to a different way of thinking and understanding, and aimed at improving the efficiency of the economy. Individuals may be employed or intend to be employed in any occupation at any level in order to meet the needs of the economy in human resources.' <sup>(a)</sup>
CZ	N	No legal act provides a direct and explicit definition of the term 'vocational education and training'. Act 561/2004 (see References, No 1) regulates VET but the term is not defined within this act. The act consistently refers to 'secondary education' / <i>střední vzdělávání</i> , a vertical position in the initial education pathway rather than to a vocational character of specific type of education.
DE	Y	In the Vocational Education and Training Act the term <i>Berufsbildung</i> is defined as follows: '(1) For the purposes of this Act, the term "vocational training" shall mean vocational training preparation, initial training, further training and retraining. (2) Vocational training preparation shall serve to impart basic skills required for the acquisition of vocational competence and thus facilitate placement in initial training in a recognised training occupation. (3) Initial training shall, through a systematic training programme, impart the vocational skills, knowledge and qualifications (vocational competence) necessary to engage in a form of skilled occupational activity in a changing working world. Initial training shall also enable trainees to acquire the necessary occupational experience. (4) Further training shall enable individuals to maintain and upgrade or broaden their vocational competence and advance their careers. (5) Retraining shall qualify individuals for another form of occupational activity.'
DK	Y	The first section of the consolidation act for <i>erhvervsuddannelser</i> , describes the mission of <i>erhvervsuddannelser</i> <sup>(b)</sup> . There is no legal definition of the term <i>erhvervsuddannelse</i> .

		Explanations
EE	Y	Vocational education is a system of knowledge, skills, experience, values and behavioural norms required for working in a certain area of specialisation, for obtaining certain qualifications and for applying for and retaining a certain position, and the acquisition and improvement of that system creates the prerequisites for successful professional activity (Republic of Estonia education Act, 1992, §12). Vocational training means the aggregate of learning, teaching and organisational activities the purpose of which is to enable the acquisition of vocational education. (Vocational educational institutions Act, 2013, §2).
EL	N	There is no single definition for VET, as it is defined through the provision of separated definitions for initial vocational training and continuing vocational training, placed under the lifelong learning perspective. Law 3879/2010 on the development of lifelong learning distinguishes non-formal education from formal education and defines non-formal education as provided in an organised framework outside the formal education system, which can lead to nationally recognised qualifications and includes initial vocational training, continuous vocational training and adult education. This is also explained by the fact that the provision of VET in Greece is set by different laws regulating IVET and CVET.
ES	Y	According to the official definition of <i>formación profesional</i> included in the Organic Law 2/2006 of 3 May on education, and its latest revision by the Organic Law 8/2013 for the improvement of education quality, <i>formación profesional</i> includes all training activities that enable the qualified performance of diverse professions, access to employment and active participation in social, cultural and economic life. It includes initial vocational training, actions of integration and reintegration of unemployed workers as well as those actions aimed at fostering continuing training activities in companies for the acquisition and updating of skills of workers. These last two categories are usually understood as VET for employment.
FI	Y	Vocational Education and Training Act (630/1998): definition of vocational upper secondary education and training; Vocational Adult Education Act (631/1998): definition of vocational adult education and training (VET for adults). The legal definitions state that those who have completed the basic degree in vocational education have wide occupational/vocational basic skills to work in different roles in their field and more specific skills and working life required know-how at least in one specific task. The vocational basic degree can be completed as vocational basic education defined in the same law or competence-based qualification defined in the law of adult education.
FR	N	There is no single general definition of VET in the legal texts (cf. <i>Code de l'éducation</i> ). There are formulations of objectives and descriptions of VET subsystems.
HR	Y	Vocational education is a process of acquiring competences (knowledge, skills and competences), if the results of this process are evaluated and confirmed in a procedure carried out by VET institutions. Vocational training also includes education to acquire competences to perform simple tasks, and education which acquires additional competences of the same or higher level qualification within the education sector for which the participant has a recognised qualification. (Vocational Education Act, Article 3)
HU	Y	Vocational training is training within or outside the school system with the aim to acquire qualification recognised by the State, listed in national vocational qualifications register (Act CLXXXVII of 2011 on vocational education and training §3). 'School-based vocational education and training: vocational education and training provided in the framework of public education, as defined by the Act on national public education and in the vocational schools defined under the Act, the participants of which are in student legal relationship with the school.' (Act CLXXXVII of 2011 on vocational education and training 2).

