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## **Conceptions of Vocational Education and Training – An analytical framework**

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Cedefop project 'Changing nature and role of vocational education and training in Europe'. Working paper 1

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## ***The changing nature and role of VET in Europe***

This working 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). The project will, over a 3-year period (2016-2018) analyse how vocationally oriented education and training has developed and changed in the last two decades (1995-2015) and on this basis point to the main challenges and opportunities facing the sector today and in the future. Work is divided into six separate but interlinked assignments:

1. The changing definition and conceptualisation of VET.
2. The external drivers influencing VET developments.
3. The role of traditional VET at upper secondary level.
4. VET from a lifelong learning perspective.
5. The role of VET at higher education levels.
6. 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 can in many countries observe a diversification of VET where new institutions and stakeholders become involved. We furthermore observe an expansion of VET to higher education areas, partly through a reform of existing institutions, partly through the emergence of new institutions. Caused by factors internal to the education and training system as well as by external pressures linked to demographic, technological and economic changes.

The 'Changing role of VET in Europe project is coordinated by Jens Bjornavold and Hanne Christensen, Cedefop. Working paper 1 has been prepared by Jörg Markowitsch, Philipp Grollmann and Günter Hefler. The authors would like to thank Tine Anderson, Jens Bjornavold, Alan Brown, Hanne Christensen, Philipp Gonon, Terence Hogarth, Karin Luomi-Messerer, Triin Roosalu and Ellu Saar for their feedback on an earlier draft of the paper and Andrew McCoshan for his assistance in revising it and making it more comprehensible.

This is a draft, not to be quoted.

# Conceptions of Vocational Education and Training – An analytical framework

## 1. Introduction and objectives of this working paper

This is the first working paper in the set of studies commissioned by Cedefop as part of the project ‘The Changing Nature and Role of VET’ (2016-2018). Its aim is to review scholarly attempts to define or explain VET and to develop a multi-perspective model to empirically analyse 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 a 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 VET, 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 in the period 1995 – 2015? <sup>(1)</sup>*** More than that, we are interested in the implications of changes in definitions for the 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, the question 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. However, 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 (e.g. 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? Furthermore, 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 of VET (e.g. in Germany), it may largely deviate from Cedefop’s definition, thus ruling out sectors which one would like to see as part of the analysis (e.g. 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 last two decades. But what exactly do we understand by ‘the changing of a definition’? Does the question refer to changes in the wording of the definition, or to changes in the phenomenon 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 of VET in the law has remained unchanged while the VET system has undergone massive changes. In most cases, we may not be able to identify any causal relations, but just assert a 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 therefore 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.

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<sup>(1)</sup> 1995 – 2015 is the period this project is focusing on. Certainly, in many European countries remarkable changes regarding VET took place before (e.g. changes related to the fall of communism in Eastern Europe) which also need to be considered.

As an alternative term that is better suited to our analysis, we would like to introduce ‘**conceptions of VET**’<sup>(2)</sup> alongside of ‘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. Metaphorically speaking, we could also say the ‘picture of VET’ suggested by the definitions or set of definitions. Hence, rather than just addressing the issue of how VET definitions have changed, we will also address the question: ***how is VET conceptualized at a national level and how has this conception changed over time?***

We will analyse the conception of VET primarily on the basis of policy documents, and thus could more precisely speak of the **national policy conception of VET**. This also needs to be distinguished from a public understanding of VET. The discussion of VET 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 (e.g. “I did an apprenticeship as a bookbinder”) without referring to or reflecting on whether the programme forms part of a VET sector or not. Given the number of VET programmes which do not even have ‘vocational’ in their title (e.g. much of ‘further education’ in England) it often happens in such narratives that even the term ‘vocational’ is not used at all. In some countries, there can be quite a gap between, on the one hand, the research and policy discourse and, on the other hand, the public discourse (VET as seen by the public and in the media). Therefore, the study will try to distinguish between public understanding<sup>(3)</sup> and policy conceptions of VET, with a clear focus on the latter.

The paper starts with framing the problem and reviewing previous attempts to systematically 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 socio-economic or labour market perspective and an educational system perspective. For each of these perspectives we ask: which key features or components of VET would such a perspective emphasize? Finally, 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 of VET and their changes over time. In the outlook in Chapter 5 we discuss the limitations of our approach and how to improve it further.

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<sup>(2)</sup> This is different from VET as a ‘model’ or VET as a ‘system’, see also the working definitions provided in the Annex 6.2.

<sup>(3)</sup> The 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 the English and the German terminology resulting in discussion of the terms ‘vocation’, ‘calling’, ‘Beruf’, ‘Bildung’ etc. (see for example Clarke and Winch, 2007; Brockmann, Clarke, and Winch 2011; Billet 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 this study. However, such an ontological perspective is beyond the scope of this project and could be studied only exemplarily.

## 2. Background and state of research

VET takes many forms, and is perhaps the least unitary of educational sectors. VET is often also the longest standing of institutionalized 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 educational 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. <sup>(4)</sup>

Since VET is shaped by the particular institutional and historical developments of each country, it is difficult to grasp VET as a single entity and it 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, for some countries a particular feature of initial VET was that it was terminal, designed for labour market entry only (which is still reflected in parts of the ISCED 1997 classification). However, thanks to the increasingly dominant paradigm of lifelong learning, systematic dead-ends have now been rare for several years, although the challenge of take-up appears to remain an important issue <sup>(5)</sup>: from what evidence we have, most people in Europe still use initial VET for labour market entry and very few progress into further higher education. 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). In addition, 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. Last, but not least provision is 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 un-regulated 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 so far 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

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<sup>(4)</sup> Billett, S. (2011). *Vocational Education – Purposes, Traditions and Prospects*. Dordrecht: Springer.

