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

Volume 1: conceptions of vocational education and training: an analytical framework



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Volume 1

Conceptions of vocational education and training:
an analytical framework

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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.

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Cedefop Director

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Executive summary

This research paper is the first in a series produced as part of the Cedefop project *The changing nature and role of VET* (2016-18). Its aim is to review scholarly attempts to define or explain vocational education and training and to develop a theoretical model to analyse national definitions or conceptions of VET and how they have changed over time.

Vocational education and training takes many forms; it is the most heterogeneous of the main education and training sectors in Europe today. It is difficult to grasp VET as a single institutional entity as it overlaps with other parts of the education and training system in many cases. Cedefop takes this diversity into account and defines 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 in the labour market’ (Cedefop, 2014a, p. 292). While sufficiently broad to be accepted by most stakeholders, this and other international definitions do not fully identify the key characteristics of vocational education and training. To overcome this, a multifaceted approach combining three partly overlapping perspectives was suggested:

- (a) an epistemological and pedagogical perspective;
- (b) a system and institutional perspective;
- (c) a socioeconomic and labour market perspective.

While the epistemological/pedagogical perspective draws attention to the ability of the sector to support learning and development of competences, the system perspective focuses on the providers and how they are organised. The socioeconomic perspective draws attention to the functions of VET in society and the labour market. Five to six key dimensions of each perspective and their typical features are discussed and defined, building on extensive previous literature. For instance, the particular knowledge approach to VET, whether it is more experience-based or more discipline-based, is discussed as part of the epistemological and pedagogical perspective. As part of the labour market perspective, the supposed purpose of VET is discussed and it is questioned whether VET predominantly aims at smooth entry into working life, becoming a member of an occupation/profession, or whether it should broadly prepare for changing requirements across working life.

In the second research paper of this series (Cedefop, forthcoming) the developed model has been empirically tested and different understandings of VET in 30 European countries have been illustrated. Apart from its use for this specific purpose, the approach presented could be very helpful in clarifying comparisons of national VET systems, as in the course of peer learning activities.

CHAPTER 1.

Introduction and objectives

This is the first research paper in the set of studies commissioned by Cedefop as part of the project *The changing nature and role of VET* (2016-18). Its aim is to review scholarly attempts to define or explain VET and to develop a multi-perspective model to analyse empirically national definitions or conceptions of VET and how they have changed over time.

Studying the changing role and nature of vocational education and training (VET) requires clarification of what we mean by VET. While most international comparative studies either start with an agreed working definition or implicitly presuppose a general understanding of the term, this project takes a bottom-up approach and asks: How is vocational education and training defined at a national level and has this definition changed during 1995-2015 ⁽²⁾? Beyond that, we are interested in the implications of changes in definitions for policies and institutional structures at national level.

While the initial question is sufficiently clear at first glance, it implies a number of challenges if studied more carefully. First, it presupposes that there is such a thing as a national definition of VET, while taking Cedefop's (international) definition of VET as a starting point. What exactly do we understand by 'definition' in this context? Is it the way a law on VET determines its scope? Is it the way national statistics define VET? Is it the positioning of VET in an overall national education and training system, as often represented in diagrams of education systems? Or, is it more a general conception of VET as perceived by the public or any other actor? Further, we can assume that in most countries there is not one single definition of VET, but a number of definitions either for VET as a whole and/or for its various subsectors. Even in cases where there is one single legal definition (for example in Germany), it may largely deviate from Cedefop's definition, ruling out sectors that could be part of the analysis (for example non-formal continuing VET in the case of Germany).

The second main challenge is that the project assumes that such definitions may have changed in the past two decades. But what exactly do we understand by 'the changing of a definition'? Does the question refer to changes in the

⁽²⁾ This project is focusing on the 1995-2015 period. In many European countries remarkable changes in VET took place before (such as those related to the fall of communism in eastern Europe), which also need to be considered.

wording of the definition, or to changes in the phenomena grasped by the definition? We can assume there will be countries where the law on VET has changed without much effect on the VET system and practices, and countries in which the definition in law has remained unchanged while the system has undergone massive changes. We may not be able to identify any causal relationships in most cases, just assert correspondence or non-correspondence between conceptions of VET and policies and structures.

These preliminary remarks warn us to be very sensitive when talking about definitions and change. We recommend limiting the use of the term 'definitions of VET' to the sort of short paragraph describing or explaining VET in government documents, such as various forms of legislation, government reports, white papers (similar official strategy papers) or national statistics.

An alternative term, better suited to our analysis, is conceptions of VET ⁽³⁾ alongside definitions of VET. By conceptions of VET we mean the connotations of the definition or the set of definitions of VET by VET experts and VET policy-makers. We could also say the 'picture of VET' suggested by the definitions or set of definitions. Rather than just addressing the issue of how VET definitions have changed, we will also address the question: how is VET conceptualised at a national level and how has this conception changed over time?

We will analyse the conception of VET primarily from policy documents, and so could speak more precisely of the national policy conception. This also needs to be distinguished from a public understanding of VET. The discussion of definitions is mainly a concern in scholarly and policy discourse. In everyday life, people rarely take notice of the distinction between vocational and general education (even less so of formal, non-formal or informal learning). When reporting on their learning biography, people usually refer to a particular type of school or programme (for example 'I did an apprenticeship as a bookbinder') without referring to or reflecting on whether or not the programme forms part of a VET sector. Given the number of VET programmes which do not even have 'vocational' in their title (as with much of further education in England) it often happens in such narratives that the term 'vocational' is not used at all. In some countries, there can be quite a gap between, on the one hand, research and policy discourse and, on the other hand, public discourse (VET as seen by the public and in the media). Therefore, the study will try to distinguish between

⁽³⁾ This is different from VET as a model or VET as a system; see also the working definitions provided in the Annex 2.

public understanding ⁽⁴⁾ and policy conceptions of VET, with a clear focus on the latter.

The paper starts with framing the problem and reviewing previous attempts systematically to define or characterise VET (Chapter 2). In the main part (Chapter 3) we discuss essential features of VET as seen from three (partly overlapping) views: an epistemological or pedagogical perspective, a socioeconomic or labour market perspective, and an education system perspective. For each of these perspectives we ask: which key features or components of VET would such a perspective emphasise? In Chapter 4 we synthesise the findings by proposing a multi-perspective model of VET conceptions, by which we intend to make visible the differences in national conceptions and their changes over time. In the outlook in Chapter 5 we discuss the limitations of our approach and how to improve.

⁽⁴⁾ Public understanding of VET is inextricably linked to the term, and its etymology, used in national language to describe VET. While there is an abundance of literature on the difference between English and German terminology resulting in discussion of the terms 'vocation', 'calling', *Beruf*, *Bildung*, etc. (see for example Clarke and Winch, 2007; Brockmann et al., 2011; Billett, 2011), this has been neglected in most of the other languages in Europe. Such nuances, as well as the differences in the expert discourse as opposed to the public discourse and the transformation of meanings of the term VET (and synonyms) over time, could be an interesting approach for study. However, such an ontological perspective is beyond the scope of this project and could be studied only exemplarily.

CHAPTER 2.

Background and state of research

VET takes many forms, and is perhaps the least unitary of education sectors. It is often also the longest standing of institutionalised educational provisions, has long been central to generating the kinds of capacities that societies and communities need, contributed to individuals' development and had a range of distinct educational purposes not addressed by other education sectors. In its contemporary forms in many countries, it also has the greatest potential to engage the widest range of learners within its programmes, institutions and experiences (Billett, 2011).