		Explanations
IE	N	There is no single definition for VET in Ireland as VET (FET) has its roots in diverse historical legislative structures. The most important legislation within the vocational education system is the Vocational Education Act, 1930 and respective amendments, which led to the establishment of 33 regionally based vocational education committees (VECs). The Vocational Education (amendment) Act, 2001, broadened the representative element of VECs to include public representatives, parents, teachers, local businesses and a requirement for the VECs to adopt education plans.
IT	Y	VET (intended as IeFP) has a single legal definition in Italy according to Law 40/2007 and based on the 2001 Constitutional Reform and Law 53/2003. This definition actually includes the regional/aa.pp. IVET 3-4 years courses, Type 1 apprenticeship out-of-company training (15-25 year-old.), post-secondary level programmes (Istituto Tecnico Superiore and <i>istruzione e formazione tecnica superiore</i> ). In legal terms, <i>istruzione e formazione professionale</i> (IeFP) refers only to courses under Regions/AA.PP responsibilities.
LT	Y	The Law on VET (2007) provides the following definition of VET: vocational education and training ( <i>profesinis mokymas</i> ) - education and training based on the curricula of vocational education and training that leads to the acquisition of qualification or its upgrading.
LV	Y	Professional education – practical and theoretical preparation for the practice of a particular profession, and for the acquisition of professional qualification and improvement of professional competence (Education Law of the Republic of Latvia, 1999, Article 1).
MT	N	There is no official definition of VET in the Education Act (2016) which is the key legislation covering education, also VET, in Malta. There is also no definition of VET in the Referencing report in Malta (2016) or in the proposed new Education Act – Bringing education into the 21st century (2016) or in the National vocational education and training policy (2015).
NL	N	The Vocational Education Act (WEB) (§ 1.2.1) covers two types of education: secondary vocational education (MBO) and adult education. The purpose of secondary vocational education is described as follows: vocational education is focused on the theoretical and practical preparation for the practice of professions, for which a vocational qualification is necessary. Vocational education contributes to the further general and personal development of students and contributes to social functioning. Vocational education is connected to the pre-vocational and general secondary education. Vocational does not include higher education. (°)
NO	N	VET is not defined but there is a definition of apprentice in the Education Act, § 3-4, 'Chapter 4. Upper secondary education and training in enterprises'. It reads that an apprentice is someone who has signed a contract in view of obtaining a trade certificate or a journeyman's certificate within a trade where in-company training is offered. (°)
PL	N	There is no official definition of VET in Poland. Reports on VET in Poland and elaborations dedicated to the topic use definitions from pedagogical literature or refer to the common understanding; Bills on the national education system – which provides framework for VET excluding VET higher education institutions the term, nor does the Law on higher education; Ministry of Finances uses the VET definition (which is necessary due to tax free regulations) from the <a href="#">Council implementing regulation (EU) No 282/2011</a> .
PT	Y	The Decree Law No 396/2007, of 31 December (establishes the legal framework of the national qualification system) defines the <i>formação profissional</i> as the training to endow the individual with competences allowing him/her to perform a specific professional job/activity.
RO	N	<i>Educație și formare profesională</i> (EFP), though commonly used, is not defined by any official document. The term is implicitly defined, as it is in the title of the Romanian VET strategy for 2016-20 ( <i>strategia educației și formării profesionale 2016-20</i> ).