<sup>(5)</sup> McCoshan, Andrew (2008). Beyond the Maastricht Communiqué: developments in the opening up of VET pathways and the role of VET in labour market integration. *ECOTEC Report*.

across a range of nation states. However, this very diversity makes a unitary description or singular account difficult".<sup>(6)</sup>

Some definitions of VET appropriately take this diversity into account and therefore purposefully do not include any particular reference to levels or types of provisions. An example of such a definition is Cedefop's definition 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".<sup>(7)</sup> Although, this provides a very clear and diplomatic view on the subject, in so far as most interest groups will agree with this definition, it is limited in terms of an analytical starting point for a study which aims at understanding the changes in the role of VET on national and European level.

A preliminary starting point for an analytical view on VET is the distinction which can be drawn between VET as an educational sector as it is commonly referred to (in a national context) and VET "as concerned with the social development of labour".<sup>(8)</sup> This would result in one 'narrower' and one 'broader' understanding of VET:

- a) VET is mainly understood as a particular sector or set of sub-sectors of the education system. VET is comprised of a particular set of (formal) educational 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. VET is found in various education and training settings including non-formal and informal learning in enterprises and not related to specific educational 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 seen as an educational sector or constitutes a 'VET system'<sup>(9)</sup> itself is subject of debates. 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 levels 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)

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<sup>(6)</sup> Billett, S. (2011). *Vocational Education - Purposes, Traditions and Prospects*. Dordrecht: Springer, p. 3.

<sup>(7)</sup> Cedefop (2014h). *Terminology of European Education and Training Policy. Second edition. A Selection of 130 Key Terms*. Luxembourg: Publications Office of the European Union. [http://www.cedefop.europa.eu/EN/Files/4117\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/4117_en.pdf) [accessed 05.09.2015].

<sup>(8)</sup> Clarke, L., & Winch, C. (Eds.). (2007). *Vocational Education – International approaches, developments and systems*. Oxon: Routledge, p. 1.

<sup>(9)</sup> For a discussion of VET as a system see: Greinert, W.-D., & Hanf, G. (2004). *Towards a history of vocational education and training (VET) in Europe in a comparative perspective: proceedings of the first international conference October 2002, Florence. Volume I, The rise of national VET systems in a comparative perspective*. Vol. 103. Luxembourg: Office for Official Publications of the European Communities.

are not as clearly established as between general programmes. As a result, they may be misclassified, and later reclassified.”<sup>(10)</sup> 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. Obviously, even though the end result may be more accurate, these modifications work to the detriment of national time series analyses, because it is often difficult to reassign enrolments for previous years. Moreover, this also hinders regional comparisons because each country tends to react to these ‘trends’ at its own pace.<sup>(11)</sup>

Thus, 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 analyzing the essential features that constitute VET. In the subsequent Chapter and main part of this paper we aim at distinguishing constitutive elements of vocational education and training, or in other words essential features or characteristics of VET.

There are abundant international studies and papers which characterise vocational education and training, but only a few authors did so systematically. Moodie provides such an attempt in defining VET by distinguishing at least four dimensions: epistemological, teleological, hierarchical, and pragmatic<sup>(12)</sup>. 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. Pragmatic definitions of VET Moodie sees either as residual (not elsewhere included) or as ‘what happens to be the arrangement in a particular place at a particular time’<sup>(13)</sup>. He argues that a definition is needed which combines all four dimensions, which certainly 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.”<sup>(14)</sup>

An alternative and more elaborated conceptual framework for VET is provided by Rojewski<sup>(15)</sup>, who also defines the requirements of such a framework. According to Rojewski a conceptual framework for (T)VET needs a) to explain the general purpose of VET, b) to reflect the underlying beliefs and perspectives of its constituents, and c) to shape current activity and future direction.<sup>(16)</sup> He goes on, claiming 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

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<sup>(10)</sup> UNESCO (2006). *Participation in formal technical and vocational education and training programmes worldwide. An initial statistical study*. Bonn: UNESCO-UNEVOC, p. 9.

<sup>(11)</sup> Ibid.

<sup>(12)</sup> Moodie, G. (2008). *From vocational to higher education: an international perspective*. Berkshire, England; New York, SRHE and Open University Press.

<sup>(13)</sup> Ibid.

<sup>(14)</sup> Ibid., p. 260.

<sup>(15)</sup> See also: Rojewski, J. (2002). Preparing the workforce of tomorrow: A conceptual framework for career and technical education. *Journal of Vocational Education Research*, 27(1), pp. 7-35.

Rojewski, J. W. (2009). A conceptual framework for technical and vocational education and training. In: Maclean, R.; Wilson, D. (eds). *International handbook of education for the changing world of work*. Springer. Vol. 1, pp. 19-39.

<sup>(16)</sup> Ibid. p. 19

types of programmes and are not readily subject to change'.<sup>(17)</sup> The framework he finally suggests consists of seven components: 1) purpose, theories, models; 2) teacher-education; 3) curriculum; 4) delivery options; 5) clientele; 6) student assessment; and 7) 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 framework of VET, we see some shortcomings in the way these requirements are met by his own framework. On the one hand it is difficult to see from the components of his framework what makes the framework specific to VET (e.g. the labour market perspective is completely missing), on the other hand the framework is clearly biased to a US context. An internationally better balanced view on VET is provided by Billet, who discusses various features and variants of VET. His monograph on vocational education is a rich source for potential components of a conceptual framework of VET, but he does not summarize these insights into a systematic framework.<sup>(18)</sup>

### 3. Defining Features of Vocational Education and Training

In contrast to the categorical approaches taken by most international organisations involved in the definition of VET (e.g. Cedefop, European Commission, UNESCO, OECD, ILO), Moodie, Rojewski and Billet provide an empirical-conceptual approach in defining VET by distinguishing core dimensions or features of VET, which subsequently can be described and analysed in detail. We suggest to follow their line of reasoning and to look at the conception of VET from three perspectives: (1) an epistemological or pedagogical perspective, (2) an educational system perspective and (3) a socio-economic or labour market perspective. We are aware that these perspectives are partly overlapping and also not independent of each other. Still 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 a distinctive way of knowledge production, representation, use and transfer, which again 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* 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'<sup>(19)</sup>. A cognitive view would understand knowledge as information and emphasize that knowledge 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. Expected to the type of knowledge a **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 again is explicit knowledge (rules, theories, etc.), which can be tested by paper and pencil. In

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<sup>(17)</sup>Ibid. p. 20

<sup>(18)</sup> Billett, S. (2011). *Vocational Education - Purposes, Traditions and Prospects*. Dordrecht: Springer.