Since VET is shaped by the particular institutional and historical developments of each country, it is difficult to grasp as a single entity and consistently escapes attempts to be defined as such. This challenge is complicated by the fact that VET takes place, *de facto*, throughout an individual's lifetime, and in formal, non-formal and informal contexts.

Until the early 1990s, a particular feature of initial VET for some countries was that it was terminal, designed for labour market entry only (which is still reflected in parts of the ISCED (international standard classification of education) 1997 classification). However, thanks to the increasingly dominant paradigm of lifelong learning, systematic dead ends have been rare for several years, although the challenge of take-up appears to remain an important issue: from what evidence we have, most people in Europe still use initial VET for labour market entry and very little progress into further higher education (McCoshan et al., 2008). At the same time, VET programmes have also intruded into higher education markets or been upgraded to tertiary programmes (an aspect that will be the subject of subsequent papers). Qualifications frameworks for lifelong learning have started to acknowledge at higher levels VET that was previously classified at lower and medium levels only. In some European countries, the occupational focus is central to VET provision. However, there is quite a range of programmes that are primarily concerned with the occupational preparation of school leavers and those which have a far broader educational purpose, including sustaining individuals' employability across working lives. Provision is also quite often shared between educational institutions and workplaces.

Continuing VET (CVET) presents an even more complex picture. Different forms of formal and non-formal provision abound, alongside the vast amount of informal vocational learning that takes place (learning on the job). The private

(competitive) market in CVET is enormous, especially for short courses without formal validation and recognition and particularly in countries with unregulated markets or market segments. Credit systems, quality assurance and provider accreditation regimes, along with methods to validate non-formal and informal learning, are intended to help deal with such issues, but what evidence exists suggests that their full potential is yet to be realised.

Considering this context, a long-term observer and thorough analyst of VET recently stated: 'Of the key educational fields, vocational education is probably the least homogeneous. Indeed, its diversity in terms of its purposes, institutions, participants and programmes is one of its key and defining characteristics. It serves a broad set of interests in quite distinct ways across a range of nation States. However, this very diversity makes a unitary description or singular account difficult' (Billett, 2011, p. 3).

Some definitions of VET take this diversity into account and purposefully do not include any particular reference to levels or types of provisions. An example of such a definition is Cedefop's, which describes 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, 2014a, p. 292). Although, this provides a very clear and diplomatic view on the subject, in so far as most interest groups will agree, it is limited in terms of an analytical starting point for a study which aims at understanding the changes in the role of VET at national and European levels.

A preliminary starting point for an analytical view on VET is the distinction which can be drawn between VET as an education sector as it is commonly referred to (in a national context) and VET associated with the social development of labour (Clarke and Winch, 2007). This would result in one narrower and one broader understanding:

- (a) VET is mainly understood as a particular sector or set of subsectors of the education system. It comprises a particular set of (formal) education programmes provided by respective institutions (narrower understanding of VET);
- (b) VET is mainly understood as a cross-sectoral term or particular feature of education and training. It is found in various education and training settings including non-formal and informal learning in enterprises and not related to specific education sectors (broader understanding of VET).

In both cases, it remains challenging to arrive at a working definition, which can be applied in the analysis of the subsequent assignments. What forms part of

VET an education sector or constitutes a 'VET system' ⁽⁵⁾ is itself subject to debate. VET is not organised as a 'system' *per se*. In most countries, there is a wide range of VET institutions including State, non-governmental and private providers, each with different interests, administrative structures and traditions. Public formal VET often overlaps with school and tertiary education systems, and ministries of education often share responsibility for VET policy with ministries of labour and/or employment (among others).

This complexity is well illustrated when it comes to applying ISCED to VET. As UNESCO points out, vocational programmes are often harder to classify by ISCED level than general programmes, due to their greater heterogeneity, shorter average duration and higher specificity: 'Due to their comparatively low enrolment and lack of parity of esteem, they are usually not regarded as part of the mainstream and, as a result, some of the student "flows" from and to other educational programmes (be they vocational, pre-vocational or general) are not as clearly established as between general programmes. As a result, they may be misclassified, and later reclassified' (UNESCO, 2006, p. 9). Several countries have recently reclassified programmes from ISCED 3 or 5B to level 4, as they have become more aware of this level's intended profile. Even though the end result may be more accurate, these modifications work to the detriment of national time series analyses; it is often difficult to reassign enrolments for previous years. This also hinders regional comparisons because each country tends to react to these 'trends' at its own pace (UNESCO, 2006).

Even for a narrower understanding of VET, which could have been assumed to be the easier route to a suitable working definition for this project, there is no shortcut and we cannot avoid analysing the essential features that constitute VET. In Chapter 3 we aim at distinguishing constitutive elements of vocational education and training, essential features or characteristics of VET.

There are abundant international studies and papers which characterise vocational education and training, but few authors have done so systematically. Moodie makes such an attempt to define VET by distinguishing at least four dimensions (Moodie, 2008):

- (a) epistemological;
- (b) teleological;
- (c) hierarchical;
- (d) pragmatic.

⁽⁵⁾ For a discussion of VET as a system, see Cedefop et al., 2004.

Epistemological definitions posit that vocational education and training is based on a distinctive way of knowing or learning. Teleological definitions base vocational education's identity on a distinctive purpose such as preparing students for a vocation. Hierarchical definitions locate vocational education within a classification of occupational, educational or cognitive levels. Moodie sees pragmatic definitions of VET either as residual (not elsewhere included) or as 'what happens to be the arrangement in a particular place at a particular time' (Moodie, 2008, p. 39). He argues that a definition is needed which combines all four dimensions, which is a promising approach. However, it needs to be questioned if his own definition of VET succeeds in covering these dimensions adequately and if it really provides a sustainable definition of VET. He defined vocational education and training as 'the development and application of knowledge and skills for middle level occupations needed by society from time to time' (Moodie, 2008, p. 42).

An alternative and more elaborated conceptual framework for VET is provided by Rojewski (Rojewski, 2002; Rojewski, 2009), who also defines the requirements of such a framework. In his view a conceptual framework for technical vocational education and training (TVET) needs:

- (a) to explain the general purpose of VET;
- (b) to reflect the underlying beliefs and perspectives of its constituents;
- (c) to shape current activity and future direction (Rojewski, 2002; Rojewski, 2009).

He states that 'any conceptual framework for TVET must be flexible enough to allow for differences in secondary or post-secondary programmes and accommodate changes in various economies and countries, but at the same time identify underlying assumptions, beliefs and values that are consistent for all types of programmes and are not readily subject to change' (Rojewski, 2002; Rojewski, 2009, p. 20). The framework he finally suggests consists of seven components:

- (a) purpose, theories, models;
- (b) teacher-education;
- (c) curriculum;
- (d) delivery options;
- (e) clientele;
- (f) student assessment;
- (g) programme evaluation.

For each of the components he characterises, in key words, the past, current and emerging situation. While we can easily agree with Rojewski regards his general requirements for a conceptual VET framework, we see some

shortcomings in the way these requirements are met by his own framework. It is difficult to see from the components of his framework what makes it specific to VET (for example, the labour market perspective is completely missing), and the framework is clearly biased to a US context. An internationally better balanced view on VET is provided by Billett, who discusses various features and variants of VET. His monograph on vocational education is a rich source for potential components of a conceptual VET framework but he does not summarise these insights into a systematic framework (Billett, 2011).

CHAPTER 3.

