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An Empirical Investigation into the Utility of Descriptions of Inclusive Vocational Excellence Practices

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Abstract

The present paper investigated how inclusive vocational excellence (IVE) practices specific to vocational education and training (VET) can be described in an effective and transparent manner. A framework for the description of such practices was proposed, and then 44 descriptions of practices were collected with this framework from an international sample of providers of such practices from four countries. Expert raters have rated the quality of these descriptions, in terms of how much they respect the proposed structure, provide relevant information about the proposed practice, provide relevant information about the manner in which the practice was implemented and offers a clear and explicit description, further usable by other interested VET institutions. Statistical analyses have then revealed that the framework generates more consistent descriptions for some domains then for others. Implications for practice are discussed.

Keywords: inclusive vocational excellence (IVE); vocational education and training (VET); practice descriptions; communicability.

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This paper focuses on inclusive vocational excellence (IVE) aimed at vocational education and training (VET) institutions and contributes to the clarity and transparency of future descriptions of IVE projects and policies. Empirical research in the domain of IVE is still young, and a multitude of practices that loosely fall into the IVE category are reported in the literature, but often with little systematization in terms of scope, relevance, clarity or sheer transparency of these descriptions. This makes both the accumulation of knowledge in this domain, and the generalization of some of the more effective IVE practices problematic. The current study builds on a European project that described a large number of IVE practices across four countries, proposes a framework and consequent analysis grid for descriptions of IVE practices and empirically evaluates how well the proposed framework works when specialists describe their practices applying this framework.

Rather than being inherently contradictory, the terms "inclusive" and "excellence" can complement each other when utilized for efficiently organizing and managing educational environments. Even apparently these terms seem contrasting, they are not to be treated as mutually exclusive perspectives, as the occurrence of one of them does not supersede the other. A well-integrated perspective – highly advocated in this article – has to acknowledge the contribution of both factors to develop equitable educational and training approaches, where diversity and inclusion are not just accepted but actively leveraged for achieving excellence and collective improvement. Also, because inclusion leads to excellence, inclusion in functional governance is also important in order to have the anticipated processes supported by the diverse stakeholders who may intervene in decisions in educational environments. By fostering an inclusive environment, both in delivery and in governance, the educational ecosystems can tap into a broader range of learners' needs and perspectives, leading to a more robust and successful outcome. Ignoring such perspective and trying to pursue excellence in isolation from considerations of inclusion can perpetuate inequities and can lead, intentionally or inadvertently, to elitist exclusivity, potentially missing out on valuable contributions from a wide diversity of learners and opportunities.

Therefore, inclusive excellence suggests that an educational community develop intentional, complementary strategies that value diversity, equity, and inclusion. The approach is a broad and flexible concept that can be applied across various educational contexts, starting with, for instance, curriculum, desirable fostering an inclusive school culture, continuing with higher education policies regarding student admissions, faculty recruitment or staff composition, with educational leadership and governance or accessible resources and facilities available, research or policies. Certainly, inclusive excellence specific to VET – the focus of this article – can be added to the previous selective enumeration, being a growing area of interest and further research within the academic community, but especially in what started to be generally called Centers of Vocational Excellence (COVEs).

In the attempt to define inclusive vocational excellence, an important limitation has to be addressed: the scarcity of scientific literature and consistent research on the subject. Such a gap has to be firmly mentioned since the insufficient coverage in the literature on the particular topic of inclusive vocational excellence can pose challenges for specialists and practitioners seeking comprehensive insights. In this context, the ambition of this paper is to consistently contribute to expanding the existing knowledge base in this underexplored field.

Even though the richness of scientific literature on inclusive excellence is not consistent, some academic references can be highlighted, mainly referring to additional fields to VET, such as mainstreaming systems, continuous or special education. For instance, Hornby (2020) highlights key points regarding the integration of these two principles in the special education context, taking into account the challenges and potential tensions that may arise in trying to balance equity and excellence. In this regard, he states that focusing on excellence alone without ensuring equity in education systems does not lead to overall excellence. To achieve optimal educational outcomes for all students, it is crucial to combine efforts to promote excellence with a focus on equity

As technology and innovation are increasingly pervasive in education, we can talk about innovative and inclusive pedagogies in VET as well. These pedagogies have as characteristics either elements related to technology (artificial intelligence, augmented reality, virtual learning environments, etc.) or design elements (experiential learning, design thinking, gamification) or skills (computational thinking, learning experiences addressing emotional and social development, etc.). We cannot have innovative and inclusive pedagogies on CoVEs without a governance system also adapted to current times with entrepreneurial, agile and anticipatory characteristics. An ecosystem based on innovative and inclusive pedagogies and entrepreneurial, agile and anticipatory governance system can help today's learners to thrive and shape the world, to create and contribute to a better future. It is important that within CoVE learning takes place in a stimulating and supportive learning environment where good, relevant and robust learning takes place. Inclusion based vocational excellence (IVE) is a complex problem that calls for collective action of multiple actors in addressing solutions – business agents, public administration agents, universities & research organizations, civil society organizations and sustainable development agents (Ciolan et al., 2022).