<sup>(19)</sup> Neuweg, G. H. (2004). Tacit knowing and implicit learning. In: Fischer, M.; Boreham, N.; Nyhan, B. (eds.). *European perspectives on learning at work: the acquisition of work process knowledge* (pp. 130-147). Luxembourg: Office for Official Publications of the European Communities.

contrast the tacit knowing view understands knowledge as experience and emphasizes that knowledge is mainly **practical** ('know-how', skills), implicit, personal and situational. Learning means making practical experience (**learning by doing**) and is seen as 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 VET, be it problem-based and case-study learning in practice-oriented higher education programmes<sup>(20)</sup> or learning in a Montessori school or in organisational learning.<sup>(21)</sup> 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 those formal systems of vocational education and training that integrate extended phases of practical learning within the company seem to be very successful with regards to the integration of young people into the labour market.<sup>(22)</sup> However, here it is important to point out that work-based learning is foremost a specific way of organising learning, which can be realized in either of the two views. The tacit knowing view would assume that certain dispositions could not be learnt 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 vocational education and training.

The distinction into the 'tacit knowing view' and the 'cognitive view' is also important with regards to a concept that is often used in close alliance with vocational education and training that is **technical education**. Technical education 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 usually the knowledge that technical education would refer to as the object of educational delivery processes would be derived from the body of relevant scientific disciplines. In essence, 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<sup>(23)</sup> and the concept of 'boundary crossing'<sup>(24)</sup> that puts emphasis on the equivalence of both forms of knowledge for education.

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<sup>(20)</sup> Markowitsch, J.; Messerer, K. (2006). Practice-Oriented Methods in Teaching and Learning in Higher Education: Theory and empirical evidence. In: Tynjälä, P.; Välimaa, J.; Boulton-Lewis, G. (eds.). Higher Education and Working Life. Collaborations, Confrontations and Challenges (pp. 177-194). Amsterdam: Elsevier Ltd.

<sup>(21)</sup> E.g. Argyris, Chris; Schön, Donald A.: Die lernende Organisation: Grundlagen, Methode, Praxis. Stuttgart 1999.

<sup>(22)</sup> European Commission. (2013). Work-Based Learning in Europe. Practices and Policy Pointers. Brussels.

<sup>(23)</sup> E.g. Schön, Donald A. The reflective practitioner: How professionals think in action. Vol. 5126. Basic books, 1983.

<sup>(24)</sup> Akkerman, S. F., & Bakker, A. (2012). Crossing boundaries between school and work during apprenticeships. *Vocations and Learning*, 5(2), pp. 153-173.

These distinctive and conflicting views on VET <sup>(25)</sup> 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 17<sup>th</sup> and 18<sup>th</sup> century at which a separation between the engineering (and training for engineers) and the workshops (e.g. producing artillery) manifested itself.

Hence, corresponding to these epistemological perspectives 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 we can see a development which started with only work-based learning, to which some schooling (in terms of further education) was added mainly in the 19<sup>th</sup> century, followed by reforms of the 20<sup>th</sup> century which manifested the school as an equally important learning site. <sup>(26)</sup> Since the beginning of this century we also see the rise of a third learning site for apprenticeships (e.g. learning in inter-enterprise training centers in addition to learning at the school and the work-place) Formal VET programme that are exclusively work-based are rare, but for continuing VET and vocational learning in informal contexts (e.g. informal apprenticeships) this is still the dominant form of learning. Anyhow, these 'educationalised' forms of traditional VET need to be distinguished from 'vocationalised' forms of schooling. The latter also form part of VET, but they are rooted in the traditional classroom setting while integrating work-based elements to a certain degree.

Both the principle of duality and the master-apprentice principle can be identified in all kinds of learning and educational settings (such as at universities for art or music in the form of 'master classes' or at dual higher education studies). In that regard, 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 educational 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 20<sup>th</sup> century we saw the emergence of new VET sectors. On the one hand the massification of higher education and (a new)

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<sup>(25)</sup> This conflict between the two conceptions of knowledge are continuing in scholarly and curricula 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, P. (2008). Quality of Vocational Teachers: teacher education, institutional roles and professional reality. *European Educational Research Journal*, 7(4).

<sup>(26)</sup> Different concepts have been used so far to describe this process: formalization, secondarization (Gallart 1988) or educationalising (Meyer 2006). Meyer, T. (2006). Vocationalising education or educationalising vocational training? A lab report from Switzerland. Paper presented at the *European Research Network on Transitions in Youth TIY Workshop 'Vocationalisation of education: How, where, when, why and in what sense does it matter'*, Marseille, 7-9 Sept 2006. Gallart, M. A. (1988). The secondarization of technical education in Argentina and the vocationalization of secondary education in Brazil. *Vocationalizing education: an international perspective*. Oxford: Pergamon.

vocationalism resulted in increasing provisions of VET at higher levels, on the other hand 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). Generally speaking we saw an increase in the variety of forms of VET, types of providers, levels and funding sources and mechanisms. We summarize the perspective which mainly looks at these aspects as an 'educational system perspective'. An educational system perspective is also the approach taken by international statistics. Therefore we first discuss how the definition of VET in international statistics evolved and then consider further characteristics usually emphasised from this perspective,

An educational system perspective would look at the way VET as an institution has evolved and continues to evolve over time<sup>(27)</sup>. However, there are various ways in which VET can be conceptualized as an institution, applying such different concepts as, such as VET as a sector<sup>(28)</sup>, VET as a system<sup>(29)</sup>, VET as organisational field<sup>(30)</sup>, VET as a community<sup>(31)</sup>, or VET as a culture<sup>(32)</sup>. 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 recognized area of institutional life: providers, 'customers', regulatory authorities, organizations running public (co-)funding, etc. or in other words VET providers, types of programmes, target groups, governance structures and the like. VET as defined in statistics also forms part of this institutional perspective. However, a synchronic analysis of VET, as defined in the statistics and frequently taken as a starting point, would not shed much light on the phenomenon we are interested in. In contrast, a diachronic study or analysis which is concerned with the evolution and change of international definitions of VET<sup>(33)</sup> in statistics over time could provide a first reference point, before then addressing national definitions (which is the main focus of this assignment).