Defining features of vocational education and training

In contrast to the categorical approaches taken by most international organisations defining of VET (including Cedefop, the European Commission, UNESCO, the Organisation for Economic Cooperation and Development (OECD), the International Labour Organisation (ILO)), Moodie, Rojewski and Billett provide an empirical-conceptual approach by distinguishing core VET dimensions or features, which can subsequently be described and analysed in detail. We suggest following their line of reasoning and looking at the conception of VET from three perspectives:

- (a) an epistemological or pedagogical perspective;
- (b) an education system perspective;
- (c) a socioeconomic or labour market perspective.

While these perspectives are partly overlapping and not independent of each other, they allow us to structure the various features of VET so that we can maintain an overview.

3.1. VET from an epistemological and pedagogical-didactical perspective

It can be argued that vocational education's identity is rooted in distinctive knowledge production, representation, use and transfer, which can be associated with distinctive ways of teaching and learning. There is a certain canon among VET researchers in this respect, starting with referring to the distinction Aristotle made in the *Nicomachean Ethics* (SparkNotes, 2003) between *episteme* (pure science), *techne* (art or applied science), and *phronesis* (prudence or practical wisdom), the latter two forming the backbone of a theoretical foundation of VET. From an epistemological point of view, we could summarise these accounts as 'tacit knowing view' as opposed to a 'cognitive view' (Neuweg, 2004). A cognitive view would understand knowledge as information and emphasise that it is mainly explicit (know-that), abstract, standardised and impersonal. Such a view would argue that knowledge is mainly produced by scientific disciplines and applied in practice. For such knowledge, teacher-centred learning would be most efficient, as teaching is seen as an offer of structured information to be processed by

students. The learning result is also explicit knowledge (rules, theories), which can be tested by paper and pencil. In contrast the tacit knowing view understands knowledge as experience and emphasises that knowledge is mainly practical (know-how, skills), implicit, personal and situational. Learning means making practical experience (learning by doing) and is seen as a social process that happens through socialisation in communities of practice. Teaching mainly means to create the learning environment in which students can gain experience.

Although often referred to as a particular feature of VET, we can find tacit knowing views in some contexts traditionally not associated with it this may be problem-based and case-study learning in practice-oriented higher education programmes (Markowitsch and Messerer, 2006) or learning in a Montessori school or in organisational learning (Argyris and Schön, 1996). In the European policy discussion increasing attention has been given to the term 'work-based learning' in recent years. This is related to the fact that formal systems of vocational education and training that integrate extended phases of practical learning within the company seem successful in integrating young people into the labour market (European Commission, 2013). However, here it is important to point out that work-based learning is primarily a specific way of organising learning, which can be realised in either of the two views. The tacit knowing view would assume that certain dispositions could not be learned in any other context than practice itself. In any case, learning in practice or work-based learning is an essential feature of a modern understanding of VET.

The distinction between the tacit knowing view and the cognitive view is also important with regards to a concept often used in close alliance with VET: technical education. This is often associated with sub-baccalaureate level education programmes, for example in technical colleges that lead to respective intermediate level technical occupations. What is important here is that the knowledge that technical education would usually refer to, as the object of educational delivery processes, would be derived from the body of relevant scientific disciplines. The body of knowledge would not be the practical knowledge of the occupation or profession itself but parts of the available scientific knowledge that can be applied to work contexts (applied knowledge). This goes along with connotations of appropriate forms of delivery and the way this knowledge can be used in work contexts. In an ideal typical view, the notion would be that the respective 'applied' scientific knowledge can be transferred by the learner from the (school-based) learning situation to the real work situation, in which the knowledge can then be applied. This view has been strongly challenged by proponents of the tacit knowing view (Schön, 1983) and the

concept of 'boundary crossing' (Akkerman and Bakker, 2012) that puts emphasis on the equivalence of both forms of knowledge for education.

These distinctive and conflicting views on VET ⁽⁶⁾ can also be explained by its different historical origins. One (practical knowledge) is rooted in the tradition of master craftsmen supervised by craft guilds of the Middle Ages, who were entitled to employ young people (apprentices) as an inexpensive form of labour in exchange for formal training in the craft. The other (applied knowledge) can be dated back to early military academies of the 17th and 18th century at which separation between engineering (and training for engineers) and the workshops (such as producing artillery) manifested itself.

Corresponding to these epistemological viewpoints we can also identify distinct pedagogical-didactical perspectives, for instance by contrasting the master-apprentice principle with the teacher-classroom setting. However, the pedagogical principle of master-apprentice has developed over the years more and more into a dual principle, combining learning at work and in school, and is currently being discussed under the concept of crossing boundaries. Within the tradition of apprenticeship is a development which started with only work-based learning, to which some schooling (in terms of further education) was added mainly in the 19th century; this was followed by reforms of the 20th century which manifested the school as an equally important learning site ⁽⁷⁾. Since the beginning of this century there has also been a rise in a third learning site for apprenticeships, such as learning in inter-enterprise training centres in addition to learning at the school and the workplace). Formal VET programmes that are exclusively work-based are rare, but for continuing VET and vocational learning in informal contexts (such as informal apprenticeships) this is still the dominant form. These 'educationalised' forms of traditional VET need to be distinguished from 'vocationalised' forms of schooling. The latter also form part of VET, but are rooted in the traditional classroom setting while also integrating work-based elements.

Both the principle of duality and the master-apprentice principle can be identified in all kinds of learning and educational settings: examples are universities for art or music in the form of 'master classes' or dual higher

⁽⁶⁾ This conflict between the two conceptions of knowledge are continuing in scholarly and curriculum debates. For example, it has been debated how far the introduction of large-scale testing challenges curricular concepts based on the tacit knowing view, since available time and resources need to be targeted to fulfilling rigid academic standards. See Grollmann, 2008.

⁽⁷⁾ Different concepts have been used so far to describe this process: formalisation, secondarisation (Gallart, 1988) or educationalising (Meyer, 2006).

education studies. This perspective draws our attention to educational areas and learning situations that need to be considered in a broader understanding of VET.

3.2. VET from an education system perspective

In the previous section we introduced two distinct forms and traditions of VET (apprenticeships and technical schools) which continue to have an effect on contemporary conceptions of VET. In the second half of the 20th century we saw the emergence of new VET sectors. The massification of higher education and (a new) vocationalism resulted in increasing provision of VET at higher levels, while the economic crises of the 1970s and the recessions of the early 1980s and 1990s resulted in new vocational programmes addressing youth unemployment and programmes for retraining (often forming part of active labour market policy). There was a general increase in the variety of forms of VET, types of providers, levels and funding sources and mechanisms. We summarise the perspective which mainly looks at these aspects as an education system perspective, which is also the approach taken by international statistics. We first discuss how the definition of VET in international statistics evolved and then consider further characteristics usually emphasised from this perspective.

An education system perspective would look at the way VET as an institution has evolved and continues to evolve over time ⁽⁸⁾. However, there are various ways in which VET can be conceptualised as an institution, applying different concepts such as VET as a sector ⁽⁹⁾, VET as a system ⁽¹⁰⁾, VET as organisational field ⁽¹¹⁾, VET as a community ⁽¹²⁾, or VET as a culture (Heikkinen, 2004). Recent literature on cross-country comparative institutional research allows the synthesis of these approaches, taking as a common starting point the organisational population, which makes up VET, and the relations between its elements. Institutional approaches look at those organisations or units that, as a whole, constitute a recognised area of institutional life: providers, ‘customers’, regulatory authorities, organisations running public (co)funding (VET providers),

⁽⁸⁾ Compare for example Thelen, 2004.