		Explanations
SE	N	The term <i>yrkesutbildning</i> is used in several legal documents (e.g. the national Education Act ( <i>Skollag</i> ) 2010:800, or the Higher Vocational Education Act ( <i>Lag om Yrkehögskolan</i> ) 2009:128)) but often implicitly and with varying meaning in different contexts depending on the education level (e.g. IVET, AVET, etc.). Even within these laws, there is no clearly demarcated definition of the term – instead the implicit understanding of VET is conveyed through the whole text.
SK	Y	Legal Act No 61/2015 provides in Article 1 paragraph 2 definitions of basic terms used, where in section (a) vocational education is defined as ‘a process of education and upbringing that allows for the adoption of the knowledge, skills and abilities needed for the performance of a vocation, group of vocations or vocational activities; it is divided into theoretical education and practical education.’ Legal Act No 61/2015 has introduced the concept of dual VET into Slovak educational system. <sup>(e)</sup>

<sup>(a)</sup> English translation of the law provided by the Department of Labour, Ministry of Labour, Welfare and Social Insurance [http://www.mlsi.gov.cy/mlsi/dl/dl.nsf/dmllegislation\\_en/dmllegislation\\_en?OpenDocument](http://www.mlsi.gov.cy/mlsi/dl/dl.nsf/dmllegislation_en/dmllegislation_en?OpenDocument)

<sup>(b)</sup> BEK No 367 of 19.4.2016 – <https://www.retsinformation.dk/Forms/R0710.aspx?id=179825>

<sup>(c)</sup> Source: <http://wetten.overheid.nl/BWBR0007625/2016-08-01>. Pre-vocational secondary education (vmbo) is covered by the Secondary Education Act.

<sup>(d)</sup> Act of 17 July 1998 No 61 relating to primary and secondary education and training (the education Act). With amendments as of 25 June 2010, 31 May 2011, 2012, 2013 and 2014.

<sup>(e)</sup> National Council of the Slovak Republic, Act No 61/2015 on vocational education and training, <http://www.zakonypreludi.sk/zz/2015-61>

Source: Cedefop.

Table A4. Analytical framework

VET as seen from the ....	Dimensions	Variants/features	
	...would in terms of ...	...emphasise the following key features/components....	
Epistemological/ pedagogical perspective	1. Knowledge approach	1.1 Practical knowledge/experience-based	
		1.2 Applied knowledge/disciplinary-based	
	2. Pedagogical/ didactical approach	2.1 Learning by doing/problem-based learning	
		2.2 Instruction-centred learning	
	3. Teacher-student relationship	3.1 Master-apprenticeship	
		3.2 Teacher-student	
		3.3 Different types of instructors (e.g. teachers and workshop trainers)	
	4. Learning sites	4.1 Mainly on the job/work-based learning	
		4.2 Multiple learning sites (e.g. some form of duality)	
		4.3 Mainly in classrooms with some practical experiences	
	5. Specificity of learning outcomes	5.1 Occupation/profession-specific (e.g. brick maker, nurse)	
		5.2 Broader vocational-field-related (e.g. construction, health)	
		5.3 Vocational preparation	
	6. Professional ethos	6.1 Distinct occupational or professional ethos	
		6.2 No specific occupational or professional ethos	
	Education system perspective	7. Level of education	7.1 Mainly lower level (i.e. ISCED-11 level 2)
			7.2 Middle level of education (i.e. ISCED-11 level 3-4)
			7.3 Middle level and some higher VET (i.e. ISCED-11 level 3-5)
8. Age		8.1 Adolescent/young people (15 to 19)	
		8.2 Young adult/adults (18-24)	
		8.3 No particular age group	
9. Outcomes/ destination		9.1 Occupational qualifications or rights	
		9.2 Educational qualifications/access rights to higher levels of education	
		9.3 Occupational rights and access rights to higher levels of education	
		9.4 No specific occupational rights/rights for progressing in education	
10. Key providers		10.1 Companies	
		10.2 Schools	
		10.3 Further and/or higher education providers	
11. Parity of esteem		11.1 Higher or equal compared to general/academic education	
		11.2 Lower than general/academic education	
Socioeconomic/ labour market perspective		12. Sources of funding	12.1 Mainly by companies
			12.2 Mainly by the State – education budget
			12.3 Mainly by the State – labour market/social security budget
	13. Student identity/legal status	13.1 Student	
		13.2 Apprentice or novice worker	