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<sup>(27)</sup> Compare for example Thelen, K. (2004). *How Institutions Evolve – The Political Economy of Skills in Germany, Britain, the United States, and Japan*. Cambridge: Cambridge University Press.

<sup>(28)</sup> See for example: Moodie, G. (2008). *From vocational to higher education : an international perspective*. Berkshire, England; New York, SRHE and Open University Press.

<sup>(29)</sup> See for example: Greinert, W.-D. (2004). European vocational training systems: the theoretical context of historical development. In: Greinert, W.-D.; Hanf, G. (eds). *Towards a history of vocational education and training (VET) in Europe in a comparative perspective: proceedings of the first international conference October 2002, Florence*. Volume I, The rise of national VET systems in a comparative perspective. Vol. 103.

<sup>(30)</sup> Not yet applied to VET, but for adult education see for example: Hefler, G., & Markowitsch, J. (2013). Seven types of formal adult education and their organisational fields: Towards a comparative framework. In: Saar, E.; Ure, O. B.; Roosalu, T. (eds). *Lifelong Learning in Europe: National Patterns and Challenges* (pp. 82-113). Cheltenham: Edward Elgar. See also: Scott, W. R. (2008). *Institutions and Organizations: Ideas and Interests*. London: Sage.

<sup>(31)</sup> Not yet systematically applied to VET, but frequently to higher education, see for example: Barnett, R. (1994). *Academic Community: Discourse or Discord? Higher Education Policy Series, 20*. Bristol: Jessica Kingsley Publishers. Compare also Wenger, E. (1999). *Communities of practice – learning, meaning, and identity*. Cambridge et al.: Cambridge University.

<sup>(32)</sup> Heikkinen, A. (2004). Models, Paradigms or Cultures of Vocational Education. *European Journal: Vocational Training*, 32, 32-44.

<sup>(33)</sup> We will consult here also with ongoing work of interagency working group initiatives (ILO; OECF; ETF; CEDEFOP; etc.), e.g. on the definition of WBL and TVET.

Changing approaches in statistics in classifying VET are likely to reflect changes in the overall educational landscape<sup>(34)</sup>. 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. At the international level the International Standard Classification of Education (ISCED) provides since 1976 the key instrument for cross-country comparison of education and it is worth analysing how VET has been conceptualized in this classification. Interestingly the first version of ISCED (1976) contained neither a definition of VET nor a definition of VET programmes. Programmes were classified only according to the level of education (e.g. upper-secondary) and field of education (e.g. agriculture). Only by combining these two dimensions could a proxy for VET programmes be realized.

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 to distinguish 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). Furthermore, there is the explicit intention to implement on levels 6-8 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 of VET which essentially understood VET as being terminal. While at the beginning of this decade the international classification acknowledges both a trend towards modularisation of education (distinguishing between full vs. partial qualification) and the vocational drift in higher education (distinguishing between 'academic' vs. 'professional').<sup>(35)</sup>

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<sup>(34)</sup>When ISCED76 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.

<sup>(35)</sup> This also poses the question about what we understand by 'Higher VET', which will be the focus of assignment 5. 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) defines the VET dimension of post-secondary vocational education and training as follows: 'programmes ... that prepare for direct entry to the labour market in a specific profession, are of one year or more in length (full-time equivalent), are provided beyond upper secondary level (ISCED 4, 5), and lead to recognised qualifications'. Cedefop (2011). *Vocational education and training at higher qualification levels*. Luxembourg: Office for Official Publications of the European Communities. OECD (2012). *Post-Secondary Vocational Education and Training: Pathways and Partnerships, Higher Education in Regional and City Development*. Paris: OECD. The HAPHE 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, A. F. et al. (2014). *Professional Higher Education in Europe. Characteristics, Practice Examples and National Differences*. Final report of the HAPHE project.

From this brief digression about international statistics we can learn at least three distinct features of VET of which the first two are in the decline: (1) VET as terminal programmes not providing access to higher education, (2) VET focussed on middle level of education (ISCED 3 – 4) and (3) VET programmes oriented towards technical or occupation related content. In the following we try to specify these aspects and to discuss further important dimensions from an educational system perspective.

Table 1: **Changes in the definition and classification of vocational programmes in ISCED77, 97 and 2011**

Year	Definition – Vocational education...	Classification approach
2011	... is designed for learners to acquire the knowledge, skills and competencies 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 lead to a labour-market relevant vocational qualification recognized by the competent authorities in the country in which it is obtained (e.g. Ministry of Education, employers' associations, etc.).	Programme orientation (vocational or general) and programme destination (labour market, access to higher education, etc.) is introduced by which VET be identified.
1976	No definition of VET or vocational programme provided.	Only by combining the 'level of education' and 'field of education' could VET be represented

Source: Authors, statistical manuals of the respective ISCED releases

As explained above, the simple original formula of VET as 'middle level education not leading to higher education' does not hold true anymore. Although most of all designated VET programmes and the majority of VET learners can be found at **middle level of education** (ISCED11 level 3 and 4), we meanwhile find programmes at all levels. Many basic education programmes, such as for migrants, with clear vocational components have emerged in the last decade in Europe and are (would be) classified as **lower level** (i.e. ISCED11 level 2). Many of them are not (yet) formal programmes and their orientation and purpose may also depend on the source of funding (e.g. labour, immigration or education budgets). The idea of classifying the increasing number of vocational oriented programmes at **higher levels** (i.e. ISCED11 level 5-7 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) comes close to the type of company-based training at upper-secondary level best illustrated by apprenticeships (e.g. master craftsmen programmes), b) specialised vocational schools or vocational colleges (some of which were transformed into universities) and c) vocational oriented university programmes. The latter 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, we are interested 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?