⁽⁹⁾ See for example Moodie, 2008.

⁽¹⁰⁾ See for example Greinert, 2004.

⁽¹¹⁾ Not yet applied to VET, but for adult education; see for example Hefler and Markowitsch, 2013; Scott, 2008.

⁽¹²⁾ Not yet systematically applied to VET, but frequently to higher education; see for example Barnett, 1994; compare also Wenger, 1999.

types of programmes, target groups, and governance structures. VET as defined in statistics also forms part of this institutional perspective. However, a synchronic analysis of VET, as defined in statistics and frequently taken as a starting point, would not shed much light on the phenomenon that interests us. In contrast, a diachronic study or analysis, concerned with the evolution and change of international definitions of VET ⁽¹³⁾ in statistics over time, could provide a first reference point, before then addressing national definitions (which is the main focus of this assignment).

Changing approaches in statistics in classifying VET are likely to reflect changes in the overall education landscape ⁽¹⁴⁾. In turn, classifications determine the statistical visibility of VET and vocational qualifications in the labour market, and thus are likely to have an impact on the shared visions of VET and its relevance for the world of work. The international standard classification of education (ISCED) has, since 1976, provided the key instrument for cross-country comparison of education and it is worth analysing how VET has been conceptualised in this classification. The first version of ISCED (1976) contained neither a definition of VET nor of VET programmes. Programmes were classified only according to the level of education (for example upper secondary) and field of education (for example agriculture). Only by combining these two dimensions could a proxy for VET programmes be realised.

Only in 1997 was a definition for VET introduced and the programme orientation (general, pre-vocational, vocational) implemented. However, for many studies the programme destination (direct entry into the labour market or access to higher education) was more important in distinguishing VET from general education. While the definition of VET has not really changed through the most recent release of 2011, programme orientation and destination have been complemented by type of qualification (full/partial). There is also the explicit

⁽¹³⁾ Consulting here the continuing work of interagency working group initiatives (ILO; OECD; European Training Foundation (ETF); Cedefop, etc.), for example on the definition of work-based learning (WBL) and TVET.

⁽¹⁴⁾ When ISCED 76 was implemented, a significant share of adults did not enter upper secondary education and vocational education on upper secondary level marked already a distinguishing educational achievement in many countries. The proportion of higher education graduates was low. Four decades later, in many countries, the vast majority of the age cohort complete upper secondary education and roughly half of the cohort enter higher education or at least post-secondary education prior to their 30th birthday. In most countries, at least some vocational programmes have clearly declined in market value and are now at the bottom of the informal hierarchy of educational credentials.

intention to implement on levels 6 to 8 a distinction between academic and professional.

These changes in the global statistical definition and classification of VET are remarkable. From an initial situation (mid-1970s) in which the distinction between VET and general education was apparently less important, we arrive by the mid-1990s at a conception which essentially understood VET as being terminal. At the beginning of this decade the international classification began to acknowledge both a trend towards modularisation of education (distinguishing between full and partial qualification) and the vocational drift in higher education (distinguishing between academic and professional) ⁽¹⁵⁾.

From this brief digression into international statistics we can learn at least three distinct features of VET, of which the first two are in decline:

- (a) VET as terminal programmes not providing access to higher education;
- (b) VET focused on the middle level of education (ISCED 3, 4);
- (c) VET programmes oriented towards technical or occupation-related content.

In Table 1 we aim to specify these aspects and to discuss further important dimensions from an education system perspective.

⁽¹⁵⁾ This also poses the question of what we understand by 'higher VET', which will be the focus of Volume 5 of this project. Cedefop (2011) describes professional education as 'preparation for a profession that needs specialised knowledge within a profession or vocation. Very often leads directly to an exact profession or work'. OECD (2012, p. 128) defines the VET dimension of post-secondary vocational education and training as: 'programmes ... that prepare for direct entry to the labour market in a specific profession, are of one year or more in length (full-time equivalent), are provided beyond upper secondary level (ISCED 4, 5), and lead to recognised qualifications' (OECD, 2012, p.19). The HAPHE (harmonising approaches to professional higher education in Europe) project refers to the following characteristics of the VET dimension in their definition of professional higher education programmes (PHE): 'professional higher education is a form of higher education that offers a particularly intense integration with the world of work in all its aspects, including teaching, learning, research and governance' (Camilleri et al., 2014, p. 24).

Table 1. **Changes in the definition and classification of vocational programmes in ISCED 1977, 1997 and 2011**

Year	Definition: vocational education...	Classification approach
2011	... is designed for learners to acquire the knowledge, skills and competences specific to a particular occupation, trade, or class of occupations or trades. Vocational education may have work-based components. Successful completion of such programmes leads to labour market-relevant vocational qualifications acknowledged as occupationally oriented by the relevant national authorities and/or the labour market.	Programme orientation (vocational or general) and programme destination (access to higher education) is complemented by type of qualification (full/partial). On level 6-8, a distinction between 'academic' and 'professional' is intended, but not yet implemented.
1997	... is mainly designed to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation or trade or class of occupations or trades. Successful completion of such programmes leads to a labour-market-relevant vocational qualification recognised by the competent authorities in the country in which it is obtained (e.g. Ministry of Education, employers' associations).	Programme orientation (vocational or general) and programme destination (labour market, access to higher education, etc.) is introduced by which VET be identified.
1977	No definition of VET or vocational programme provided.	Only by combining the 'level of education' and 'field of education' could VET be represented.

Source: OECD, 1999; OECD et al., 2015.

The simple original formula of VET as 'middle level education not leading to higher education' no longer holds true. Although most designated VET programmes and VET learners can be found at the middle level of education (ISCED 11 levels 3 and 4), there are programmes at all levels. Many basic education programmes, such as for migrants, with clear vocational components have emerged in the past decade in Europe and are (would be) classified as lower level (ISCED 11 level 2). Many of them are not (yet) formal programmes and their orientation and purpose may also depend on the source of funding (for example labour, immigration or education budgets). The idea of classifying the increasing number of vocationally oriented programmes at higher levels (ISCED 11 levels 5 to 7 as 'professional') does not really improve transparency. It would be more relevant to distinguish between:

- (a) programmes of advanced further training which, in terms of the main providers (companies and further education providers), the mode of governance (high level of coordination) and the source of funding (companies), come close to the type of company-based training at upper

- secondary level best illustrated by apprenticeships (for example master craftsmen programmes);
- (b) specialised vocational schools or vocational colleges (some of which were transformed into universities);
 - (c) vocationally oriented university programmes.

The last of these usually identify themselves as higher education as opposed to vocational education, irrespective of their clientele or orientation. For our analysis of the conception of VET, we are less interested in which VET programmes exist at which levels than in the dominant national picture. Is VET, as suggested by its national definitions and mission statements, mainly associated with lower levels of education, middle levels of education, middle levels plus some higher VET, or mainly higher levels?

We will probably find some sort of VET, in terms of professional education, at the higher end of an educational and occupational hierarchy in all countries. This may be through academic studies for liberal occupations such as lawyers, notaries, engineers, architects, doctors, or accountants, or through more work-based programmes such as for aircraft or sea captains. However, the former are rarely associated with VET and the latter form a minority with little influence on the overall conception.