A similar conclusion about the synergy between excellence and inclusion, seen as mutually reinforcing factors, embraced and integrated into the core values and practices, is strongly underlined in different documents referring to the VET domain. Such strategic and programmatic papers, produced mainly at the European level, can play an important role in compensating the literature and research gap previously mentioned.

Several international declarations and recommendations shape the programmatic directions of the IVE domain; cumulatively, these documents describe VET as an ecosystem aiming to equip learners with practical skills, knowledge and competencies required by particular career paths and occupations, while highlighting the need to promote excellence and inclusion. Many of these international documents highlight the importance of both inclusiveness and excellence in the definition (e.g., World Bank, UNESCO & ILO, 2023), melding the need to zoom in on the marginalized, disadvantaged and under-represented (i.e., "inclusive") with the need to engage in efficient skills development (i.e., "excellence").

In the European Union, the Council Recommendation on VET for sustainable competitiveness, social fairness and resilience defines different key principles to be followed to ensure that VET offers quality opportunities for all learners. The need for inclusive practices leading to fostering inclusive excellence is underlined, as VET systems are requested to "foster inclusiveness and equal opportunities and contribute to achieving resilience, social fairness and prosperity for all" (Council of the European Union, 2020).

Similarly, the Osnabrück Declaration refers directly to "excellent and inclusive European VET systems" as being an enabler of innovation and an essential foundation for sustainable growth. More notably, one of the areas of intervention proposed by Osnabrück Declaration for the years 2021 to 2025 is resilience and excellence through quality, inclusive and flexible VET: "Apprenticeships and work-based learning embedded in a real-life work environment improve employability. VET equips our labour force with knowledge, skills and competencies that are relevant for the ever-changing labour market and offers upskilling and re-skilling for inclusion and excellence" (European Commission, 2021, p. 4).

A comprehensive definition of vocational excellence is provided within the European Training Foundation (ETF) document focused on exploring this challenging topic. From this perspective, inclusive vocational excellence typically denotes high-quality training and education, but also pertains to the relevance of the training to the job market and the appeal of educational programs to both learners and employers. It can also suggest a broader, more inclusive understanding of skills development, encompassing aspects such as innovation, teaching methods, social justice, lifelong learning, transferable skills, ongoing professional development, and the needs of the community (European Training Foundation, 2020).

This approach reconciles, once again, the apparent contradiction between the two concepts in the area of vocational training – excellence and inclusiveness as there is a growing recognition in policy as well as in practice.

The arguments used for constructing this balanced perspective are extracted from Cooper's (1980) opinions, rejecting the possible competition between excellence and quality, in favour of the notion of "acceptable minimum", which according to the European Training Foundation (2020) means that an acceptable minimum for everyone while striving for excellence for some; therefore, it is feasible to highlight good examples of excellence

rather than necessarily focusing on the most outstanding examples (European Training Foundation, 2020, p. 14). A more operational description of the synergy between inclusion and excellence in VET systems is provided when referring to the specificity of the Centres of Vocational Excellence (CoVEs). Such institutions represent collaborative networks aimed at creating skills ecosystems supporting regional development, innovation, and smart specialization strategies. VET collaborates closely with other educational and training sectors, the scientific community, and businesses, and is involved in research, education, and innovation according to European Commission (2019).

Based on these insights, the concept of inclusive VET excellence addresses a wide set of thematic operators, referring to: (a) governance: institutional autonomy, smart specialisation, sustainable financing, sector councils/ alliances, performance-based evaluation; (b) quality: quality assurance frameworks, continuous improvement of VET standards; (c) relevance: sound qualifications, aligned skills and competencies; (d) effectiveness: skills intelligence tools; (e) employability: high-level vocational skills, policy labs (incubators); (f) flexibility: permeability to connect to all possible learning pathways; (g) lifelong learning: comprehensive qualification frameworks; (h) image: VET public recognition as an optimal option for learners and society; career guidance; (i) innovation: value generated, innovation hubs are institutionalised (European Training Foundation, 2020).

By correlating these dimensions, inclusive vocational excellence strives to connect inclusivity and equity with high quality standards, nurturing an environment where all learners can thrive and succeed in their chosen careers. In other words, the approach "ensures high-quality skills and competencies that lead to quality employment and career-long opportunities, which meet the needs of an innovative, inclusive and sustainable economy" (European Commission, n.d.).