In all countries we will probably find some sort of VET, in terms of professional education, at the higher end of an educational and occupational hierarchy. Be it through academic studies for liberal occupations such as lawyers, notaries, engineers, architects, doctors, or accountants, or be it 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 of VET.

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**. Finally, 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, but on the contrary the diversity of identities of VET learners is the particular characteristic of VET in a certain country, this might also be an indicator of a differentiated system.

A predominant status of workers or novice workers 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 attract money from different sources including spending on active labour market measures. However, some countries finance their VET systems exclusively by employment/labour market budgets. For those we would assume that the main focus of VET is on addressing youth unemployment and we would further assume a 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. <sup>(36)</sup> 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 by outsiders. As such, 'measured' attractiveness <sup>(37)</sup> is only a weak indicator of parity of esteem, as there is no common international ground for measuring national cultures. Obviously the 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 for example 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 scrutinizing a simple judgement like '**VET is lower (or equal) to general education**', by asking: 'Why? And which part of VET do you have in mind, when making such a judgement'? Finally, the answer also depends on whom you ask.

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<sup>(36)</sup> Stenstrom, Marja-Leena, and Johanna Lasonen. *Strategies for Reforming Initial Vocational Education and Training in Europe*. Institute for Educational Research, University of Jyväskylä, Finland, 2000.

<sup>(37)</sup> Cedefop. (2014). *Attractiveness of initial vocational education and training: identifying what matters* Cedefop research paper. Luxembourg.

### 3.3 VET from a socio-economic and labour market perspective

VET contributes to social stratification by providing access to particular career pathways, thereby also backing the social reproduction of fields of economic activity. In a similar vein, it contributes skills, competences and attitudes required by companies and their 'work systems'. VET allows workers to cover the requirements of their given workplace, while simultaneously workplaces allow the acquisition of skills (workplaces as 'training slots'; <sup>(38)</sup>). Companies therefore represent both the demand side and the supply side in a market for skills <sup>(39)</sup>. VET provides benefits for the employer organisations and the individual workers alike, giving centre stage to the questions as to who contributes how much to the costs of VET and how benefits are distributed across the 'industrial divide'. These questions are mainly discussed by economists of education <sup>(40)</sup>, yet, also by sociologists working on employment systems and industrial relations.

Cross-country comparative research has shown that national approaches to VET strongly differ when it comes to the role of VET for social stratification, work organisation and matching on the labour market. These differences could be – yet not necessarily are – mirrored in differences in national conceptions of VET across countries. The role of VET and the range of approaches covered by the term differ when it comes to the transition from education to the workplace and the socio-economic 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 occupational hierarchy. Countries' employment systems differ with regard to the role and timing of initial and continuing vocational education. VET plays out differently in the structure of occupational hierarchies and for available career pathways. In correspondence, countries' systems of initial vocational education differ and prepare 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 et al. <sup>(41)</sup> and related studies, countries' 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 as they perceive to be in their best interest and in an idiosyncratic way, with large differences in work organisation and job demands between firms. Work places 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. The majority of jobs do not require any initial vocational education, yet jobs for unskilled workers are organised in chains, starting with jobs with 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

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<sup>(38)</sup> Thurow, Lester C. (1975). *Generating inequality: mechanisms of distribution in the U.S. economy*. New York: Basic Books.

<sup>(39)</sup> Green, Francis. (2013). *Skills and Skilled work - An economic and social analysis*. Oxford: Oxford University Press.

<sup>(40)</sup> Becker, Gary Stanley (1964/1993). *Human capital - a theoretical and empirical analysis, with special reference to education* (3rd ed.). Chicago: University of Chicago Press.

<sup>(41)</sup> Maurice, Marc, Sellier, Francois, & Silvestre, Jean-Jacques. (1986). *The Social Foundations of Industrial Power - A comparison of France and Germany*. Cambridge, Mass.: MIT Press.

from job to job, while the speed of movement is determined by their demonstrated skills and their ability to acquire required skills on the move. Typically, workers deal only with routine tasks, while any exemptions from the rule are addressed by technicians or managers<sup>(42)</sup>. For workers in 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 models of production<sup>(43)</sup><sup>(44)</sup>. In countries<sup>(45)</sup> where 'organisational space' dominates, one can find therefore large groups of workers without formal vocational qualifications, having acquired nearly all of their vocational skills on the job, accompanied by small groups of vocationally trained technicians and comparatively larger groups of management professionals with training in the higher education sector. IVET on 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. Overall, the proportion of professionals of all kinds – including managers – who have acquired professional skills within higher education is comparatively 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 on 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 on secondary level mainly prepares students with weak school performance or former drop-outs for entering any first job. Examples for countries with work systems dominated by 'organisational space' include the UK, France or the United States and Japan, although countries within the group differ considerably.

When 'occupational space' dominates, firms organise work processes by exploiting broad and standardised vocational qualifications, which allow the graduates to perform a multitude of job roles. Workers are less attached to (chains of) workplaces, yet, function as parts of multiply skilled, self-organising teams, built out of more novice and experienced workers,

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<sup>(42)</sup> As Koike, Kazuo, & Inoki, Takenori (Eds.). (1990). *Skill formation in Japan and Southeast Asia*. Tokyo: University of Tokyo Press., 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 the ordinary workers as part of their broader job roles.

<sup>(43)</sup> Holm, Jacob, Lorenz, Edward, Lundvall, Bengt-Åke, & Valeyre, Antoine (2010). Organizational learning and systems of labor market regulation in Europe. *Industrial and Corporate Change*, 19(4), 1141-1173.

<sup>(44)</sup> Discretionary modes of work organisation may be achieved also 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.