Directly linked to level is the age of learners and student identity. We can assume that VET which is mainly associated with higher levels will be targeted at young adults, while VET which is restricted to upper secondary education may mainly target adolescents. A dispersed aged structure within VET could be an indicator for a more pronounced lifelong learning perspective. A strong indicator for a particular conception of VET is also the legal status of VET learners: are they predominately students/pupils, workers or do they have a special status, for instance as apprentices? If there is no predominant status, and the diversity of VET learner identities is the particular characteristic of VET in a certain country, this might also be an indicator of a differentiated system.

For workers or novice workers to be the dominant group can only be expected if companies are among the key providers, in which case it is also likely that companies are an important source of funding. If schools and higher education, mainly financed by the State, are the main providers of VET we could also assume a predominately State-led governance mode. Due to their flexibility, further education providers are usually better suited to attracting money from different sources including spending on active labour market measures. However, some countries finance their VET systems exclusively from employment/labour market budgets; this suggests that the main focus of VET is

addressing youth unemployment as well as lower attractiveness of VET compared to general/academic education.

The question of parity of esteem between vocational and general education probably forms part of any conception of VET, although it is rarely explicitly referred to in official definitions (Stenström and Lasonen, 2000). It is associated with the sort of deeper beliefs and assumptions about VET that seem to be obvious to every citizen in the country, but difficult to understand for outsiders. As such, ‘measured’ attractiveness (Cedefop, 2014b) is only a weak indicator of parity of esteem, as there is no common international ground for measuring national cultures. Parity of esteem between vocational and general education is mainly determined by the dominant provisions of VET and the occupations or professions they prepare for, rather than the various minority provisions, such as the liberal occupations mentioned above. Although difficult to explain to outsiders, the question of parity of esteem is a very good starting point for diagnosing national conceptions of VET. We can start by scrutinising a simple judgement like ‘VET is lower (or equal) to general education’, asking: ‘Why? And which part of VET do you have in mind, when making such a judgement?’ The response also depends on the person asked.

3.3. VET from a socioeconomic and labour market perspective

VET contributes to social stratification by providing access to particular career pathways, also backing the social reproduction of fields of economic activity. It contributes skills, competences and attitudes required by companies and their work systems, allowing workers to cover the requirements of their given workplace, while workplaces allow the acquisition of skills (workplaces as training slots; Thurow, 1975). Companies represent both the demand and the supply sides in a market for skills (Green, 2013). VET provides benefits for employer organisations and individual workers alike, giving centre stage to the questions such as who contributes how much to the costs of VET and how are benefits distributed across the ‘industrial divide’. These questions are mainly discussed by education economists (Becker, 1994), yet, also by sociologists working on employment systems and industrial relations.

Cross-country comparative research has shown that national approaches to VET differ greatly when it comes to the role of VET in social stratification, work organisation and matching on the labour market. These differences could be – yet are not necessarily – mirrored in differences in national conceptions of VET across countries. The role of VET and the range of approaches covered by the

term differ in the transition from education to the workplace and the socioeconomic stratification as a whole. Individuals engaged in VET of a particular type – and at a particular point of time during their life course – might experience poor or bright career opportunities compared to individuals with a similar number of years in general education. They might or might not be better off as individuals lacking any education beyond compulsory schooling.

VET prepares for different levels of jobs and career pathways within the occupations hierarchy. National employment systems differ with regard to the role and timing of initial and continuing vocational education; initial vocational education prepares for different sets of job roles. Cross-country comparative research on work and employment systems provides typologies for contrasting the most usual combinations of work organisations and related occupational structures and IVET systems. Following the analysis of Maurice and colleagues (1986) and related studies, national work systems could be understood as dominated either by the so-called organisational space or occupational space.

When organisational space dominates, firms tend to organise work processes in what they perceive their best interest and in an idiosyncratic way, with large differences in work organisation and job demands between firms. Workplaces are shaped in accordance with the chosen way to organise the work process, with little consideration paid to the qualification and skills of the job holders. Most jobs do not require initial vocational education, yet jobs for unskilled workers are organised in chains, starting with jobs involving only elementary skill demands and leading to jobs with more advanced skill demands. Most learning takes place on the job or in short spells of off-the-job training. Workers move on from job to job, with the speed of movement determined by their demonstrated skills and their ability to acquire required skills on the move. Typically, workers deal only with routine tasks, while any exceptions from the rule are addressed by technicians or managers⁽¹⁶⁾. For workers on the blue-collar job ladder, there is typically no opportunity to join the ranks of managers or professionals. Beyond a large group of vocationally unskilled workers, firms employ groups of technicians and professionals in management and research. These groups are qualified in forms of VET on post-secondary or tertiary level and hired directly after graduation. Organisational space is thought to fit well with simple and Tayloristic forms of work organisation, yet, not so well with lean

⁽¹⁶⁾ As Koike and Inoki (1990) demonstrated, for workplace learning and the role of VET, it is crucial whether or not the extraordinary tasks are solved by specialist forces or by ordinary workers as part of their broader job roles.

models of production (Holm et al., 2010) ⁽¹⁷⁾. In countries ⁽¹⁸⁾ where organisational space dominates, large groups of workers may be without formal vocational qualifications, having acquired nearly all of their vocational skills on the job; there may also be small groups of vocationally trained technicians and comparatively larger groups of management professionals with training in the higher education sector. Initial vocational education and training (IVET) at secondary level is typically marginalised, often more remedial in nature and poorly rewarded in the workplace. The exceptions are post-secondary technical schools, preparing for technical roles. The proportion of professionals of all kinds – including managers – who have acquired professional skills within higher education is generally quite high. Wage differences between unskilled and skilled workers on the one side and professional groups (technicians, managers) on the other are marked. Given the restricted opportunities for everyone without post-secondary or higher education, the prestige of IVET at upper secondary level is poor and there is a strong preference for completing at least a more selective, academic upper secondary education before entering the workplace. IVET at secondary level mainly prepares students with weak school performance or former dropouts for entering any first job. Examples for countries with work systems dominated by organisational space include France, Japan, the United Kingdom and the United States, although countries within the group differ considerably.

When occupational space dominates, firms organise work processes by exploiting broad and standardised vocational qualifications, which allow graduates to perform a multitude of job roles. Workers are less attached to (chains of) workplaces; they function as parts of multiply skilled, self-organising teams, built out of more novice and experienced workers, which can deal with both routine and extraordinary workplace requirements. Typical workplaces and

⁽¹⁷⁾ Discretionary modes of work organisation may also be achieved by splitting off skill-demanding activities and organising them in ‘professional organisations’, which employ mainly graduates of the higher education systems with only a small number of support staff.

⁽¹⁸⁾ Lean models are possible, when firms hire workers with comparatively high levels of general education (holding at least an academic upper secondary diploma) and provide extended spells of on- and off-the-job training in extended inception phases. These extended in-house training programmes can account for a significant part of vocational education and training in countries where the organisational space dominates. Arrangements may differ at sectoral level from the dominating features at country level. For example, work organisation in the logistic sector may clearly correspond to the organisational space model, even when occupational space dominates a country’s work system as a whole. See Hefler and Markowitsch, 2012.

skill demands are much more similar across firms belonging to one economic sector. Demands in more standardised workplaces and the content of standardised vocational qualifications are continuously adjusted to each other. Workers holding a vocational qualification could change between firms, without seeing much of their skills becoming obsolete. Firms can draw on a large stock of vocationally qualified workers, as young people are motivated to enter vocational education pathways and little learning is devoted to skills required for a particular firm only.