VET as seen from the ....	Dimensions	Variants/features
	...would in terms of ...	....emphasise the following key features/components....
		13.3 Worker
	14. Occupational hierarchy	14.1 Semi-skilled workers
		14.2 Skilled workers
		14.3 Technicians/professionals/para-professionals
	15. Governance	15.1 Low coordination – industry-led
		15.2 High coordination – led by organised business/trade unions
		15.3 High coordination – State-led
	16. Focus/purpose	16.1 Entry into working life/entry level
		16.2 Broad preparation for changing requirements across working life
		16.3 Becoming a member of an occupation/(para-)profession
	17. Context of justification	17.1 Securing supply of skilled labour
		17.2 Innovation and economic growth

Source: Cedefop.



Table A5. Overview of country clusters and the 10 variables with the highest ratings (average scores)

Cluster 1: DE, AT_wbl, DK, SK_wbl, HU		Cluster 2: AT-school, BE, BG, EE, ES, LV, MT, RO, SI	
1.1. Practical knowledge/experience-based	1.0	12.2. Mainly by the State – education budget	1.0
2.1. Learning by doing/problem-based	1.0	13.1. Student	1.0
6.1. Distinct occupational/ professional ethos	1.0	15.3. High coordination – State-led	1.0
7.2. Middle level of education	1.0	10.2. Schools	0.9
9.1. Occupational qualifications or rights	1.0	4.3. Mainly in classrooms/some practical experience	0.9
14.2. Skilled workers	1.0	8.3. Adolescent/young people (15 to 19)	0.8
17.1. Securing supply of skilled labour	1.0	9.3. Occupational rights and access rights to higher education	0.8
3.1. Master-apprenticeship	0.8	11.2. Lower than general/academic education	0.8
4.2. Multiple learning sites	0.8	3.2. Teacher-student	0.8
5.1. Occupation-specific (e.g. brick maker)	0.8	6.1. Distinct occupational/professional ethos	0.7
Cluster 3: HR, CY-school, LU, NL, PL, PT		Cluster 4: CY-appr., UK-EN	
12.2. Mainly by the State – education budget	1.0	16.1. Entry into working life/entry level	1.0
15.3. High coordination – State-led	1.0	17.1. Securing supply of skilled labour	1.0
10.2. Schools	1.0	17.2. Innovation and economic growth	1.0
11.2. Lower than general education	1.0	14.3. Technicians/professionals	1.0
5.1. Occupation-specific	1.0	14.2. Skilled workers	1.0
16.1. Entry into working life/entry level	1.0	2.2. Teacher-centred learning	1.0
7.2. Middle level of education	1.0	8.5. Particular age group	1.0
17.1. Securing supply of skilled labour	1.0	10.3. Further and/or higher education providers	1.0
9.2. Educational qualifications	1.0	9.4. No specific occupational rights	1.0
13.1. Student	0.9	15.3. High coordination – State-led	0.7
Cluster 5: FR, IR-appr, IT, FI			
16.1. Entry into working life/entry level	1.0		
5.1. Occupation-specific	1.0		
1.1. Practical knowledge/experience-based	1.0		
17.4. Individual progression, ...	1.0		
3.3. Different types of instructors	1.0		
2.1. Learning by doing/problem-based	1.0		
9.1. Occupational qualifications or rights	1.0		
4.2. Multiple learning sites	1.0		
17.1. Securing supply of skilled labour	0.8		
14.2. Skilled workers	0.8		

NB: 1= all countries in this cluster emphasised this feature as a key feature; wbl = work-based learning.  
Source: Cedefop.

