

Skills2Capabilities

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ABSTRACT

This paper reviews existing frameworks for assessing the governance of vocational education and training (VET) systems and presents a new framework that better balances social, economic and educational goals aiming at combining ideas of the human capital with the human capabilities approach. The analysis builds on Markowitsch & Chan (2020) who have initially reviewed five tools for assessing VET governance which have been developed in the last two decades. Replicating their approach, we scrutinised two more frameworks, one from the World Bank and one from the European Training Foundation (ETF). Based on further analysis of the strengths and weaknesses of these seven frameworks, we developed the most promising one, the so-called Employer-Education-Link, further, so that it better reflects also social aims, in addition to economic aims. The paper presents the steps taken to develop the framework, explains how it will be used for country comparison and presents some preliminary results.

Skills2Capabilities, a Horizon Europe study, is about understanding how skills systems need to develop if they are to assist people to make labour market transitions – i.e. between jobs, employers or sectors – and thereby reduce the level of skill mismatch which might otherwise arise.

This Working Paper is part of the Skills2Capability WP3 on ‘The Responsiveness and Proactiveness of VET’.

For more information please visit skills2capabilities.eu

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Assessing the Governance and Quality of Vocational Education and Training Systems globally. A Reconditioned Analytical Framework

1 Introduction

The expansion of the European Union and enhanced cooperation on education since the mid-1990s have propelled comparative VET research in Europe to new heights (Cedefop, 2023). In particular, the accession of Central and Eastern European (CEE) countries into the European Union has significantly broadened the scope of systems under consideration, thereby intensifying research endeavors over the past two decades. The growing demand for up-to-date information on VET and policy learning in Europe has spurred a proliferation of comparative studies, database expansions, and the development of online tools (Cedefop, 2023). Since the late 2000, various frameworks to compare and assess the governance¹ and quality of VET systems have developed. Most of these frameworks were developed by transnational organisations such as Cedefop, ETF, the European Commission or the World Bank². Although considering themselves as ‘analytical’ frameworks they are all normative by nature and thus underpinned by certain ideologies and values as pointed out by Markowitsch & Chan (2020). This is crucial to note insofar as these frameworks are intended to build or at least influence vocational training policy partly by ‘benchmarking’ countries along certain dimensions. This is precisely why it is important to create a framework that includes both economic and social objectives.

One pioneering effort was spearheaded by Felix Rauner (2008), who introduced the concept of ‘plural governance (PG)’, drawing from VET research and administrative sciences. Initially independent from educational governance research, the project aimed to develop recommendations for German VET policy through international comparison. Subsequent publications reinforced links to educational governance research and further developed methodologies, such as the Governance Equalizer-Tool, facilitating comparisons across different apprenticeship systems (Rauner et al., 2009; Rauner & Wittig, 2013; Cedefop, 2016). Others, like the Cedefop's study on

¹ ‘Governance’ refers to the coordination, management, or “steering” of social and economic actions. Since mid-2000, a debate on “new governance” has developed in connection with the reform of education policy, which refers to decentralised, anti-hierarchical network structures and quality assurance or monitoring system.

² We have been only looking at frameworks that 1) are exploring the quality of national VET systems or large parts of VET systems (e.g. sub- systems), 2) are comparative, i.e. include at least three countries and address these countries at equal terms, 3) are empirical in the sense that they build on observations (surveys or the analysis of primary sources which can be quantitatively, qualitatively or mixed), and 4) were conducted in the last 15 years.

feedback mechanisms (FM) in VET renewal processes across European countries underscored the importance of inclusiveness, collaboration, openness, responsiveness, transparency, and communication in VET governance (Cedefop, 2013; Markowitsch & Hefler, 2018). Ursula Renold and her team, commissioned by the National Center on Education and the Economy, developed the so-called 'education-employment linkage' (EEL) model to assess the responsiveness of VET systems in OECD countries (Renold et al., 2016; Rageth & Renold, 2017; Rageth, 2018). Furthermore, EU policy initiatives such as Thematic Country Reviews on Apprenticeships³ (TCR) and the European Framework for Quality and Effective Apprenticeships (EFQEA) offer comprehensive frameworks for assessing VET quality and effectiveness, fostering collaboration and policy learning among member states (EFQEA, 2018). Prior to these activities SABER (Systems Approach for Better Education Results), developed by the World Bank, assesses workforce development and provides a comprehensive framework for evaluating various aspects of education policy, governance, and service delivery (Rogers & Demas, 2013). Within the context of VET governance, SABER potentially assists policymakers and stakeholders in identifying strengths, weaknesses, and areas for improvement in vocational education and training systems. For an overview of these frameworks see Table 4 in the Annex. An in-depth discussion of five of these seven frameworks is provided by Markowitsch & Chan (2020).

In summary, this working paper underlines the need for a comprehensive tool to assess and facilitate global comparisons of VET systems that prioritises research-based analyses over purely normative approaches. The aim of the paper is to review the existing frameworks for comparative assessment of VET systems while developing a new framework that effectively incorporates social, economic and educational policy aims.