CoVEs vary in the degree to which they are 'embedded' in policies for regional development, innovation and smart specialization (European Commission, 2019). Where there are no national or regional networks, there is a risk of a patchy CoVE landscape when viewed across a country as a whole. However, even in such a case, CoVEs develop relationships and networks: partnerships form a central component of CoVE governance, as they ensure shared ownership of goals and activities, and a common commitment to achieving them, by pooling and sharing resources.

Descriptions of current practices are critical in all situations, but especially so in this innovative and emerging domain. Clear and transparent descriptions of practices enable us to analyse them in a systematic way and enable the sharing of practices in both practice communities, policy environments and the scientific literature. Clarity, structure or transparency in the descriptions of practices are critical to the development of the domain,

as knowledge is accumulated and shared with efficiency, while lack of these characteristics may lead to less efficiency and may hamper development.

Description of Current Practices: A Template and Framework

One example of current best practices to be highlighted in this context is the good practice score card (see Figure 1) developed by the ETF (2015), working between 2012 and 2014 with a range of training providers from the EU's 28 member countries and ETF's 29 partner countries, to help them objectively determine the strengths and weaknesses of their training. The ETF score card comprises a set of criteria and an assessment framework that help in the critical review of training provisions by other training professionals working in the same field (also see Table 1).

Table 1: *Excerpt from the ETF Good practices and assessment framework (ETF, 2015)*

Dimension 1: Training Needs Analysis (TNA)				
Rationale A training needs analysis (TNA) ensures that the training programme is designed to meet the specific needs of the target group. A first step in a training programme is to define in concrete terms what the training requirements are of those who will follow a training programme. This information can also assist the training provider in monitoring market trends. Training needs analysis involves an examination of skill gaps and weaknesses. Accumulated TNA intelligence can help policymakers address systemic issues for training. **Objective** The objective of this component of the ETF good practice peer review is to determine how well training needs analysis has been defined as input to the design and execution of a training programme, including the potential for use in wider policy developments.				
Level	**Value**	**Indicators**	**Score**	**Comments - evidence**
Level 1	1	Evidence of proxy - TNA process: data and analysis borrowed from other training environments with risk that training design is less relevant to local market		
	1	TNA tools borrowed and not adapted to local training environment		
Level 2	2	Evidence of TNA is confined to ad hoc or one-off data intelligence gathering related to the training provision under review with no defined plans to update TNA know ledge		
	2	Evidence that TNA is driven by actors external to the training environment (e.g. donors)		
Level 3	3	Clearly defined links between the training provider and private sector for identifying training needs		
	3	At least one TNA tool (e.g. survey, focus group) exploited for purposes of training design and delivery		
	3	At least one example that TNA tools and analysis are sensitive to specific target groups (e.g. exporting SSMEs)		
Level 4	7	TNA reflects scale of training provision in terms of numbers involved in training and geographical spread		
	7	TNA is core feature of training provider's business or organisation plan		
	7	At least one example shared which convinces peer reviewers of innovation in the TNA process. Innovation involves any aspects which brings real added value to the TNA process		
	7	At least one example of an agreement established between training provider and general industry or sector-specific organisation for training development purposes		
Level 5	10	TNA includes analysis of sector trends (trade, turnover, employment, skills) using primary and secondary data.		

	10	Evidence that TNA intelligence from the project has been provided by training provider for wider policy debate e.g. sector-specific, government policies (education, training, employment, enterprise, economic development)		
	10	At least one example shared which convinces peer reviewers of innovative use for technology for TNA process (e.g. e-surveys)		
		Subtotal dimension 1:		
Expert Comments		The most interesting the TNA for me was: My key improvement / recommendation on TNA for the training provider is: My recommendation for ETF for site visit is:		

For example, experienced trainers in youth entrepreneurship critically review the training provided by fellow trainers of youth entrepreneurship. The peer review process involves an in-depth scrutiny of these training practices and identifies strengths and weaknesses as well as opportunities for the training provider to improve the programme. The real value is that the peer review is undertaken by training providers with expertise and know-how in the same field. Equally, the peer reviewer has the opportunity to learn at first hand from the experience, know-how and innovation within the training programme under review.

Figure 1: *The ETF Good practice scoring framework (ETF, 2015)*

Training programmes can be peer reviewed with the ETF score card against five good practice criteria: (1) training needs analysis, (2) design of training programme, (3) training

environment, (4) monitoring, evaluation and improvement, and (5) marketing and dissemination. Each criterion comprises more specific requirements to be met within a training programme. The training provider shares evidence to demonstrate that the requirements are met. Each requirement is assigned a numeric value or score depending on how demanding and complex it is. Taken together, the scores across the various criteria allow peer reviewers to arrive at an overall scoring for the training programme. In the ETF exercise, this total result then determined whether the training programme was confirmed as good practice.