<sup>(45)</sup> 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 on sectoral level from the dominating features on 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 & Markowitsch 2012). Hefler, Günter, & Markowitsch, Jörg. (2012). Bridging Institutional Divides: Linking education, careers and work in 'organizational space' and 'skill space' dominated employment systems. In Rachel Brooks, Alison Fuller, & Johanna Waters (Eds.), *Changing Spaces of Education - New Perspectives on the Nature of Learning* (pp. 160-181). London: Routledge.

which can deal with both routine and extraordinary requirements of the workplace. Typical workplaces and skill demands are much more similar across firms belonging to one economic sector. Demands of 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. The majority of 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 trained in the higher education sector. 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. Based on a vocational education on 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 on post-secondary and tertiary level grow in importance. IVET on upper secondary level is a key part of the education system, enjoys its own legitimacy and high prestige. It may allow for a smooth entry into the labour market (in particular in cases where IVET is organised in a German-type apprenticeship approach). IVET grants membership to an occupational group and – comparable to the traditional professions – novice workers are expected to further 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 Germany, Austria, Switzerland, Denmark and the Netherlands.

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 on medium level, high number of skilled employees with qualifications on post-secondary or tertiary level Vocationally skilled workers are mainly <ul style="list-style-type: none"> <li>➤ semi-skilled workers OR</li> <li>➤ technicians</li> </ul>	Low number of unskilled, high number of vocationally skilled workers on medium level, low number of employees with post-secondary or tertiary degrees Vocationally skilled workers are mainly <ul style="list-style-type: none"> <li>➤ skilled workers with a qualification on upper secondary level</li> </ul>
IVET prepares for	<ul style="list-style-type: none"> <li>➤ entry level jobs</li> </ul>	<ul style="list-style-type: none"> <li>➤ membership in an occupation/ (para-)profession</li> </ul>

Source: Authors

The dichotomy of occupational versus organisational space as summarized in Table 2 can guide the 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. Obviously, they are used here as contrasted ideal types, which can only be found for parts of the labour market while usually diverse hybrid-spaces exist. Furthermore, the institutional changes (e.g. in terms of liberalisation) that countries have

experienced in the last two decades may be profound, so that initial attributions may not be fully adequate anymore. <sup>(46)</sup>

Finally, 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)<sup>(47)</sup>, 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<sup>48</sup>. Furthermore, economic research in the line of human capital theory has made significant contributions relevant for understanding IVET and CVET.<sup>(49)</sup>

All approaches taking a socio-economic or labour market perspective as their starting point, share a functional perspective on VET. VET is understood mainly by its broad range of functions within social and economic processes, summarised by Stephen Billett (2011) as follows:

- i. “cultural reproduction, remaking and transformation of occupational practices (e.g. the continuity, maintenance and transformation of culturally derived occupational practices that are essential to countries, communities and individuals;)
- ii. economic efficiency (e.g. meeting particular occupational requirements);

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<sup>(46)</sup> Thelen, K. A. (2014). *Varieties of liberalization and the new politics of social solidarity*. Cambridge: Cambridge University Press.

<sup>(47)</sup> See for instance: Doeringer, P. B., & Piore, M. J. (1971). *Internal labor markets and manpower analysis*. Lexington, MA: D. C. Heath; Osterman, Paul (Ed.) (1984). *Internal labor markets*. Cambridge, Mass.: MIT Press; Fligstein, Neil, & Byrkjeflot, Haldor (1996). The Logic of Employment Systems. In John Pock, James N. Baron, David B. Grusky, & Donald J. Treiman (Eds.), *Social differentiation and social inequality: essays in honor of John Pock* (pp. 11-35). Boulder: Westview Press; Marsden, D. (2007). Labour Market Segmentation in Britain: The Decline of Occupational Labour Markets and the Spread of 'Entry Tournaments'. *Economies et Societes*, 41(6), 965-998..

<sup>(48)</sup> See for instance: Shavit, Yossi, & Müller, Walter. (1998). *From school to work: a comparative study of educational qualifications and occupational destinations*. Oxford: Clarendon Press.; Shavit, Yossi, & Müller, Walter. (2000). *Vocational secondary education - Where diversion and where safety net? European Societies*, 2(1), 29-50; Ryan, Paul. (2001). *The School-to-Work Transition - A Cross-National Perspective. Journal of Economic Literature*, 39(1), 34-92.; Müller, Walter, & Gangl, Markus (Eds.). (2003). *Transitions from education to work in Europe the integration of youth into EU labour markets*. Oxford : Oxford Univ. Press.; Brzinsky-Fay, C. (2007). Lost in Transition? Labour Market Entry Sequences of School Leavers in Europe. *European Sociological Review*, 23(4); Rogowski, Ralf (Ed.) (2008). *The European social model and transitional labour markets: law and policy*. Farnham: Ashgate; Raffe, David. (2014). Explaining National Differences in Education-work Transitions. *European Societies*, 16(2), 175-193.

<sup>(49)</sup> Booth, Alison L. ,& Snower, Dennis J. (Eds.). (1996). *Acquiring Skills: Market Failures, their symptoms and policy responses*. Cambridge: Cambridge University Press.; Acemoglu, Daron, & Pischke, Jorn-Steffen. (1999). Beyond Becker: Training in Imperfect Labour Markets. *The Economic Journal* 109.453 (1999): 112-142; Brunello, Girogio, Garibaldi, Pietro, & Wasmer, Etienne (Eds.). (2007). *Education and Training in Europe*. Oxford: Oxford University Press; Hanushek, Eric , Machin, Stephen , & Woessmann, Ludger (Eds.). (2011). *Handbook of the Economics of Education*. Amsterdam: Elsevier; Cedefop. (2011). *The economic benefits of VET for individuals*. Luxembourg: Publications Office of the European Union; Cedefop. (2014). *Macroeconomic benefits of vocational education and training*. Luxembourg: Publications Office of the European Union; Hanushek, Eric A., Schwerdt, Guido, Woessmann, Ludger, & Zhang, Lei. (2016). General Education, Vocational Education, and Labor-Market Outcomes over the Life-Cycle. *Journal of Human Resources*. doi:10.3368/jhr.52.1.0415-7074R

- iii. societal continuity (e.g. reproducing societal norms and values),
- iv. individuals' fitness for particular occupations and readiness to engage in work life (e.g. meeting students' needs and readiness to work and learn) and
- v. individual progression and continuity (e.g. supporting development throughout the working life)." (Billett 2011, p. 137).