2 Values and References of VET assessment Frameworks

In their analysis of five VET assessment frameworks Markowitsch & Chan (2020) concluded that these studies neither reflect explicitly about the values they base their assessment on nor do they apply any theoretical models to justify their approach (with the exception of the curriculum value chain model of the EEL study.) Against this background, it is interesting to analyse which normative ideas they pursue. This is all the more important as these instruments are also used to pursue vocational training policy and attempt to establish an international standard of "good VET".

In a first step we analysed the values underpinning the VET assessment frameworks ETF and SABER, complementing and expanding the analysis done by Markowitsch and

³ Cedefop, 2019. See also: <https://www.cedefop.europa.eu/en/events-and-projects/projects/apprenticeships-work-based-learning#1>

Chan (2020). Ensuring comparability, we used the same methodological approach as applied to the other instruments.

In practical terms, this means that we analysed each questionnaire item to determine which (normative) values it is based on. Every assessment criterion (questionnaire item) is a value judgement. Value judgements can be disassembled into the object in question ('reference level') and the value assigned to it 'value level'. To determine the reference level we developed a list of descriptors in a bottom up process by identifying the objects in every single criterion used in the five approaches analysed. In a further step, we aggregated the items and arrived at a final list of 10 dimensions for the reference level. For the 'value level' Markowitsch and Chan utilized an inventory of public value concepts developed by Jørgensen and Bozeman (2007), which consists of 20 value concepts, and the European Commission's values of good governance (European Commission, 2017), comprising 15 value concepts. Initially, all 35 value concepts were used for their coding purposes, but these two lists were merged into one list containing 24 value concepts consisting of: Transparency, legality, inclusiveness, effectiveness, responsiveness, accountability, public interest, impartiality, efficiency, competitiveness, user orientation, innovation, regime dignity, connectivity, equity, self-development of employees, reflection, altruism, sustainability, majority rule, user democracy, protection of minorities, political loyalty and robustness (see Table 5 in Annex).

These 24 value concepts were applied to the assessment frameworks. Each item of the two instruments was coded accordingly. The coding was conducted independently by two researchers. Following the coding process, the next step involved discussing cases where different reference levels and value concepts were assigned. This discussion aimed to reconcile any discrepancies or differences in the independently made coding decisions, ensuring accuracy in the final analysis results.

Table 1 shows the relative frequency of the top 7 values for the five original and two additional frameworks. Table 5 in the Annex shows the full data for the seven frameworks.

The values repeatedly referred to in the ETF's instrument were accountability (15), effectiveness (10) and transparency (7). In the World Bank's SABER tool, the values most often referred to were transparency (15), inclusiveness (9) and responsiveness (7). Apart from accountability, the top three most often assigned value concepts in the two additional instruments are part of the set of core values identified by Markowitsch and Chan (2020), with the core values covering 50% of all assigned values in the ETF's instrument and 77% in the World Bank's instrument.

Table 1 Selection of Values of selected VET assessment frameworks⁴

Relative %	Legality	Transparency	Inclusiveness	Effectiveness	Public interest	Impartiality	Responsiveness	Total
Quality and Effective Apprenticeships (EFQEA)	●●	●●●	●●	●●	●	○	○	83%
Thematic Country Reviews of apprenticeships (TCR)	●●●	●●	○	○	●	●	●	79%
Education-Employment Linkage Index (EEL)	●●●	●	●●●	●●	●	○	○	90%
Plural Governance Equalizer (PGF)	●●	●●	●●	●●	●	●	○	74%
Feedback Mechanism (FM)	○	●●●	●	○	○	●	●●	81%
Methodology on assessing governance and financing of VET strategies (ETF)	○	●●	●	●●	○	○	●●	50%
Systems Approach for Better Education Results (SABER)	●	●●●	●●	○	○	○	●●	77%

0-5% ○ 6-10% ● 11-20% ●● 21-30% ●●●

Note: The "sum" indicates the proportion of the 7 values in all 24 values, e.g: In the case of EEL, these 7 values contribute to 90 % of the total of 24 values.

Source: Markowitsch & Chan 2020/ Authors.

Hence, adding the two instruments to the analysis did not change the overall picture and only slightly changed the order of core values (see Table 2 below): 'Accountability' has displaced 'impartiality', but still the overlap between the core values identified for VET governance and global values of good governance is remarkable. Political loyalty which is one of the global values of good governance hasn't been referred to once by the seven frameworks analyse.

⁴ See full list in Annex 1

Table 2 Global values of good governance and top values of frameworks for assessing VET governance

7 Global Values of Good Governance (2012)	Top 7 Values of Governance of VET (2020)	Top 8 Values of Governance of VET (2024)
based on 14 national codes of good governance and 2 international codes (Jørgensen and Sørensen, 2012)	based on 5 frameworks for assessing VET systems (Markowitsch & Chan, 2020)	Based on 7 frameworks for assessing VET & skill formation systems (ETF and SABER added)
Public interest	5. Public interest	7. Public interest
Political loyalty		
Transparency	2. Transparency	1. Transparency
Impartiality	6. Impartiality	8. Impartiality
Effectiveness	4. Effectiveness	4. Effectiveness
Accountability		6. Accountability
Legality	1. Legality	2. Legality
	3. Inclusiveness	3. Inclusiveness
	7. Responsiveness	5. Responsiveness

Source: Authors

What is equally remarkable, and also confirms previous findings, is the fact that values we would associate with social and political aspects (with the exception of inclusiveness) are clearly less emphasised or not mentioned at all in comparison to values related to economic aspects (see Table 5 in the Annex). Thus, without any doubt, the frameworks prefer economic values (such as effectiveness, competitiveness, efficiency, etc.) over social values (such as altruism, majority rule, user democracy, protection of minorities, equity or political loyalty). For the further development of a VET assessment framework, a better balance between the social and economic spheres is essential, which we will endeavour to achieve further below. First, we turn to a general assessment of these instruments which in the further course of the analyse we limited to those applying a quantitative method.