Based on the structured approach of the ETF scorecard, and also on a generalized acknowledgement of the need to transparently and effectively discuss, analyse and share practices, CoVEs have begun to offer more structured descriptions of their practices. But even with this explicit effort to structure the descriptions, their utility may be hampered by lack of clarity. Specifically, practices can oftentimes be useful in more than the context in which they were initially developed and applied – for practices that are narrow in scope and clear-cut, the framework is easy and straightforward to apply, but for broader practices, clarity and thus utility may be questionable.

To address this shortcoming, we investigate the way in which descriptions of practices that were developed by CoVEs based on this structured template, fit into the framework categories, and discuss various the ways in which descriptions of practices can be improved in clarity and utility. To this end, we analysed with the help of six experts a number of 44 good practice descriptions produced by a number of 9 institutions: VET centres, an applied sciences university, companies (in a cooperative work of an international partnership) from four different European countries: Spain, Italy, Malta and Finland. We present results regarding the quality of practice descriptions (as rated by the experts), as well as the fit of these practice descriptions with the targeted categories. We then discuss how both these aspects (quality of descriptions and fit with the underlying categories) can be improved.

Method

Participants

The invitation to participate in the current study was addressed to a number of nine national experts in either VET education and/or organizational psychology, all of them having previous experience and being currently active in the field of VET, both IVET and CVET. These experts have had during the past three decades important contributions in the field of innovative and inclusive pedagogies, VET and governance, and have worked in strategic projects of the European Commission, OECD, ETF and UNESCO. Six experts responded to the invitation and actually participated. It is relevant to mention that they worked with ETF, National Centre for Technical and Vocational Education and Training, the International Test Commission (ITC), the Council of the European Educational Research

Association (EERA) and the European Research Network in Vocational Education and Training (VetNET).

Measures

The questionnaire (Section 2 of the Electronic Supplementary Materials) for the present study was developed in order to enable us to analyse practices related to VET excellence. The questionnaire contained three sections: (1) practice identification data, (2) quality of description and (3) assessment of practice.

Practice identification (section 1) referred to the actual practice that was described, and contained the name of the practice, as well as details about the organization that had proposed it, community in which it was implemented and the categories (section 3) in which the proponents thought it should be included.

Quality of description (section 2) contained 4 items through which the quality of each practice description could be assessed. The 4 items were: "Respects the proposed structure", "Provides relevant information about the proposed practice", "Provides relevant information about the manner in which the practice was implemented", "The description is clear and explicit". For each of the 4 items evaluation was requested on a scale from 1 (= low quality) to 5 (= high quality) regarding the verbatim description that had been offered for the analysed practice.

Assessment of practice (section 3) contained 10 categories to which each practice could refer. The 10 categories are comprised of 6 actual focal domains, to which a seventh "undefined" was added; from those 6 focal domains one comprises two subcategories, and another one comprises three subcategories. The 10 actual categories were as follows: (1) Governance, (2) Teaching - a) Inclusive and innovative pedagogies, including the use of technologies, (3) Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation), (4) Assessment and certification (Prior or at the end of the CoVE training programme), (5) Support services focusing on counselling and guidance - a) Learning support, including special needs support, (6) Support services focusing on counselling and guidance - b) Career, educational and vocational support, (7 Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support, (8) Research & development, (9) VET team professional development, (10) Undefined. Raters used this framework of categories (and the descriptions of each category, see Section 1 of the Electronic Supplementary Materials) to assess each practice in terms of match from 1 (= absolutely inappropriate for this category) to 5 (= perfectly appropriate for this category).

Procedure

The set of 44 practices was initially gathered between December 2021 and February 2022, followed by a period of evaluation and feedback by stakeholders, as well as further

clarifications – final forms of the practices we collected by July 2023. Most of the practices were offered by institutions that provide either professional training or further support services including multi-sector education promoting inclusion, life-skills and well-being, placement of work force or information services related to the labour market. One important aim of these practices was to reorganize functional multilevel governance to be more agile, entrepreneurial and anticipatory, but the final aim of these practices was to generate knowledge and competences related to innovative training services as well as to develop ways to introduce innovative approaches (i.e., challenge or inquiry-based methods) and tools (e.g., virtual reality, gaming) in pedagogies.

The participants (the six experts) were invited to use the questionnaire in order to categorize each of the 44 practices. Practices were presented in a randomized order to each of them; the practice description then remained open and could be browsed and scrolled through while the questionnaire was presented. Instructions called for a quality rating (the 4 items of section 2) and then a request to rate the appropriateness of the presented practice for the category (focal domain) that practice was initially categorized in. Also, the experts were asked to propose where they thought that practice should be categorized in, as well as to offer, in those cases where several categories were available, their second and third best categorization.