Most workers in manufacturing and service alike hold vocational qualifications, supported by a small fraction of unskilled workers and a comparable small fraction of managers and engineers from higher education. When occupational space dominates, discretionary as well as lean modes of work organisation are the most likely to be applied, while simple or Tayloristic modes of work organisation seem less appropriate. Starting from vocational education at upper secondary level, it is possible to move on to the ranks of technicians and mid-level managers, although acquiring a formal degree in further education might be requested.

Wage differentials between vocationally skilled workers and employees with post-secondary and tertiary education are comparatively low, as pay for vocational skills is comparatively high. Beyond traditional pathways for moving up the blue-collar career ladder (for example the craft master qualification), various forms of continuous higher VET at post-secondary and tertiary level grow in importance. IVET at upper secondary level is a key part of the education system, enjoys its own legitimacy and high prestige. It may allow for smooth entry into the labour market, particularly where IVET is organised in a German-type apprenticeship approach. IVET grants membership to an occupational group and – comparable to traditional professions – novice workers are expected to develop with, and contribute to the development of, the particular occupational group over the whole life span of their careers. Examples of countries where occupational space dominates include Austria, Denmark, Germany, the Netherlands and Switzerland.

Table 2. **Summary of key dimensions of occupational versus organisational space**

	Dominance of organisational space	Dominance of occupational space
Occupational structure/hierarchy	High number of low skilled, low number of vocationally skilled at medium level, high number of skilled employees with qualifications at post-secondary or tertiary level. Vocationally skilled workers are mainly: <ul style="list-style-type: none"> • semi-skilled workers; • technicians. 	Low number of unskilled, high number of vocationally skilled workers at medium level, low number of employees with post-secondary or tertiary degrees. Vocationally skilled workers are mainly: <ul style="list-style-type: none"> • skilled workers with a qualification at upper secondary level.
IVET prepares for	<ul style="list-style-type: none"> • entry-level jobs 	<ul style="list-style-type: none"> • membership in an occupation/ (para)profession

Source: Cedefop.

The dichotomy of occupational versus organisational space as summarised in Table 2 can guide reflection on a country's specific conception of VET from a labour market perspective, just as the one on cognitive and tacit knowing views could do from an epistemological perspective. These are used here as contrasted ideal types, which can only be found for parts of the labour market; usually diverse hybrid spaces exist. Further, the institutional changes (for example in terms of liberalisation) that countries have experienced in the past two decades may be profound, so that initial attributions may not be fully adequate anymore (Thelen, 2014).

There are various other typologies and approaches from the sociology of labour markets literature (internal versus external/occupational labour markets; primary and secondary labour markets) ⁽¹⁹⁾, and life-course research on the transitions from school to work (organisation, occupational, Mediterranean, professional and transitional labour markets) which could be considered to guide our thinking on VET conceptions ⁽²⁰⁾. Economic research in human capital theory has also made significant contributions relevant for understanding IVET and CVET ⁽²¹⁾.

⁽¹⁹⁾ See for instance, Doeringer and Piore, 1971; Osterman, 1984; Fligstein and Byrkeflot, 1996; Marsden, 2007.

⁽²⁰⁾ See for instance, Shavit and Müller, 1998; Shavit and Müller, 2000; Ryan, 2001; Müller and Gangl, 2003; Brzinsky-Fay, 2007; Rogowski, 2008; Raffe, 2014.

⁽²¹⁾ Booth and Snower, 1996; Acemoglu and Pischke, 1999; Brunello et al., 2007; Hanushek et al., 2011; Cedefop, 2011; Cedefop, 2014c; Hanushek et al., 2016.

Approaches taking a socioeconomic or labour market perspective as their starting point share a functional perspective on VET. It is understood mainly by its broad range of functions within social and economic processes, summarised by Billett as follows (Billett, 2011, p. 137):

- (a) cultural reproduction, remaking and transformation of occupational practices: for example the continuity, maintenance and transformation of culturally derived occupational practices that are essential to countries, communities and individuals;
- (b) economic efficiency: for example meeting particular occupational requirements;
- (c) societal continuity: for example reproducing societal norms and values;
- (d) individuals' fitness for particular occupations and readiness to engage in work life: for example meeting students' needs and readiness to work and learn;
- (e) individual progression and continuity: for example supporting development throughout working life.

VET definitions provided by international organisations typically also adopt a functional view of VET, yet emphasise only one or a smaller number of the dimensions outlined. Compare the following examples: 'a means of preparing for occupational fields and for effective participation in the world of work' (UNESCO/ILO); 'a method of facilitating poverty alleviation' (UNESCO/ILO); '[a means] to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market' (Cedefop). The socioeconomic, transitions-related perspective (preparing youth for the labour market) has emerged as dominant in the functional view of VET, followed by the importance of VET for economic efficiency. However, it has been stressed by different approaches, from pedagogy to the sociology of innovation, that workers' skill profiles do not only have to match workplaces, but that skilful, knowledgeable workers can and do contribute to change, knowledge creation and innovation in the workplace (Nonaka and Takeuchi, 1995). Vocational education and training contributes to workers' capabilities to promote continuing innovation and improvement in the workplace; it may be the backbone of a country's innovation system (Streeck, 1991). For some countries, vocational education and training and skilled work requiring skills at intermediate, non-tertiary level, is perceived as being integral to the respective national innovation system. The fact that workers not only adapt to the organisations they work in, but also exert an influence on the way the organisation changes, is captured through many transnational surveys, such as the European company survey or the European survey on working conditions. In Germany, belief in VET as a

fundamental driver of innovation has found its way into vocational education and training curricula through the idea of *Gestaltung* (in the sense of shaping skilfully a meaningful total), reflecting an ability to be acquired by vocational qualifications, from level three of the German qualifications framework upwards. This also shows that, at a discursive level, there can be a close connection between humanitarian goals and economic functionalities (Rauner, 1988).

CHAPTER 4.

Towards a multi-perspective conceptual framework of VET

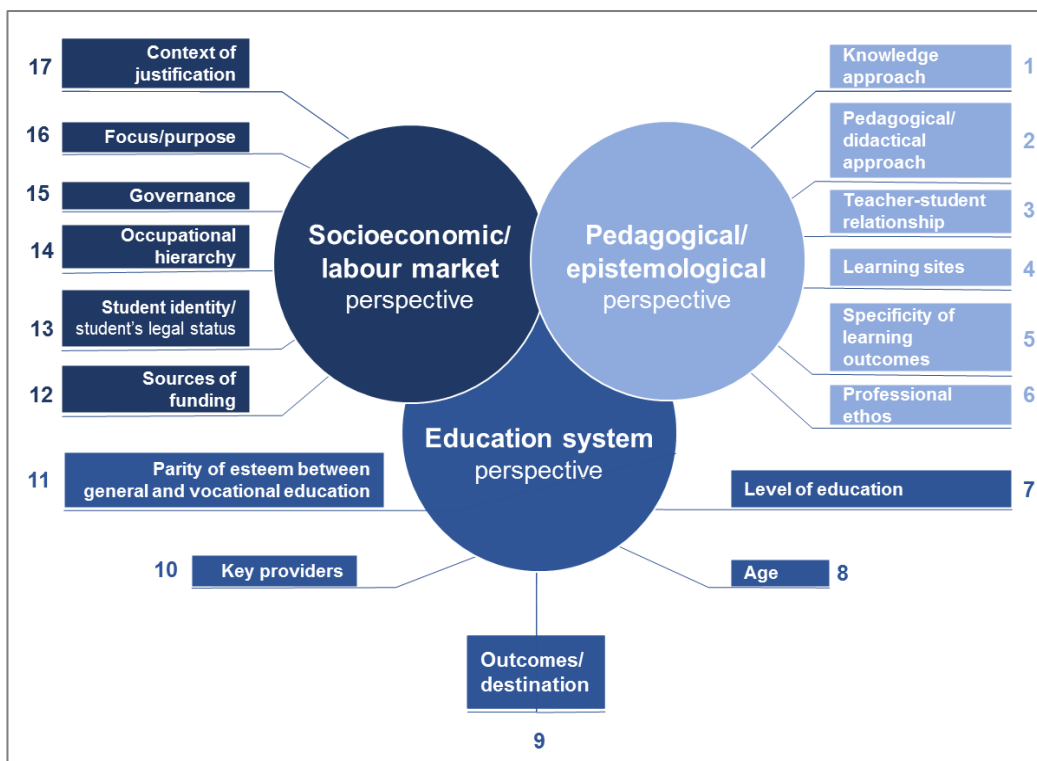
The way vocational education and training might be conceived from a pedagogical point of view differs from a theory of knowledge point of view; economists and labour market sociologists would point at different characteristics and so do people in education administration. In Chapter 3 we discussed a number of features that are crucial for vocational education and training, or at least were crucial at some point in history, from different perspectives.