3 Qualitative assessment of VET assessment frameworks

In a second step we assessed the assessment frameworks with a focus on their validity and clarity of questions and comprehensiveness and completeness of the instrument. The comprehensiveness was assessed using Cedefop's 50 dimensions of vocational education and training (Cedefop 2023) by comparing these dimensions with the questionnaire subheading or individual items.

The validity and clarity were assessed by the following approach: Each questionnaire has been first answered by two VET researchers from Norway and two VET researchers from Austria independently. They all provided written comments on individual questions. The two country researchers then sat down together to discuss their assessment and comments and had to agree on a joint response. Their discussion has led to further agreed comments. Finally, the two country teams met and discussed

question per question and their overall assessment. An overview of this assessment is provided in Table 3.

Table 3 Qualitative assessment of surveys according to validity, clarity and comprehensive-ness/completeness

	Strengths	Weaknesses
PGF	<ul style="list-style-type: none"> - Tailored answer options for legal regulations and actual practices - Captures vital elements of dual VET systems - Facilitates stakeholder group discussions effectively 	<ul style="list-style-type: none"> - Strongly diverging views on the interpretation of certain criteria. - Lack of clarity in some questions - Subjective interpretation of key concepts leading to inconsistent ratings - Missing elements such as teacher/trainer training, apprentices' responsibilities, labor market situation, and social dimension of apprenticeship - Some ambiguity persists despite consulting the definition of criteria
EEL	<ul style="list-style-type: none"> - Addresses important elements within its scope effectively - Mostly clear questions with only a few ambiguities - Easy to complete and captures (especially) the Norwegian system's nuances 	<ul style="list-style-type: none"> - Ambiguity regarding the interpretation of "employer" - Lack of clarity on whether employers refer to individual employers or employer associations - Uncertainty regarding the scope of examinations (final examinations or encompass all types of examinations) - Social dimension is missing, although partially compensated by additional questions
ETF	<ul style="list-style-type: none"> - Covers relevant elements of VET governance, structure, and strategy 	<ul style="list-style-type: none"> - Unclear term usage ("Vet community", "Public-private partnership") - Questions unclear and overly complex - Difficult to assess
SABER	N/A	<ul style="list-style-type: none"> - Not designed as a conventional questionnaire, making direct comparison challenging

Source: Authors.

Clearly, these instruments have different objectives and follow different agendas (see also Table 4 in the Annex). For instance, the EEL has been mainly developed based on the scientific, economic rationales of Human Capital Theory, while PGF was, at least originally, designed as a participatory method using national stakeholder workshops to encourage critical thinking about a country's vocational training system. However, the validity, clarity of the questions and the comprehensiveness of the instruments can be assessed independently of their objectives.

Despite strengths such as tailored response options and comprehensive coverage, frameworks like PGF and EEL face challenges like interpretive variability and ambiguity, while tools like ETF struggle with clarity and complexity issues.

PGF offers tailored response options, allowing nuanced evaluation of VET governance. It comprehensively captures crucial elements within dual VET governance and is conducive to stakeholder consensus-building. Interpretive variability exists in certain concepts, potentially leading to subjective assessments. Clarity deficiencies in approximately 10 questions may result in inconsistent responses. Critical aspects such as teacher training are missing, which is detrimental to completeness. Despite criteria definition, ambiguity persists, and the survey's narrow focus overlooks significant governance dimensions.

Overall, while the survey facilitates stakeholder discussions and provides a comprehensive assessment framework, issues with interpretive variability, clarity, and coverage compromise its effectiveness in capturing nuanced governance dynamics.

The EEL questionnaire exhibits clarity in its formulation, facilitating easy completion and providing valuable insights into the examined systems. It covers essential elements within its scope comprehensively, capturing similarities and differences across various contexts effectively. Despite its overall clarity, the questionnaire occasionally suffers from ambiguities, particularly regarding the interpretation of "employer" and the scope of examinations. The instrument is also not sensitive towards the differences between small and big employers and different ways to organising employers' interests. Furthermore, and this is the central shortcoming, the social and educational dimension is missing. When comparing countries like Norway and Austria, discrepancies arise, affecting the questionnaire's validity. While generally clear and comprehensive, EEL could benefit from resolving ambiguities and further exploring the social dimension. Nevertheless, it remains a valuable tool for understanding and comparing VET systems across different contexts.

The ETF assessment tool addresses pertinent aspects of VET governance, structure, and strategy. It endeavours to evaluate comprehensive facets of VET systems, providing a framework for assessing various dimensions of vocational education and training. However, the tool suffers from several shortcomings. Many questions lack clarity or are overly complex, compromising the validity of responses. Additionally, reliance on subjective opinions diminishes the reliability of the assessment.