Statistical Approach

In this study, we employed descriptive statistics and boxplots to analyse and visualize the distribution of responses across various categories. Boxplots were chosen for their effectiveness in illustrating the central tendency and dispersion of data, providing a clear view of the median, interquartile range (IQR), and potential outliers within each category. For each category, we computed the mean (*M*), standard deviation (*SD*), minimum (Min), first quartile (Q1), median, third quartile (Q3), maximum (Max), and interquartile range (IQR). The mean offers insight into the average response, while the standard deviation reflects the variability around this average. The minimum and maximum values denote the range of the data, and the quartiles, along with the median, help identify the spread and skewness of the data. This approach allowed us to comprehensively understand how different categories performed in terms of 'Respect for structure,' 'Relevance of information provided about the proposed practice,' 'Relevance of information regarding implementation in VET,' and 'Clarity and explicitness of the practice description.'.

Results

In analysing the degree to which the prescribed structure was respected across the various categories (see Table 2, Figure 2a), the data revealed significant insights into how different categories adhere to established standards. Categories 4 (Assessment and certification) and

8 (Research & development) emerged as the top performers with the highest mean scores of 4.33 and 4.67 respectively, indicating a robust adherence to the structure. These categories also demonstrated lower variability with standard deviations of 0.66 and 0.58, suggesting a consistent application of standards across observations. Notably, the lowest scores in these categories were 3 and 4, emphasizing their overall strong performance. Categories 1 (Governance), 7 (Support services - c), and 2 (Teaching - a) also showed high adherence, with mean values consistently above 4.1 and minimal variability. The central tendency of these categories was marked by medians of 4.00, with the third quartile reaching 5.00, highlighting a concentration of higher ratings.

In contrast, category 6 (Support Services - b) and category 3 (Teaching - b) exhibited more significant variations in adherence, as reflected by their higher standard deviations of 1.50 and 0.88 and the lowest scores of 1 and 2 respectively. This variation suggests a more inconsistent application or perception of the structure within these categories. Furthermore, category 10 (Undefined categories) presented a lower mean score of 3.67 and a wider dispersion (*SD* = 1.03), which may indicate ambiguity or inconsistency in how these categories align with the expected structure. Lastly, category 9 (VET team professional development) and category 2 (Teaching - a) maintained good scores with low variability, indicating a consistent understanding and application of the structure across these fields.

Table 2: *Descriptive Statistics for 'Respects the structure'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	4.17	0.65	3	4.00	4.00	5.00	5	1.00
2	27	4.33	0.62	3	4.00	4.00	5.00	5	1.00
3	44	3.86	0.88	2	3.00	4.00	4.25	5	1.25
4	21	4.33	0.66	3	4.00	4.00	5.00	5	1.00
5	32	3.81	0.82	2	3.75	4.00	4.00	5	0.25
6	25	3.92	1.50	1	4.00	5.00	5.00	5	1.00
7	66	4.12	0.79	2	4.00	4.00	5.00	5	1.00
8	3	4.67	0.58	4	4.50	5.00	5.00	5	0.50
9	20	4.20	0.52	3	4.00	4.00	4.25	5	0.25
10	6	3.67	1.03	2	3.25	4.00	4.00	5	0.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