VET definitions provided by international organisations typically adopt also a functional view of VET, yet emphasise only one or a smaller number of the dimensions outlined. Compare the following examples: VET is: '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), and so on. The socio-economic, transitions-related perspective ('preparing youth for the labour market') has emerged as the dominant view on 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 <sup>(50)</sup>. Vocational education and training contributes to workers' capabilities to promote continuing innovation and improvement in the workplace and may build the backbone of a countries' innovation system <sup>(51)</sup>. For some countries, vocational education and training and skilled work requiring skills on the 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 surveys that also exist on a transnational level, such as the European company survey or the European Survey on Working conditions. In Germany, the idea of VET as a fundamental driver of innovation has found its way in to 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. <sup>(52)</sup>

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<sup>(50)</sup> Nonaka, Ikujiro , & Takeuchi, Hirotaka. (1995). *The knowledge-creating company: how Japanese companies create the dynamics of innovation*. New York: Oxford Univ. Press; Høyrup, Steen (Ed.) (2012). *Employee-driven innovation: a new approach*. New York, NY: Palgrave Macmillan.

<sup>(51)</sup> Streeck, Wolfgang. (1991). On the institutional conditions of diversified quality production. In: Egon Matzner & Wolfgang Streeck (Eds.), *Beyond Keynesianism - The Socio-Economics of Production and Employment* (pp. 21-61). London: Elgar.

<sup>(52)</sup> Rauner, F. (1988). Die Befähigung zur (Mit)Gestaltung von Arbeit und Technik als Leitidee beruflicher Bildung. Gestaltung von Arbeit und Technik - ein Ziel beruflicher Bildung. G. Heidegger, P. Gerds and K. Weisenbach. Frankfurt, New York, Campus: 32-51. Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (1991). "Rahmenvereinbarung über die Berufsschule. Beschluß der Kultusministerkonferenz vom 14./15.3.1991." *Zeitschrift für Berufs- und Wirtschaftspädagogik*(7): 590-593.

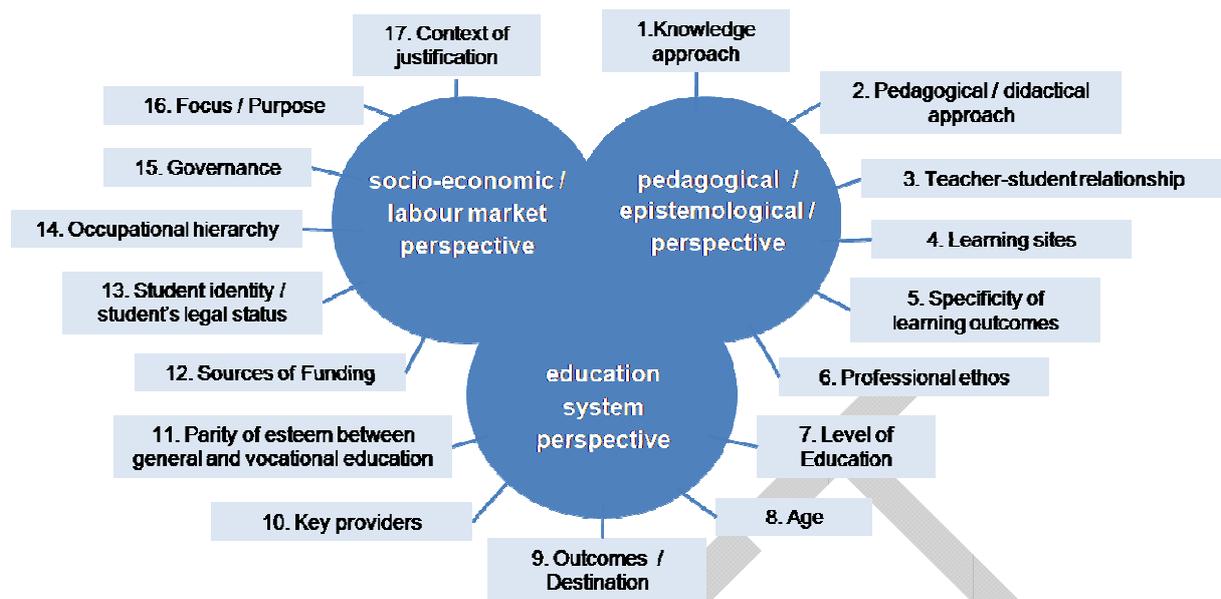
## 4. Towards a multi-perspective conceptual framework of VET

The way vocational education and training might be conceived from a pedagogical point of view differs from a theory of knowledge point of view, and economists and labour market sociologists would again point at different characteristics and so do people in educational administration. In the previous chapter 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 certainly not comprehensive. We could have added several dimensions that look equally relevant. For instance, from an education system perspective the *scope of courses*, would be interesting since the range includes both programmes with very specific purpose (e.g. for licensed roles such as workplace safety, lifting, welding) and multi-year courses with high-level qualifications associated with para-professional occupations or degree programmes leading to prestigious occupations such as law and medicine. Another dimension that is a relevant feature for this perspective is the extent of articulation between VET and higher education programmes. We could have also been more specific on *special target groups*, such as young school leavers, women returning to working life, or the long term unemployed or as regards the selectivity of access. Certainly it makes a difference if programmes are selective according to prior educational performance or if there is no selection at all. Again, it makes a difference if companies are in charge of the selection. Related to this is the question of whether VET is free of charge for the learners, or if they have to pay some fees or even if they receive some remuneration during their programme as in the case of many apprenticeships. Regarding the providers, it would be interesting to see if there is a large or only little variety of providers, and whether the key providers also provide extensively continuing education and training, or if this provision is only limited. From a labour market perspective, the dominating forms of work organisation, such as whether organisational, occupational or professional, would be interesting. Linked to that we could have made a reference to the *degree of regulation*, such as VET leading to regulated occupations or less/not regulated occupations.