Table A6. **Similarity matrix**

	DE	ATa	ATs	BG	BE	HR	CYiv	CYcv	CZ	DK	UK-ENa	ENs	ES	FI	FR	GR	HU	IS	IEvt
DE	1.00	0.80	0.51	0.55	0.49	0.61	0.47	0.47	0.63	0.67	0.51	0.47	0.49	0.53	0.57	0.53	0.67	0.67	0.57
ATa	0.80	1.00	0.39	0.47	0.49	0.53	0.39	0.43	0.67	0.80	0.63	0.43	0.53	0.57	0.53	0.61	0.80	0.63	0.57
ATs	0.51	0.39	1.00	0.84	0.65	0.49	0.39	0.63	0.59	0.43	0.39	0.63	0.65	0.53	0.37	0.45	0.47	0.55	0.29
BG	0.55	0.47	0.84	1.00	0.73	0.57	0.39	0.67	0.59	0.51	0.47	0.71	0.69	0.61	0.45	0.49	0.55	0.55	0.33
BE	0.49	0.49	0.65	0.73	1.00	0.59	0.37	0.65	0.53	0.61	0.49	0.61	0.71	0.67	0.51	0.71	0.57	0.57	0.39
HR	0.61	0.53	0.49	0.57	0.59	1.00	0.45	0.61	0.65	0.65	0.57	0.61	0.59	0.63	0.67	0.59	0.49	0.65	0.59
CYiv	0.47	0.39	0.39	0.39	0.37	0.45	1.00	0.63	0.31	0.39	0.59	0.59	0.41	0.33	0.49	0.41	0.35	0.47	0.65
CYcv	0.47	0.43	0.63	0.67	0.65	0.61	0.63	1.00	0.55	0.47	0.51	0.71	0.61	0.53	0.57	0.69	0.51	0.67	0.41
CZ	0.63	0.67	0.59	0.59	0.53	0.65	0.31	0.55	1.00	0.67	0.51	0.47	0.57	0.78	0.61	0.57	0.67	0.63	0.41
DK	0.67	0.80	0.43	0.51	0.61	0.65	0.39	0.47	0.67	1.00	0.63	0.51	0.69	0.73	0.61	0.73	0.67	0.63	0.57
ENa	0.51	0.63	0.39	0.47	0.49	0.57	0.59	0.51	0.51	0.63	1.00	0.67	0.45	0.53	0.53	0.57	0.55	0.51	0.57
ENs	0.47	0.43	0.63	0.71	0.61	0.61	0.59	0.71	0.47	0.51	0.67	1.00	0.57	0.45	0.53	0.53	0.35	0.47	0.49
ES	0.49	0.53	0.65	0.69	0.71	0.59	0.41	0.61	0.57	0.69	0.45	0.57	1.00	0.76	0.59	0.67	0.61	0.61	0.47
FI	0.53	0.57	0.53	0.61	0.67	0.63	0.33	0.53	0.78	0.73	0.53	0.45	0.76	1.00	0.67	0.71	0.65	0.57	0.43
FR	0.57	0.53	0.37	0.45	0.51	0.67	0.49	0.57	0.61	0.61	0.53	0.53	0.59	0.67	1.00	0.71	0.61	0.61	0.67
GR	0.53	0.61	0.45	0.49	0.71	0.59	0.41	0.69	0.57	0.73	0.57	0.53	0.67	0.71	0.71	1.00	0.65	0.73	0.55
HU	0.67	0.80	0.47	0.55	0.57	0.49	0.35	0.51	0.67	0.67	0.55	0.35	0.61	0.65	0.61	0.65	1.00	0.67	0.57
IS	0.67	0.63	0.55	0.55	0.57	0.65	0.47	0.67	0.63	0.63	0.51	0.47	0.61	0.57	0.61	0.73	0.67	1.00	0.57