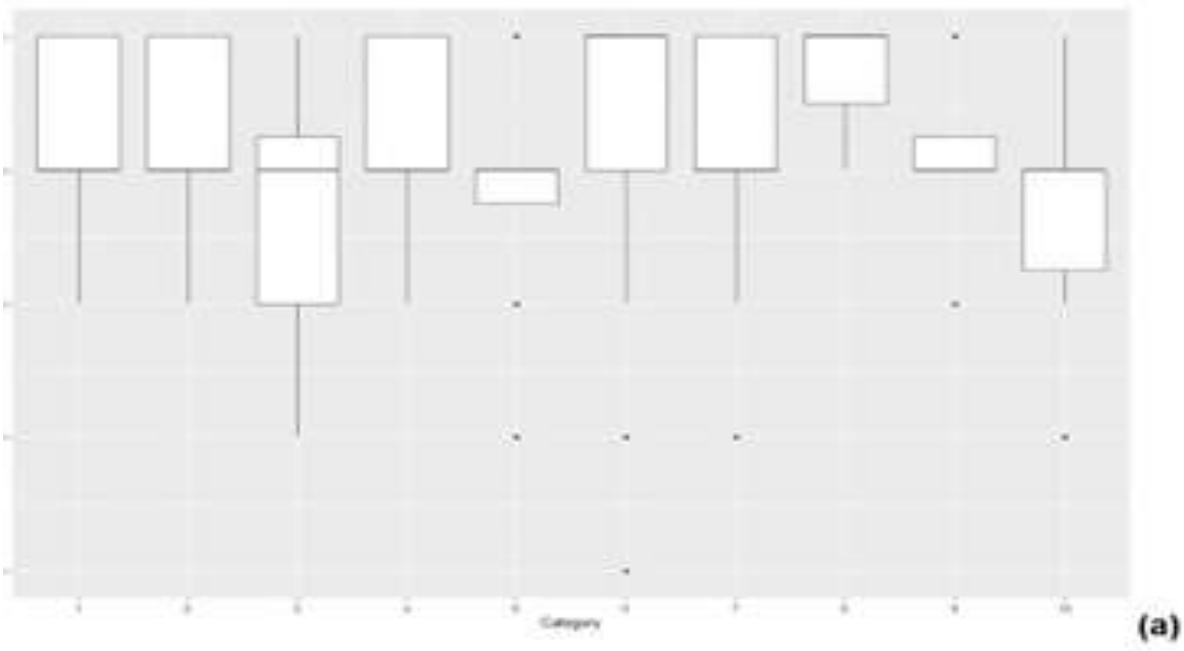

Figure 2a: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Respects the structure'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In evaluating how well various categories provide relevant information about the proposed practice (see Table 3 and Figure 2b), distinct patterns and differences in performance were observed across the categories. Categories 4 (Assessment and certification) and 2 (Teaching - a) demonstrated strong relevance, with mean scores of 3.86 and 4.30 respectively; category 4 also showed low variability with a standard deviation of 0.57, and category 2 with a standard deviation of 0.67, also suggested consistent ratings across different instances. The lowest score observed in these categories was 3, underlining

their general effectiveness. Categories 1 (Governance) and 6 (Support services - b) also exhibited good performance, with mean scores of 3.91 and 4.08 respectively. These categories had moderate variability (*SD* = 0.67 and *SD* = 0.81) and a median of 4.00, showing that the majority of ratings were high, though with some variations.

In contrast, category 5 (Support services - a) and category 3 (Teaching - b) presented more variation in the provision of relevant information, as evidenced by their higher standard deviations of 0.92 and 0.77, and the lowest scores of 1 and 2 respectively. This suggests a less consistent application or perception of relevance within these categories. Category 10 (Undefined categories) presented the most notable challenge with a mean score of 2.83 and a wide range of scores (*SD* = 0.98), indicating significant ambiguity or inconsistency in providing relevant information. Lastly, category 9 (VET team professional development) and category 7 (Support services - c) showed moderate relevance, with mean scores of 3.45 and 3.77, and standard deviations of 0.76 and 0.84, respectively, indicating variability in how well these categories provide relevant information about the practices.

Table 3: *Descriptive Statistics for 'Provides relevant information about the proposed practice'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	3.91	0.67	3	3.50	4.00	4.00	5	0.50
2	27	4.30	0.67	3	4.00	4.00	5.00	5	1.00
3	44	3.77	0.77	2	3.00	4.00	4.00	5	1.00
4	21	3.86	0.57	3	4.00	4.00	4.00	5	0.00
5	32	3.53	0.92	1	3.00	4.00	4.00	5	1.00
6	25	4.08	0.81	2	4.00	4.00	5.00	5	1.00
7	66	3.77	0.84	2	3.00	4.00	4.00	5	1.00
8	3	4.00	0.00	4	4.00	4.00	4.00	4	0.00
9	20	3.45	0.76	2	3.00	3.00	4.00	5	1.00
10	6	2.83	0.98	2	2.00	2.50	3.75	4	1.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