Ambiguities in terminology, such as "VET community" and "Public-private partnership," further impede clarity and precision in evaluation. Furthermore, implementation aspects, such as those related to school-based and work-based learning, are notably absent from the assessment tool. While it focuses on governance and financing, it fails to provide education on how these aspects are implemented in practice. While the assessment tool covers relevant elements of VET governance, structure, and strategy, its effectiveness is hampered by question quality issues. Consequently, it may not be suitable for robust assessment of VET systems. Addressing these shortcomings is crucial for enhancing the tool's utility and accuracy in evaluating vocational education and training initiatives.

SABER's Workforce Development assessment tool deviates from traditional questionnaire-based assessments, making it challenging to evaluate using conventional criteria. Its structure as a framework for interviews may pose difficulties in directly comparing it with other assessment tools. Additionally, it seems as if it is focusing on developing countries or those in the process of system development may limit its applicability to more established VET systems or those in different stages of development. Consequently, while SABER could offer valuable guidance for VET

evaluation in specific cases, its suitability for comprehensive assessment across a wide range of contexts may be limited.

While the assessments tools provide valuable insights into VET governance dynamics, there are areas that warrant enhancement to optimize its utility and accuracy:

1. Addressing issues related to question clarity and complexity is paramount to enhancing the validity of assessment outcomes. Measures should be taken to streamline questions, reduce complexity, and clarify terminology to ensure respondents' clear understanding and accurate interpretation of assessment criteria.
2. Mitigating reliance on subjective opinions and enhancing the reliability of assessment outcomes are crucial for improving the tool's effectiveness. This may involve refining questions to minimize ambiguity, standardizing response criteria, and incorporating objective indicators where possible to enhance the reliability of responses.
3. Expanding the inclusivity and scope of the assessment tools to encompass a broader range of VET governance dimensions, such as social inclusion, equity, and diversity, can provide a more comprehensive understanding of governance practices. This may involve incorporating additional questions or refining existing ones to capture these critical aspects effectively.

In conclusion, addressing key areas of improvement can further enhance the effectiveness and utility of the VET assessment tools for policymakers, practitioners, and researchers in the field of vocational education and training. By refining question clarity, reducing complexity, and broadening the scope of assessment criteria, the tools can better serve as a reliable and comprehensive instrument for evaluating and enhancing VET governance practices.

From this discussion, the EEL questionnaire emerged as clearly the best instrument, insofar as

- it better avoids ambiguity in the answers,
- it is the most comprehensive of the analysed frameworks, and
- it builds on a theoretical model and is generally more analytical than the other frameworks.

Thus, we decided to use the EEL to build a more balanced instrument that better considers social aspects so far neglected.

4 Expanding the EEL Framework of ETH Zurich and creating EEL+

The overall aim of this research is to develop a new framework for assessing the quality VET systems that better balances social, economic and educational goals than previous frameworks and combines the human capital with the human capabilities approach. Drawing upon the analysis of values the frameworks are based on a qualitative assessment by two independent research teams, the EEL questionnaire was considered as the best starting point. It's the most comprehensive and elaborate instrument, only lacking items targeted at thoroughly exploring the social dimension.

In order to develop a supplementary questionnaire for EEL we analysed literature from the human capabilities approach in the field of employment, skills and lifelong learning, (Boyadjieva & Ilieva-Trichkova 2021; Bryson, 2015; Bryson & Zimmermann 2020; Lambert & Zimmermann 2012; Salais & Villeneuve 2005). This was only productive to a limited extent for two reasons. Firstly, there seems to be little agreement within the literature as to which dimensions are central to VET, and secondly, with the exception of Bryson (2015), we found no suggestions for suitable questionnaire items. Nevertheless, we produced an initial list of potential additional questions that emphasise social and educational (personal development) goals – based on our reading of that literature. This is clearly a very pragmatic approach. In the long term, however, the model on which the EEL is based would have to be linked to the capability approach or, if necessary, a new model would have to be developed.

A first draft questionnaire complementary to the original EEL was then developed including questions on social issues as well as questions to be answered from an employees' or learners' perspective. The added draft items were sent for review to VET researchers from five different countries and revised according to their feedback. Consisting of 43 items in the original EEL, 29 items were added with 23 of them being directly linked to EEL items and 6 completely new ones (see the full questionnaire in the Annex). We refer to this new framework including the original EEL with 43 items and our additional 29 items as the “EEL+”.

Subsequently, the new EEL+ (including the original EEL) was tested in six countries (Austria, England, Germany, Italy, Norway and Korea) for two points in time, retrospectively for 2000 and for 2024, and in Austria and Norway additionally for two different occupations. The other questionnaires (PGF, ETF and SABER) were only tested for Austria and Norway for 2024 (see above and the sampling overview in Table 6 in the Annex).

5 Preliminary results

The analysis of the full data will start in spring 2024. Nevertheless, the initial results of our analysis allow us to make some interesting preliminary observations.