IEvt	0.57	0.57	0.29	0.33	0.39	0.59	0.65	0.41	0.41	0.57	0.57	0.49	0.47	0.43	0.67	0.55	0.57	0.57	1.00
IEve	0.41	0.37	0.57	0.65	0.67	0.55	0.49	0.65	0.45	0.45	0.45	0.57	0.55	0.63	0.55	0.63	0.45	0.57	0.43
IT	0.47	0.47	0.39	0.43	0.45	0.61	0.51	0.55	0.51	0.51	0.43	0.43	0.53	0.57	0.73	0.69	0.51	0.63	0.65
LV	0.47	0.47	0.67	0.71	0.73	0.53	0.47	0.63	0.63	0.67	0.51	0.59	0.78	0.78	0.49	0.61	0.51	0.55	0.37
LH	0.43	0.47	0.55	0.55	0.65	0.61	0.39	0.47	0.63	0.63	0.47	0.55	0.73	0.73	0.57	0.65	0.51	0.55	0.49
LU	0.53	0.41	0.45	0.53	0.51	0.71	0.57	0.69	0.53	0.45	0.53	0.65	0.51	0.51	0.71	0.63	0.53	0.69	0.67
MT	0.37	0.53	0.69	0.69	0.67	0.51	0.45	0.65	0.61	0.57	0.57	0.61	0.71	0.63	0.47	0.67	0.57	0.57	0.39
NL	0.55	0.47	0.55	0.55	0.57	0.65	0.47	0.67	0.55	0.47	0.51	0.59	0.57	0.53	0.69	0.65	0.59	0.71	0.61
NO	0.59	0.55	0.55	0.71	0.69	0.61	0.39	0.63	0.55	0.55	0.47	0.59	0.65	0.65	0.65	0.65	0.59	0.63	0.45
PL	0.57	0.53	0.61	0.61	0.59	0.63	0.49	0.73	0.61	0.57	0.49	0.61	0.63	0.59	0.67	0.67	0.65	0.69	0.51
POiv	0.47	0.47	0.59	0.63	0.65	0.53	0.39	0.71	0.51	0.55	0.43	0.55	0.73	0.61	0.53	0.73	0.63	0.71	0.45
POcv	0.43	0.47	0.51	0.55	0.69	0.53	0.39	0.67	0.47	0.63	0.51	0.51	0.65	0.65	0.57	0.82	0.63	0.59	0.53
RO	0.45	0.45	0.86	0.86	0.67	0.51	0.41	0.65	0.57	0.49	0.45	0.65	0.76	0.55	0.43	0.51	0.57	0.53	0.39
SI	0.49	0.53	0.57	0.69	0.76	0.59	0.37	0.69	0.65	0.61	0.49	0.61	0.80	0.80	0.63	0.71	0.61	0.57	0.39
SLs	0.53	0.61	0.61	0.69	0.63	0.55	0.29	0.53	0.82	0.65	0.49	0.45	0.71	0.88	0.59	0.63	0.69	0.57	0.39
ES	0.57	0.53	0.73	0.69	0.63	0.55	0.45	0.69	0.61	0.61	0.53	0.53	0.67	0.59	0.59	0.63	0.61	0.73	0.39
SEup	0.49	0.45	0.61	0.73	0.76	0.67	0.45	0.69	0.57	0.57	0.53	0.57	0.63	0.67	0.55	0.67	0.49	0.69	0.47
SEps	0.57	0.65	0.49	0.53	0.47	0.55	0.53	0.57	0.65	0.65	0.61	0.53	0.59	0.59	0.63	0.67	0.65	0.78	0.59
SLa	0.67	0.80	0.47	0.47	0.49	0.49	0.43	0.35	0.67	0.67	0.63	0.39	0.53	0.65	0.49	0.53	0.71	0.55	0.57