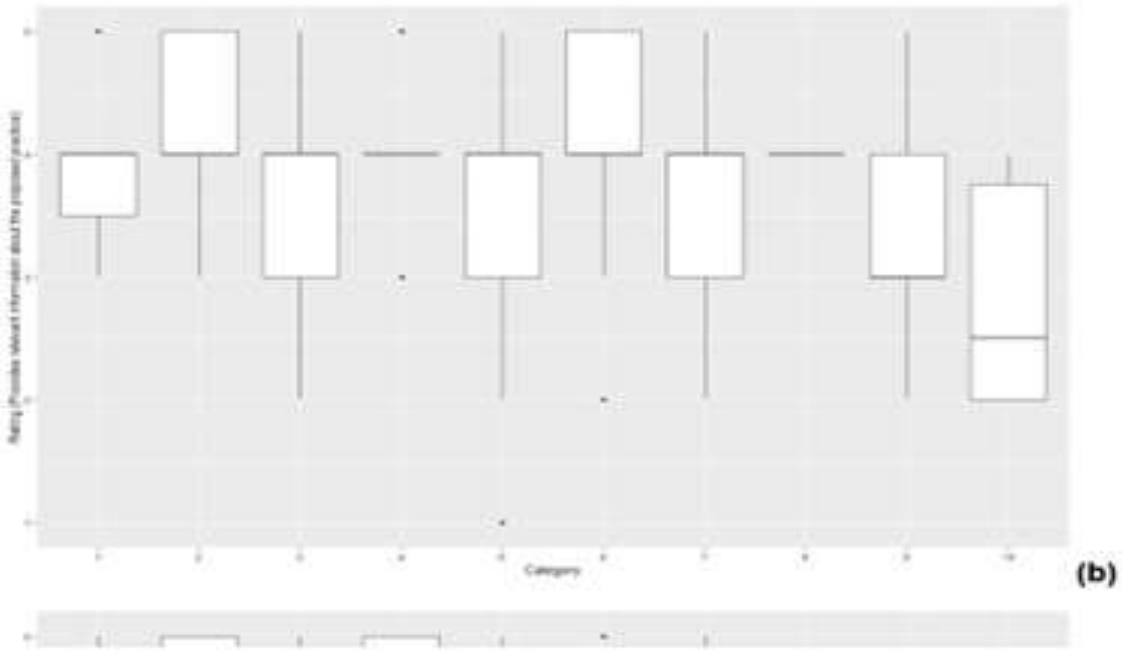

Figure 2b: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Provides relevant information about the proposed practice'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In evaluating how effective different categories provide relevant information about the implementation in VET (see Table 4 and Figure 2c), the analysis highlighted notable differences in ratings. Categories 4 (Assessment and certification) and 1 (Governance) demonstrated strong and consistent performance with mean scores of 4.24 and 4.26, respectively. These categories also showed relatively lower variability, with standard deviations of 0.62 and 0.75, and all observations had scores at least above 2 and 3, underscoring robust capacity to provide relevant information. Category 6 (Support services - b) similarly exhibited a strong mean score of 4.24, though with slightly higher variability (SD = 0.78), indicating that while most instances were effective, there were some variations in how information was provided.

In contrast, category 8 (Research & development), despite a smaller sample size, showed a notable dip in effectiveness, with a mean of 3.33 and minimal scores staying around the baseline of 3, suggesting challenges in consistently providing relevant VET information. Category 5 (Support services - a) and category 2 (Teaching - a) showed more substantial variations in their delivery of relevant information, as evidenced by their higher standard

deviations of 1.07. The lowest scores reached 2 and 1, respectively, highlighting inconsistencies in these areas. Category 10 (Undefined categories) faced the most considerable challenges with a mean score of 2.67 and the highest variability (*SD* = 1.63), indicating major inconsistencies and difficulties in providing relevant VET information. This was further illustrated by the broad range of scores from 1 to 5. Lastly, category 9 (VET team professional development) and category 7 (Support services - c) demonstrated moderate performance with mean scores of 3.20 and 3.64, respectively. These categories exhibited some variability, suggesting that while there are instances of effective information provision, there are also areas for improvement.

Table 4: *Descriptive Statistics for 'Provides relevant information about the implementation in VET'*

Category	Count	*M*	*SD*	Min	Q1	Median	Q3	Max	IQR
1	23	4.26	0.75	2	4.00	4.00	5.00	5	1.00
2	27	3.93	1.07	1	3.50	4.00	5.00	5	1.50
3	44	3.75	0.81	2	3.00	4.00	4.00	5	1.00
4	21	4.24	0.62	3	4.00	4.00	5.00	5	1.00
5	32	3.78	1.07	2	3.00	4.00	5.00	5	2.00
6	25	4.24	0.78	2	4.00	4.00	5.00	5	1.00
7	66	3.64	0.99	1	3.00	4.00	4.00	5	1.00
8	3	3.33	0.58	3	3.00	3.00	3.50	4	0.50
9	20	3.20	0.83	2	3.00	3.00	3.25	5	0.25
10	6	2.67	1.63	1	1.25	2.50	3.75	5	2.50