As we can see, this list of features of VET discussed in Chapter 3 could be easily extended and be developed into an even more comprehensive system for characterizing VET programmes and sub-systems. However, as our aim is to get a broad overview on the dominant national conceptions of VET we limited ourselves to such aspects that are recurrent in definitions of VET. Therefore, we reduced a former more comprehensive list of features to the one shown in Annex 6.2 and summarized in Figure 1 below. After piloting the instrument in five countries we further reduced the list and shaped the concepts. We intended to use this list of descriptors both for the analysis of current conceptions of VET and changes in the conceptions of VET in the last 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. Still, the ultimate goal is to finally identify both current patterns of VET in Europe and patterns of change.

Figure 1: A conceptual framework to characterise VET



Source: Authors.

Note: For each of the dimension two to five options (variants) were developed. The full list of variants can be found at.

In its most simple application, this framework should allow us to quickly 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<sup>(53)</sup> (Table 3). The UOE definition of VET (the common definition of UNESCO, OECD, and Eurostat) in contrast is narrower as it adds to these features also the work-based component (though optional) and restricts VET to formal education. In contrast to these 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 in 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 to this paper.

<sup>(53)</sup> Equally, it is acknowledged that Cedefop's definition could also be read by the aspects it does not refer to, e.g. Bjornavold (2015, p. 5) 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'. Bjornavold, J. (2015). The changing nature and role of vocational education and training in Europe. Presentation given at the Cedefop Workshop with the same title, 25th June 2015 in Thessaloniki.

Table 3: **Examples of VET Definitions and features of the conceptual framework they refer to**

Definition	Dimensions referred to:	Variants emphasized:
<p>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)</p>	<ul style="list-style-type: none"> <li>– Specificity of learning outcomes</li> <li>– Main focus</li> </ul>	<ul style="list-style-type: none"> <li>– Occupation-specific OR broader vocational field related</li> <li>– Supply of skilled labour</li> </ul>
<p>VET is designed for learners to acquire the knowledge, skills and competencies 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)</p>	<ul style="list-style-type: none"> <li>– Specificity of learning outcomes</li> <li>– Learning sites</li> <li>– Main focus</li> <li>– Outcomes/ Destination</li> </ul>	<ul style="list-style-type: none"> <li>– Occupation-specific OR broader vocational field related</li> <li>– Some work-based learning (optional)</li> <li>– Supply of skilled labour</li> <li>– Occupational qualifications or rights</li> </ul>
<p>1) 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. [...] (Extract from the German Vocational Training Act)</p>	<ul style="list-style-type: none"> <li>– Knowledge base</li> <li>– Learning sites</li> <li>– Specificity of learning outcomes</li> <li>– Outcomes/ Destination</li> <li>– Socialization</li> <li>– Occupational Hierarchy</li> <li>– Focus of Content</li> </ul>	<ul style="list-style-type: none"> <li>– Practical knowledge / Experience based</li> <li>– Multiple learning sites</li> <li>– Occupational qualifications or rights</li> <li>– Occupation-specific</li> <li>– Distinct occupational or professional ethos</li> <li>– Skilled workers</li> <li>– Becoming a member of an occupation AND Broad preparation for changing requirements across working life</li> </ul>

Source: Authors. Compare dimensions and variants with the list in Annex 6.2.

Using the example of Austria, we can demonstrate, 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 as such is more a labour law than an educational law. It only detailed the master-apprenticeship relation, without any 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).

### **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 stating for the first time also 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 internationalization’. Furthermore, the amendment refers to quality management and implicitly also to level 4 of the European Qualifications Framework by using similar descriptors to define required skills of graduates. <sup>(54)</sup>

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 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 furthermore further to eventually summarize these by identifying particular change patterns in Europe. However, the examples also show the limits of any standardized instrument, namely to conceal interesting nuances between alleged similar conceptions. By the German example also the language barrier becomes evident. Apart from these practical weaknesses, we highlight some more theoretical challenges in the concluding chapter below.

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<sup>(54)</sup> <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10006276>. See also Peter Schlögl (2015) Novellierung des Berufsausbildungsgesetzes - Business as usual? In: *Wirtschaft und Beruf*, p. 113-115

## 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 the analysis of national definitions. However, the nature of international definitions proved to be quite different from national definitions. 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 dangerous terrain where competing concepts, such as paradigms, systems, models or cultures of VET <sup>(55)</sup> 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. Certainly, this also implies several philosophical questions that we have not discussed here. The 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 de-constructing 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.

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<sup>(55)</sup>Heikkinen, Anja (2004): Models, Paradigms or Cultures of Vocational Education. *European Journal: Vocational Training*, n32 p32-44 May-Aug

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## 6. Annex

### 6.1 Working Definitions

#### **National policy) Definition of VET:**

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

#### **Mission statement or definition of objectives of VET**

Instead of definitions, government documents often state objectives of VET. These usually take the form of a short or a few paragraphs 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 VET experts and VET policy makers. Metaphorically speaking we could also say the “picture of VET” suggested by the definitions or set of definitions (NOTE: 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 (Conception of VET see above).

#### **(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 (e.g. non-formal continuing VET) are not regarded as part of the education and training system, while in other descriptions they may form part of the VET system.

#### **VET subsystem**

Highly diverse parts of a VET system (e.g. due to different forms of governance, educational 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 VET 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, Winterton’s models of social dialogue in VET, 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 in particular 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, strongly vary across types of work organization (‘work systems’), types of workplaces and the approaches used to support informal learning.

## 6.2 Analytical Framework

VET as seen from the ....	Dimensions ...would in terms of ...	Variants/Features ...emphasize 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-centered learning
	3. Teacher-student relationship	3.1 Master–apprenticeship 3.2 Teacher-student 3.3 Different types of instructors (e.g. teachers & 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. brickmaker, 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. ISCED11 level 2) 7.2 Middle level of education (i.e. ISCED11 level 3-4) 7.3 Middle level and some higher VET (i.e. ISCED11 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
	Socio-Economic/ labour market perspective	12. Sources of funding
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 / para-professionals
15. Governance		15.1 Low coordination – industry led 15.2 High coordination – led by organized 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