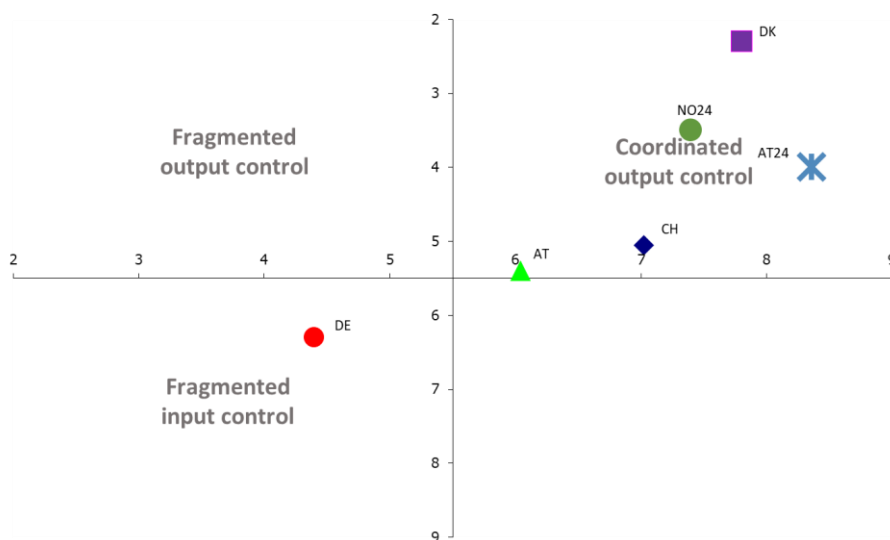
One notable discovery is the limited differences in scores over time (2000-2024), suggesting that VET governance exhibits a high degree of time invariance. This finding underscores the stability of governance structures within vocational education and training systems over the past two decades.

Furthermore, our examination of differences between occupations, based on a comparison between Norway (NO) and Austria (AT), revealed minimal differences. This observation suggests either a uniformity in VET governance practices across various occupational domains or, and more likely, the instruments are not sufficiently sensitive towards specific occupational contexts.

Although they are generally consistent with the results of the original study by Rauner et al., a comparison of the data for Austria from the original study with our data shows some discrepancies (see figure below) that merit closer examination. We suspect that this discrepancy can be traced back to the ambiguity of a few questions, but we still need to carry out a direct comparison with original data.

The relatively similar positioning of Denmark and Norway in the four-axis model (input-output, fragmentation/coordination, see Figure 1 below), on the other hand, again indicates the validity of the instrument.

Figure 1 PGF over the years (incl. qualitative assessment Austria and Norway 2024)



Note: Denmark (DK), Switzerland (CH), Germany (DE), Austria (AT), as well as qualitative assessment of Norway in 2024 (NO24) and Austria in 2024 (AT24).

Source: Rauner (2008) / Authors.

For future studies, the capability perspective in the new EEL+ framework could be further developed and in particular also need to be integrated into the theoretical model. For instance, we could consider to ask a few questions on the participative resources made available to employees and apprentices' and about what employees and apprentices' participation may help to achieve. Even if employees and apprentices have the formal opportunity to participate, they might not do so in practice for various reasons.

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7 Annex

Table 4 Overview on selected frameworks and key characteristics (the grey ones are quantitative and will be further used)

Key concepts	Plural governance; Governance Equalizer (PG)	Feedback mechanism (FM)	Employment-Education Link (EEL)	Thematic Country Reviews (TCR) of apprenticeships	Benchmarking-EFQEA; Quality and Effective Apprenticeships	ETF's methodology on assessing governance and financing of VET strategies	SABER Workforce Development assessment
Time	2008 - 2015	2012 - 2013	2015 - 2018	2014 - 2019	2018 - ongoing	2016 - 2020	2010 - ongoing
Countries	AT, CH, DE, DK (2009); ES, IT, LV, PT, SE (2016)	12 EU Member States	18 OECD countries	LT, MT (2015); GR, IT, SI (2017); HR, CY, BE, SE (2019)	not clear yet; EU Member States	Albania, Jordan, Kazakhstan, Moldova, Uzbekistan	Chile, Ireland, Singapore, South Korea, Uganda
Object of analysis	Apprenticeship systems	VET-Subsystems	Most relevant VET programme	Apprenticeship schemes	Apprenticeship schemes	VET systems	Wfd systems
Main Methods	Quantitative ratings by experts; Lickert scale 1-10, (agree/disagree)	Qualitative, Case studies	Statistical indicators & weighted ratings by experts	Qualitative ratings by stakeholders and external experts	Qualitative ratings by stakeholders	Quantitative ratings by stakeholders, Likert scale 1-6	Dataset containing qualitative information answered by stakeholders
Number of Criteria	30 structured in 6 main criteria	11 leading questions structured in three principles	43 structured in curriculum design, application and feedback phase	45 structured in 10 areas	14 structured into Learning & working and framework conditions;	66 indicators (items) for 7 VET governance and financing functions	3 functional dimensions containing 9 policy goals (3 each), 47 topics

Source: Authors based on Markowitsch & Chan (2020)

Table 5 Overview on selected frameworks and assessed values

	EFQEA	TCR	EEL	PG	FM	ETF	SABER	Total
1. Transparency	5	11	4	6	7	7	15	55
2. Legality	3	18	9	10	1	1	3	45
3. Inclusiveness	3	3	10	6	2	6	9	39
4. Effectiveness	4	3	8	8	1	10	1	35
5. Responsiveness	1	7	2	1	3	7	7	28
6. Accountability		4				15	4	23
7. Public interest	2	7	3	4	1	1	1	19
8. Impartiality	1	5	2	4	2	1		15
9. Efficiency	2			1	2	6	4	15
10. Competitiveness		3	1	3		3	2	12
11. User orientation		1	2	2		3		8
12. Innovation				4		1		5
13. Regime dignity		2		2				4
14. Connectivity		2		2				4
15. Equity	1	1				1	1	4
16. Self-development of employees	1	1	1					3
17. Reflection					2	1		3
18. Altruism								
19. Sustainability						1		
20. Majority rule								
21. User democracy								
22. Protection of minorities								
23. Political loyalty								
24. Robustness						2		
Total	23	68	42	53	21	66	47	317

Source: Authors based on Markowitsch & Chan (2020)

Note: The table shows the absolute frequency of value levels referred to by the seven frameworks (multiple references were possible).