This list of features is not comprehensive: we could have added several dimensions that look equally relevant. From an education system perspective the scope of courses would be interesting, since the range includes both programmes with very specific purpose (for example for licensed roles such as workplace safety, lifting, welding) and multi-year courses with high-level qualifications associated with paraprofessional occupations or degree programmes leading to prestigious occupations such as law and medicine. Another relevant dimension for this perspective is the extent of articulation between VET and higher education programmes. We could have also been more specific on target groups, such as young school leavers, women returning to working life, or the long-term unemployed or on selectivity of access. It makes a difference whether programmes are selective according to prior educational performance or if there is no selection at all, and also if companies are in charge of selection. Related to this is the question of whether VET is free of charge for the learners, if they have to pay fees or if they receive remuneration during their programme, as in the case with many apprenticeships. It would be interesting to see how varied are providers, and whether key providers also extensively provide continuing education and training, or if such provision is limited. From a labour market perspective, the dominating forms of work organisation, such as whether organisational, occupational or professional, would be interesting. We could have made a reference to the degree of regulation, such as VET leading to regulated occupations or those that are less/not regulated.

This list of features of VET could be easily extended and be developed into an even more comprehensive system for characterising VET programmes and subsystems. However, as our aim is to get a broad overview on the dominant national conceptions of VET we have limited ourselves to such aspects that are recurrent in definitions of VET. We reduced a more comprehensive list of

features to the one shown in Annex 2 and summarised in Figure 1. After piloting the work in five countries we reduced the list and shaped the concepts further. We intended to use this list of descriptors both for the analysis of current conceptions of VET and changes in conceptions in the past two decades. However, at this stage we deliberately decided not to propose any direction of change (as for example in the conceptual framework of Rojewski), but put the variants of VET side by side. The ultimate goal remains to identify both current patterns of VET in Europe and patterns of change.

Figure 1. **A conceptual framework to characterise VET**



NB: For each dimension, two to five options (variants) were developed. The full list of variants can be found in Annex 2.

Source: Cedefop.

In its most simple application, this framework should allow us quickly to identify and classify aspects referred to in definitions or explanations of VET at a certain time. For example, we can argue that Cedefop's definition of VET is very broad as it only refers to occupation-related skills and the transitional and

matching aspect of VET ⁽²²⁾ (Table 3). The UOE (UNESCO, OECD, Eurostat) definition of VET, in contrast, is narrower as it adds to these features the work-based component (though optional) and restricts VET to formal education. In place of limited definitions (in terms of aspects mentioned), the German definition of VET (as provided in the German Vocational Training Act) also refers to occupational hierarchy (qualified occupation/work), learning sites ('allow for job/work experience'), the kind of knowledge (*berufliche Handlungsfähigkeit*) and the changing requirements across working life. However, these examples also demonstrate that an analysis that is restricted to formal definitions of VET falls short of providing a distinct picture of VET in the respective country. For this reason, we need to shift the focus from definitions to conceptions of VET as suggested in the introduction.

Table 3. **Examples of VET definitions and features of the conceptual framework they refer to**

Definition	Dimensions referred to:	Variants emphasised:
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).	<ul style="list-style-type: none"> • Specificity of learning outcomes • Main focus 	<ul style="list-style-type: none"> • Occupation-specific or broader vocational-field-related • Supply of skilled labour
VET is designed for learners to acquire the knowledge, skills and competences specific to a particular occupation, trade, or class of occupations or trades. Vocational education may have work-based components. Successful completion of such programmes leads to labour market-relevant vocational qualifications acknowledged as occupationally oriented by the relevant national authorities and/or the labour market (UOE).	<ul style="list-style-type: none"> • Specificity of learning outcomes • Learning sites • Main focus • Outcomes/destination 	<ul style="list-style-type: none"> • Occupation-specific or broader vocational-field-related • Some work-based learning (optional) • Supply of skilled labour • Occupational qualifications or rights
'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	<ul style="list-style-type: none"> • Knowledge base • Learning sites • Specificity of learning outcomes • Outcomes/destination 	<ul style="list-style-type: none"> • Practical knowledge/ experience-based • Multiple learning sites • Occupational qualifications or rights • Occupation-specific • Distinct occupational or

⁽²²⁾ Equally, it is acknowledged that Cedefop's definition could also be read according to aspects it does not refer to; for example, Bjørnåvold interpreted the definition as 'not linked to one particular institution; not limited to a particular level of education and training, covers all learning domains, knowledge, skills and overarching competences; leans towards the combination of theoretical and practical learning; situated, context-bound and solution-oriented learning; not purely subject or discipline-oriented – problem-and-solution-oriented' (Bjørnåvold, 2015, p. 5).

Definition	Dimensions referred to:	Variants emphasised:
occupational activity in a changing working world. Initial training shall also enable trainees to acquire the necessary occupational experience' (extract from the German Vocational Training Act).	<ul style="list-style-type: none"> • Socialisation • Occupational hierarchy • Focus of content 	<p>professional ethos</p> <ul style="list-style-type: none"> • Skilled worker • Becoming a member of an occupation • Broad preparation for changing requirements across working life

NB: Compare dimensions and variants with the list in Annex 2.
Source: Cedefop.

The example of Austria demonstrates, using the framework, how the conception of company-based VET has changed over time and how changes in the understanding of VET become manifested in law. The Austrian Vocational Training Act, which regulates the company-based part of the apprenticeship system, came into force in 1969 (the same year as the German Vocational Training Act). It primarily regulated the duties of apprentices and their masters and so is more a labour law than an education law: it only detailed the master-apprenticeship relation, without reference to other features of VET. However, in 2015 it was amended by a general paragraph on the objectives of vocational training which now refers to a skilled labour force, the matching and transition aspect as well as VET's contribution to economic growth (see Box 1).

This tentative application of the analytical framework already shows some strengths and weaknesses. As Table 3 shows, the framework allows a quick and systematic analysis of the characteristics of VET referred to in national policy definitions. The Austrian example in Box 1 shows how the change of definitions over time could be studied. For instance, 'economic growth and competitiveness' appears as a new (explicit) feature to 'justify' Austria's apprenticeship systems. In this way, we should be able to analyse both changes in definitions and conceptions of VET over time at country level and eventually summarise them by identifying particular change patterns in Europe. However, the examples also show the limits of any standardised instrument, in that they conceal interesting nuances between alleged similar conceptions. With the German example the language barrier also becomes evident. Alongside these practical weaknesses, we highlight some more theoretical challenges in the concluding chapter.