NB: a=apprenticeship, b=school-based, iv=IVET, cv=CVET, vt=vocational training, ve=vocational education, up=upper secondary, ps=post-secondary.

Explanation: higher values indicate higher degree of congruency, e.g. DE is most similar to AT and least similar to MT.

Table 6 (contd.)

	IEve	IT	LV	LH	LU	MT	NL	NO	PL	POiv	POcv	RO	SI	SLs	ES	SEup	SEps	SLa
DE	0.41	0.47	0.47	0.43	0.53	0.37	0.55	0.59	0.57	0.47	0.43	0.45	0.49	0.53	0.57	0.49	0.57	0.67
ATa	0.37	0.47	0.47	0.47	0.41	0.53	0.47	0.55	0.53	0.47	0.47	0.45	0.53	0.61	0.53	0.45	0.65	0.80
ATs	0.57	0.39	0.67	0.55	0.45	0.69	0.55	0.55	0.61	0.59	0.51	0.86	0.57	0.61	0.73	0.61	0.49	0.47
BG	0.65	0.43	0.71	0.55	0.53	0.69	0.55	0.71	0.61	0.63	0.55	0.86	0.69	0.69	0.69	0.73	0.53	0.47
BE	0.67	0.45	0.73	0.65	0.51	0.67	0.57	0.69	0.59	0.65	0.69	0.67	0.76	0.63	0.63	0.76	0.47	0.49
HR	0.55	0.61	0.53	0.61	0.71	0.51	0.65	0.61	0.63	0.53	0.53	0.51	0.59	0.55	0.55	0.67	0.55	0.49
CYiv	0.49	0.51	0.47	0.39	0.57	0.45	0.47	0.39	0.49	0.39	0.39	0.41	0.37	0.29	0.45	0.45	0.53	0.43
CYcv	0.65	0.55	0.63	0.47	0.69	0.65	0.67	0.63	0.73	0.71	0.67	0.65	0.69	0.53	0.69	0.69	0.57	0.35
CZ	0.45	0.51	0.63	0.63	0.53	0.61	0.55	0.55	0.61	0.51	0.47	0.57	0.65	0.82	0.61	0.57	0.65	0.67
DK	0.45	0.51	0.67	0.63	0.45	0.57	0.47	0.55	0.57	0.55	0.63	0.49	0.61	0.65	0.61	0.57	0.65	0.67
ENa	0.45	0.43	0.51	0.47	0.53	0.57	0.51	0.47	0.49	0.43	0.51	0.45	0.49	0.49	0.53	0.53	0.61	0.63
ENs	0.57	0.43	0.59	0.55	0.65	0.61	0.59	0.59	0.61	0.55	0.51	0.65	0.61	0.45	0.53	0.57	0.53	0.39
ES	0.55	0.53	0.78	0.73	0.51	0.71	0.57	0.65	0.63	0.73	0.65	0.76	0.80	0.71	0.67	0.63	0.59	0.53
FI	0.63	0.57	0.78	0.73	0.51	0.63	0.53	0.65	0.59	0.61	0.65	0.55	0.80	0.88	0.59	0.67	0.59	0.65
FR	0.55	0.73	0.49	0.57	0.71	0.47	0.69	0.65	0.67	0.53	0.57	0.43	0.63	0.59	0.59	0.55	0.63	0.49
GR	0.63	0.69	0.61	0.65	0.63	0.67	0.65	0.65	0.67	0.73	0.82	0.51	0.71	0.63	0.63	0.67	0.67	0.53
HU	0.45	0.51	0.51	0.51	0.53	0.57	0.59	0.59	0.65	0.63	0.63	0.57	0.61	0.69	0.61	0.49	0.65	0.71
IS	0.57	0.63	0.55	0.55	0.69	0.57	0.71	0.63	0.69	0.71	0.59	0.53	0.57	0.57	0.73	0.69	0.78	0.55
IEvt	0.43	0.65	0.37	0.49	0.67	0.39	0.61	0.45	0.51	0.45	0.53	0.39	0.39	0.39	0.39	0.47	0.59	0.57
IEve	1.00	0.65	0.61	0.57	0.59	0.59	0.53	0.69	0.59	0.61	0.65	0.59	0.67	0.63	0.63	0.67	0.55	0.41
IT	0.65	1.00	0.43	0.59	0.65	0.49	0.59	0.59	0.57	0.55	0.55	0.49	0.57	0.57	0.49	0.61	0.61	0.43
LV	0.61	0.43	1.00	0.71	0.49	0.65	0.51	0.55	0.61	0.63	0.63	0.69	0.65	0.69	0.65	0.69	0.57	0.55
LH	0.57	0.59	0.71	1.00	0.61	0.61	0.51	0.55	0.57	0.55	0.59	0.61	0.61	0.65	0.45	0.57	0.57	0.51
LU	0.59	0.65	0.49	0.61	1.00	0.47	0.82	0.57	0.76	0.69	0.65	0.55	0.59	0.43	0.55	0.59	0.63	0.33