Table 6 Overview on Sampling Plan

	PGF	EEL	ETF	SABER*	EEL+
Year 2024	AUSTRIA NORWAY	AUSTRIA ENGLAND GERMANY ITALY NORWAY KOREA	AUSTRIA NORWAY	AUSTRIA NORWAY	AUSTRIA ENGLAND GERMANY ITALY NORWAY KOREA
Years 2000		AUSTRIA ENGLAND GERMANY ITALY NORWAY KOREA			AUSTRIA ENGLAND GERMANY ITALY NORWAY KOREA
Two different occupations** in 2024		AUSTRIA NORWAY			AUSTRIA NORWAY

*the SABER was finally not tested because it is not designed as a conventional questionnaire, making direct comparison difficult.

**Care workers and mechanical engineers.

Source: Authors.

7.1 Adapted EEL+ Framework: Full Questionnaire

CURRICULUM DESIGN PHASE

Do employee representatives help define qualification standards?

- Employee representatives are not involved
- Employee representatives are involved to some extent
- Employee representatives are involved as equal partners
- Employee representatives are the main actor
- Employee representatives are the only actor
- I don't know

Do employee representatives make final decisions on qualification standards?

- Employee representatives have no power
- Employee representatives have some power
- Employee representatives share power equally
- Employee representatives have most power
- Employee representatives have all power
- I don't know

Do employee representatives help define the examination form?

- Employee representatives are not involved
- Employee representatives are involved to some extent
- Employee representatives are involved as equal partners
- Employee representatives are the main actor
- Employee representatives are the only actor
- I don't know

Are employee representatives involved in the final decision of the examination form?

- Employee representatives have no power
- Employee representatives have some power
- Employee representatives share power equally
- Employee representatives have most power
- Employee representatives have all power
- I don't know

Is citizenship education and/or the democracy education part of the curriculum?

- Yes, it's a subject
- Yes, it's a subject but an integrative element
- No, it's not part of the curriculum

Is sustainability education and/or the "green transition" part of the curriculum?

- Yes, it's a subject
- Yes, it's a subject but an integrative element
- No, it's not part of the curriculum

Are employee representatives involved in VET curriculum development?

- No
- Yes
- I don't know

How are employees represented in the CET curriculum development process?

- They are not represented
- By associations/networks
- By interest groups
- By unorganised representatives

By other groups (please specify...)

I don't know

How are employee representatives' role in the curriculum development defined by law?

No, the law doesn't specify

Yes, the law requires participation but doesn't specify how

Yes, the law requires their participation and specifies it in general terms

Yes, the law requires their participation and clearly defines how

I don't know

Overall, how much power do employee representatives have during the process of VET curriculum development?

They have no power

They have little power

They have moderate power

They share power equally (e.g. with employer representatives)

They have substantial power

They have most power

They have all power

I don't know

Is there a national apprentice representation (e.g. student union, association, network)

No

Yes

I don't know

How are apprentices represented in the VET curriculum development process?

They are not represented

By associations/networks

By interest groups

By unorganised representatives

By other groups (please specify...)

I don't know

Is apprentice representatives' role in curriculum development defined by law?

No, the law doesn't specify

Yes, the law requires participation but doesn't specify how

Yes, the law requires their participation and specifies it in general terms

Yes, the law requires their participation and clearly defines how

I don't know

Overall, how much power do apprentice representatives have during the process of VET curriculum development?

They have no power

They have little power

They have moderate power

They share power equally (e.g. with employer representatives)

They have substantial power

They have most power

They have all power

I don't know.

CURRICULUM APPLICATION PHASE

Are site visits and/or job shadowing voluntarily or obligatory for students?

- Site visits and/or job shadowing are obligatory
- Site visits and/or job shadowing are voluntarily
- There aren't any site visits and/or job shadowing
- I don't know

To which extent do students/employees have to pay for the costs for VET training themselves?

- Not at all
- To some extent
- About half
- For the most part
- Completely
- I don't know

Is there a public cofunding for individual training costs?

- No
- Yes
- I don't know

Are employer/employee representatives involved in final examinations?

- No, neither employer nor employee representatives are involved
- Yes, both employer and employee representatives are involved
- Yes, but only employer representatives are involved
- Yes, but only employee representatives are involved
- I don't know

CURRICULUM FEEDBACK

Is students' feedback collected regularly (e.g. by graduate surveys)?

- No
- Yes
- I don't know

Which institution collects student's feedback?