Box 1. Austria: specifying the objectives of VET in a late amendment

In Austria, roughly 80% of a youth cohort are in IVET, whereby one half are in school-based VET and one half in the apprenticeship system. IVET is regulated by several laws and regulations. However, neither the laws regulating school-based VET nor the one regulating the company-based part of apprenticeship training (Vocational Training Act) provide a definition of vocational education or training. The basic principles of the Vocational Training Act (*Berufsausbildungsgesetz*), which entered into force in 1969, the same year as the German Vocational Training Act, still apply today. The first two paragraphs define tasks and duties of the apprentice and her/his master (*Lehrverantwortlicher*, originally: *Lehrherr*). Only in 2015 were these paragraphs complemented by a new sub-paragraph also stating for the first time the objective of vocational training. For instance, vocational education should 'contribute to the competitiveness of companies', ensure the 'labour market relevance of occupational profiles', and 'promote the attractiveness of vocational training by paying attention to permeability and internationalisation'. The amendment also refers to quality management and implicitly to level 4 of the European qualifications framework by using similar descriptors to define required skills of graduates ⁽²³⁾.

Source: Schlögl, 2015; Cedefop, 2014d.

⁽²³⁾

<https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10006276>. See also Schlögl, 2015, pp. 113-115.

CHAPTER 5.

Outlook

The work on this conceptual paper started with a comparison of international definitions of VET and the idea that breaking down these definitions into their components could also guide analysis of national definitions. However, the nature of international definitions proved quite different from national ones. We saw that the former try to define a common international core concept while the latter determine the national scope of VET in terms of structures, provisions, and practices. A national definition of VET is always associated with a specific conception of VET which, in turn, is charged by particular national policies and practices towards VET.

We therefore shifted our focus from definitions to conceptions of VET which led us on to difficult terrain where competing concepts, such as paradigms, systems, models or cultures of VET (Heikkinen, 2004) already exist. However, there is a fundamental difference between a comparative analysis of conceptions of VET and of systems of VET and, for now, we have limited ourselves to what we conceive as VET in contrast to what VET is, which will be the focus of the subsequent steps in the project. This also implies several philosophical questions not discussed here: correspondence between the conception of VET and VET as it is would also be an interesting subject to study. For instance, it could be assumed that national models of governance and national specific understandings of policy and legislation would influence this correspondence, but this is also beyond the scope of our study.

Whatever approach we take, it is always developed from a certain cultural background and influenced by the particular set of VET systems of which we are aware. The idea of taking the German dual system as a type of ideal form of VET, as suggested in the terms of reference for this project, was tempting, but it would not be fair, as it does justice neither to the large variety of forms that VET currently takes nor to the different historical origins of VET. On the contrary, we have tried to avoid idealistic or universalistic conceptions of VET by integrating different perspectives and by deconstructing some of the main components of VET. The second paper of this series, which presents the empirical analysis, shows the extent to which the approach chosen has practical value for research and policy.

List of abbreviations

CVET	continuing vocational education and training
ETF	European Training Foundation
Eurostat	statistical office of the European Union
HAPHE	harmonising approaches to professional higher education in Europe
ILO	International Labour Organisation
ISCED	international standard classification of education
IVET	initial vocational education and training
OECD	Organisation for Economic Cooperation and Development
TVET	technical vocational education and training
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UOE	UNESCO, OECD, Eurostat
VET	vocational education and training
WBL	work-based learning

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ANNEXES

ANNEX 1.

Working definitions

(National policy) definition of VET:

Usually a short paragraph or a few describing or explaining VET in government documents such as various forms of legislation, national statistics, government reports, white papers or similar official strategy papers. (NB: various definitions for VET or related terms may exist in one country and differ by stakeholder and the subsystems (see below) they address).

Mission statement or definition of VET objectives

Instead of definitions, government documents often state objectives of VET. These usually take the form of a short paragraph or a few and differences to definitions can be marginal. Whether it is a definition or mission statement of VET can often only be deduced from the context.

(National policy) conception of VET

By (national policy) conceptions of VET we understand the connotations of the national policy definition or the set of definitions of VET by experts and VET policy-makers. Metaphorically speaking we could also say the 'picture of VET' suggested by the definitions or set of definitions (NB: national conceptions of VET are deeply culturally and historically rooted and will not reveal themselves to outsiders by looking at definitions of VET only).

(Public) understanding of VET

By understanding or public understanding of VET we refer to a layman's conception of VET (see above: conception of VET).

(A country's) VET System

The sum of all provisions of VET in a country (including their specific ways of governing) forms its particular VET system. VET systems are often described as part of a country's overall education and training system (and, for instance, referred to as a particular set of elements in diagrams illustrating the overall education and training system). However, in some descriptions, certain parts of VET (for example non-formal continuing VET) are not regarded as part of the education and training system; in other descriptions they may form part of the VET system.

VET subsystem

Highly diverse parts of a VET system (for example due to different forms of governance, education tracks or student populations) may be classified as distinct VET subsystems. The systems of IVET provided in schools and in companies usually form two different VET subsystems.

Models of VET

A model of VET usually refers to a set of prototypical features of a VET system that can be used to describe similarities and differences between systems. For instance, it can be claimed that certain VET systems largely follow a particular model. The term 'model' can also be applied to subsystems. (Typical models are Greinert's social/cultural-historical models of VET in Europe (Cedefop and Greinert, 2005), Winterton's models of social dialogue in VET (Winterton, 2007), Cedefop's model of feedback mechanism in VET).

Skill formation system

A skill formation system comprises both education and training of all kinds, including off-the-job as well as non-formal and particularly informal learning in the workplace. The workplace is considered the single most important site of learning. The amount and quality of learning available in the workplace, however, vary greatly across types of work organisation (work systems), types of workplaces, and the approaches used to support informal learning.

ANNEX 2.

Analytical framework

Table 4. Analytical framework

Perspectives VET as seen from the...	Dimensions ...would in terms of...	Variants/features ...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 (ISCED11 level 2)
		7.2 Middle level of education (ISCED11 level 3-4)
		7.3 Middle level and some higher VET (ISCED11 level 3-5)
	8. Age	8.1 Adolescent/young people (15-19)
		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	

Perspectives VET as seen from the...	Dimensions ...would in terms of...	Variants/features ...emphasise the following key features/components...
		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
		13.3 Worker
	14. Occupational hierarchy	14.1 Semi-skilled workers
		14.2 Skilled workers
		14.3 Technicians/professionals/paraprofessionals
	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.

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

Volume 1: conceptions of vocational education and training: an analytical framework

This research paper is the first in a series produced as part of the Cedefop project *The changing nature and role of VET* (2016-18). The aim of the paper is to review scholarly attempts to define or explain vocational education and training and to develop a theoretical model to analyse national definitions or conceptions of VET and how they have changed over time.

VET takes many forms and is, perhaps, the least unitary of education sectors. Based on a literature review of previous attempts to characterise VET, the paper suggests using a multi-perspective framework which combines:

- (a) an epistemological and pedagogical perspective;
- (b) a system and institutional perspective;
- (c) a socioeconomic and labour market perspective to analyse VET.

These perspectives can help to identify appropriate learning approaches, institutional solutions and forms of cooperation to work towards.

In Volume 2 of this series, the approach is empirically tested and the different understandings of VET in 30 European countries are illustrated.

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