MT	0.59	0.49	0.65	0.61	0.47	1.00	0.45	0.49	0.63	0.65	0.65	0.71	0.71	0.67	0.67	0.63	0.59	0.57
NL	0.53	0.59	0.51	0.51	0.82	0.45	1.00	0.63	0.69	0.76	0.67	0.57	0.65	0.53	0.61	0.57	0.57	0.51
NO	0.69	0.59	0.55	0.55	0.57	0.49	0.63	1.00	0.53	0.55	0.55	0.57	0.73	0.65	0.57	0.69	0.61	0.51
PL	0.59	0.57	0.61	0.57	0.76	0.63	0.69	0.53	1.00	0.69	0.69	0.63	0.67	0.55	0.71	0.55	0.63	0.49
POiv	0.61	0.55	0.63	0.55	0.69	0.65	0.76	0.55	0.69	1.00	0.80	0.69	0.73	0.57	0.69	0.65	0.57	0.43
POcv	0.65	0.55	0.63	0.59	0.65	0.65	0.67	0.55	0.69	0.80	1.00	0.61	0.73	0.57	0.65	0.61	0.53	0.47
RO	0.59	0.49	0.69	0.61	0.55	0.71	0.57	0.57	0.63	0.69	0.61	1.00	0.67	0.63	0.76	0.59	0.55	0.45
SI	0.67	0.57	0.65	0.61	0.59	0.71	0.65	0.73	0.67	0.73	0.73	0.67	1.00	0.80	0.67	0.63	0.55	0.53
SLs	0.63	0.57	0.69	0.65	0.43	0.67	0.53	0.65	0.55	0.57	0.57	0.63	0.80	1.00	0.63	0.63	0.55	0.69
ES	0.63	0.49	0.65	0.45	0.55	0.67	0.61	0.57	0.71	0.69	0.65	0.76	0.67	0.63	1.00	0.59	0.67	0.53
SEup	0.67	0.61	0.69	0.57	0.59	0.63	0.57	0.69	0.55	0.65	0.61	0.59	0.63	0.63	0.59	1.00	0.59	0.41
SEps	0.55	0.61	0.57	0.57	0.63	0.59	0.57	0.61	0.63	0.57	0.53	0.55	0.55	0.55	0.67	0.59	1.00	0.53
SLa	0.41	0.43	0.55	0.51	0.33	0.57	0.51	0.51	0.49	0.43	0.47	0.45	0.53	0.69	0.53	0.41	0.53	1.00

NB: a=apprenticeship, b=school-based, iv=IVET, cv=CVET, vt=vocational training, ve=vocational education, up=upper secondary, ps=post-secondary.

# The changing nature and role of vocational education and training in Europe

## Volume 2: results of a survey among European VET experts

This research paper is the second in a series produced as part of the Cedefop project *The changing nature and role of VET* (2016-18). It discusses national definitions and conceptions of vocational education and training (VET) in European Union Member States, Iceland and Norway and describes how these have changed over the past two decades.

In autumn 2016, Cedefop invited national VET experts to respond to a questionnaire regarding the way national VET systems are understood (in the form of official definitions and overall conceptions). While the survey demonstrates significant diversity across Europe, VET is largely perceived as occupations-specific education and training geared towards securing supply of skilled labour and inferior to general or academic education. The survey also identifies two major trends: significant diversification of VET (in terms of providers, levels and target groups), and strengthening of VET (in the form of renewed emphasis on apprenticeships and increased work-based elements).

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