- None
- Ministries
- VET schools
- Employers
- Student/employee/apprentice associations

Is there a legal framework that requires the collection of feedback from students?

- No
- Yes
- I don't know

How much are employee representatives involved in deciding when to update the curriculum?

- Employee representatives are involved to some extent
- Employee representatives are involved as equal partners
- Employee representatives are the main actor
- Employee representatives are the only actor
- I don't know

Is employee representatives' role in deciding when to update legally defined?

- No, the law doesn't specify
- Yes, the law says they should participate but does not say how
- Yes, the law specifies their role broadly
- Yes, the law specifies their role exactly
- I don't know

ADDITIONAL QUESTIONS EEL⁺

Is an individual's choice for a VET programme limited by grades?

- No
- Yes
- I don't know

Are there any support programmes for disadvantaged learners?

- No, there aren't any support programmes for disadvantaged learners
- Yes, there are support programmes for unemployed learners
- Yes, there are support programmes for learners who have special needs
- Yes, there are support programmes for migrant learners
- Yes, there are support programmes for refugees/asylum seekers
- Yes, there are support programmes for other disadvantaged learners (please specify...)
- I don't know

Are there any legal obligations for companies to work with disadvantaged learners?

- No, there aren't any legal obligations for companies to work with disadvantaged learners
- Yes, there are legal obligations for companies to work with unemployed learners
- Yes, there are legal obligations for companies to work with learners who have special needs
- Yes, there are legal obligations for companies to work with migrant learners
- Yes, there are legal obligations for companies to work with refugees/asylum seekers
- Yes, there are legal obligations for companies to work with other disadvantages learners (please specify...)
- I don't know

Are there any subsidies for companies to work with disadvantaged learners?

- No, there aren't any subsidies for companies to work with disadvantaged learners
- Yes, there are subsidies for companies to work with unemployed learners
- Yes, there are subsidies for companies to work with learners who have special needs
- Yes, there are subsidies for companies to work with migrant learners
- Yes, there are subsidies for companies to work with refugees/asylum seekers
- Yes, there are subsidies for companies to work with other disadvantaged learners (please specify...)
- I don't know

To what extent can apprentices determine their individual learning path, both at school and in the company?

- Not at all
- To some extent
- About half
- For the most part
- Completely
- I don't know

To what extent is the apprentice's remuneration and additional allowances (e.g. for adults, families) sufficient to lead an independent life?

- Not at all
- To some extent
- About half
- For the most part
- Completely
- I don't know

7.2 Original EEL Framework: Full Original Questionnaire

Source: Renold, U. et al. (2016).

*Note: * these answer category come from filler questions.*

CURRICULUM DESIGN PHASE

Overall, how much power do employers have during the process of VET curriculum development?

- Employers have no power.
- Employers have little power.
- Employers have moderate power.
- Employers share power equally.
- Employers have substantial power.
- Employers have most power.
- Employers have all power.

Are employers involved in defining qualification standards?

Qualification standards describe the content and level of complexity a student should master in order to graduate. **For example:** being able to machine a part within 0.5mm of its specified dimensions (not simply being able to machine a part of unspecified quality)

- Employers are not involved.
- Employers are involved to some extent.
- Employers are involved as equal partners.
- Employers are the main actor.
- Employers are the only actor.

Are employers involved in final decisions on qualification standards?

Decision power is the authority to decide what the final curriculum should be when stakeholders disagree.

- Employers have no power.
- Employers have some power.
- Employers share power equally.
- Employers have most power.
- Employers have all power.

Are employers involved in defining the examination form?

The examination form includes whether the examination is given internally by the teacher or by an external examiner, where it takes place (e.g. school or workplace), and by whom it is written.

- Employers are not involved.
- Employers are involved to some extent.
- Employers are involved as equal partners.
- Employers are the main actor.
- Employers are the only actor.

Are employers involved in the final decision of the examination form?

Decision power is the authority to decide what the final examination form should be when stakeholders disagree.

Employers have no power.

Employers have some power.

Employers share power equally.

Employers have most power.

Employers have all power.

Does the VET curriculum seek to prepare students for the firm-specific job in which they train, for an entire occupation or for having a career in general?

General working life and career preparation (e.g. life skills, general education, etc.) OR Firm-specific job preparation.

Preparation for entire occupation(s) (e.g. plumber, computer technician, etc.).

How are employers involved in the VET curriculum development phase?

Individual firms are directly involved in curriculum development.

Employer associations represent the interests of individual firms in curriculum development.

Firms are involved both directly and through employer associations.

Is the participation of employers in the process of VET curriculum development defined by law?

Employers are not involved.*

No, the law doesn't specify participation rights.

Yes, the law requires participation but doesn't specify how.

Yes, the law specifies the participation broadly, for example by saying that firms should be involved in specific processes but not their role.

Yes, the law specifies the participation exactly, for example by saying exactly when and how firms should be involved.

What share of firms are represented in the VET curriculum development process, either individually or through employer associations (e.g. in a working commission, through consultation, in a reform commission)?

None

Small share of firms

Half of firms

Most firms

All firms

CURRICULUM APPLICATION PHASE

Overall, how much power do employers have during the process of VET curriculum application?

Employers have no power.

Employers have little power.

Employers have moderate power.

Employers share power equally.

Employers have substantial power.

Employers have most power.

Employers have all power.

What are the approximate average shares of time spent in VET classroom education and in workplace training?

Students spend no time in workplace training, and all time in the classroom.

Students spend some time in workplace training, and most time in the classroom.

Students spend about half time in workplace training, and half in the classroom.

Students spend most time in workplace training, and some time in the classroom.

Students spend all time in workplace training, and no time in the classroom.

About how many students receive site visits and job shadowing?

- No students receive site visits or job shadows.
- Only a few students receive site visits or job shadows.
- About half of students receive site visits or job shadows.
- Most students receive site visits or job shadows.
- All students receive site visits or job shadows.

**Are employers involved in providing information about the world of work to students?
Examples include job fairs, websites that show job opportunities, and student mentoring.**

- No, they are not involved at all.
- Yes, they are a little bit involved.
- Yes, they are somewhat involved.
- Yes, they are substantially involved.
- Yes, they are the main source of such information.

Are the shares of time spent in VET classroom education and in workplace training specified by law?

- No, the law does not specify time shares.
- Yes, the law specifies a broad range of time shares.
- Yes, the law specifies a narrow range of time shares.
- Yes, the law specifies time shares exactly.

Are student rights defined by a work contract?

- No
- Yes

Is there a curriculum/training plan/syllabus for workplace training?

- No
- Yes

Is the workplace training curriculum/training plan/syllabus implemented?

- No, not at all.
- Yes, a little bit.
- Yes, somewhat.
- Yes, mostly.
- Yes, completely.

Are employers legally required to have specific trainers/instructors responsible for workplace training?

This set of questions has to do with quality assurance of trainers and instructors in the workplace. These are not classroom teachers, only the person or people responsible for training at the workplace are meant.

- No
- Yes

Is there a legally defined number of students per trainer/instructor?

- No
- Yes

Are trainers/instructors in employers legally required to receive specific training?

- No
- Yes

Are trainers/instructors in employers legally required to update their knowledge/skills continuously?

No
Yes

Who bears the costs for VET classroom education?

We ask only about firms' part of the costs to focus on linkage. When students or the education system bear

all costs, the firms bear no costs.

Employers bear no costs.

Employers bear some costs.

Employers bear about half of the costs.

Employers bear most costs.

Employers bear all costs.

Who bears the costs for workplace training (e.g. equipment, training material, trainer salary, student salary)?

Employers bear no costs.

Employers bear some costs.

Employers bear about half of the costs.

Employers bear most costs.

Employers bear all costs.

Do employers provide equipment for VET classroom education?

Employers do not provide equipment.

Employers provide some equipment.

Employers provide about half of the equipment.

Employers provide most of the equipment.

Employers provide all of the equipment.

Is the provided equipment up to date (is it the best available technology)?

The provided equipment is very out of date.

The provided equipment is usually out of date.

The provided equipment is slightly out of date.

The provided equipment is nearly up to date.

The provided equipment is up to date.

Do employers provide part-time teachers for VET classroom education?

Employers do not provide teachers.

Employers provide some teachers.

Employers provide about half of the teachers.

Employers provide most teachers.

Employers provide all of the teachers.

Are classroom teachers provided by employers legally required to receive specific training?

No
Yes

Are classroom teachers provided by employers legally required to update their knowledge/skills continuously?

No
Yes

How much of final grades are defined by the practical part of the examination?

- They are not defined by the practical part of the examination at all.
- They are defined by the practical part of the examination to some extent.
- About half of them are defined by the practical part of the examination.
- They are defined by the practical part of the examination to the most part.
- They are completely defined by the practical part of the examination.

How much of the grade for the practical part of the examination is defined by examination that happens at the workplace?

- No part of the practical examination grade is tested at the workplace.
- Some of the practical examination grade is tested at the workplace.
- Half of the practical examination grade is tested at the workplace.
- Most of the practical examination grade is tested at the workplace.
- All of the practical examination grade is tested at the workplace.

What share of experts in the practical part of the examination are provided by employers?

- Employers provide no experts.
- Employers provide some experts.
- Employers provide about half of the experts.
- Employers provide most experts.
- Employers provide all of the experts.

Is the exam overseen or given by experts from outside the learning place (e.g. members of national or regional commissions)?

- No
- Yes

CURRICULUM FEEDBACK PHASE

Overall, how much power do employers have during the process of VET curriculum feedback?

- Employers have no power.
- Employers have little power.
- Employers have moderate power.
- Employers share power equally.
- Employers have substantial power.
- Employers have most power.
- Employers have all power.

Are there any surveys asking employers whether graduates of the VET program perform well in the workplace?

- No
- Yes

Are there any labor force surveys on how graduates of the VET program fare on the labor market?

For example: Do graduating web designers find jobs? Do they go on to work in the web design industry?

- No
- Yes

Employer Involvement To what extent are employers involved in deciding when updates are necessary?

- Employers are not involved at all.
- Employers are involved to some extent.
- Employers are involved as equal partners.
- Employers are the main actor.
- Employers are the only actor.

Is the involvement of employers in deciding when updates are necessary defined by law?

- Employers are not involved at all.*
- No, the law doesn't specify participation rights.
- Yes, the law requires participation but doesn't specify how.
- Yes, the law specifies the participation broadly.
- Yes, the law specifies the participation exactly.

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