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

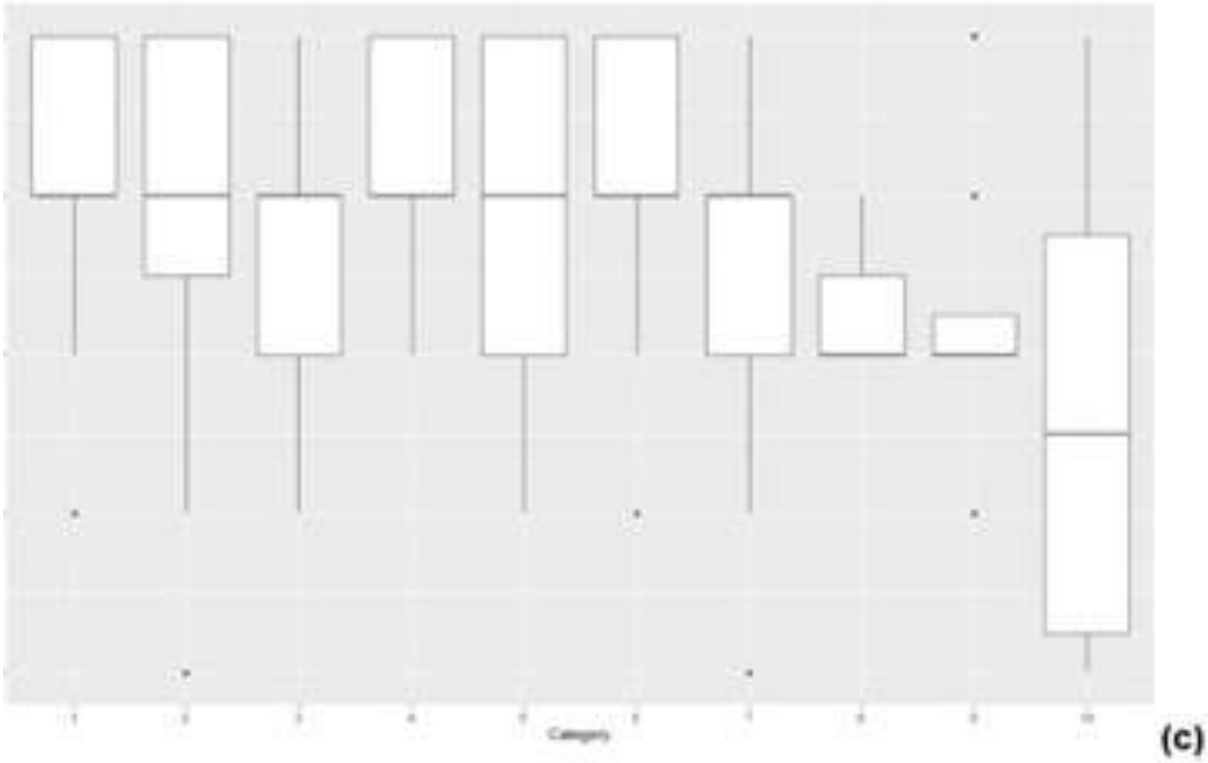

Figure 2c: *Boxplot Showing the Distribution of Ratings Across All Categories for 'Provides relevant information about the implementation in VET'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

In the assessment of how clearly and explicitly various categories describe their practices (see Table 5 and Figure 2d), a mixed range of performance was observed among the categories. Categories 4 (Assessment and certification) and 8 (Research & development) demonstrated strong clarity in their practice descriptions, both recording a mean score of 4.00. Category 4 exhibited some variability (*SD* = 0.77) with scores ranging from 3 to 5, while category 8 showed no variability (*SD* = 0.00), maintaining a consistent score of 4 across all instances. Category 2 (Teaching - a) also indicated a clear and explicit description, matching the mean score of 4.00 with variability (SD = 0.83) reflecting a range from 3 to 5.

Conversely, category 10 (Undefined categories) faced significant challenges in clarity, with the lowest mean score of 2.50 and a standard deviation of 0.84, pointing to inconsistency in how descriptions are provided. The scores in this category ranged from 2 to 4, underscoring the need for improvements in clarity. Categories 1 (Governance) and 6 (Support services - b) showed moderate performance with mean scores of 3.87 and 3.92, respectively. Both categories had some variability in how clearly practices were described, as evidenced by their standard deviations (0.81 and 0.91) and the ranges of scores they encompassed. Category 5 (Support services - a) and category 3 (Teaching - b) presented more considerable variations in the clarity of their descriptions, with mean scores of 3.56 and 3.66, and higher standard deviations of 0.98 and 0.83 respectively. This indicates a broader spread in the clarity of descriptions within these categories. Lastly, category 9 (VET team professional development) showed a lower mean score of 3.35 and a relatively tight range of clarity (*SD* = 0.59), indicating a consistent but moderate level of explicitness in descriptions.

Table 5: *Descriptive Statistics for 'The description of the practice is clear and explicit'*

Category	Count	M	SD	Min	Q1	Median	Q3	Max	IQR
1	23	3.87	0.81	2	3.00	4.00	4.00	5	1.00
2	27	4.00	0.83	3	3.00	4.00	5.00	5	2.00
3	44	3.66	0.83	1	3.00	4.00	4.00	5	1.00
4	21	4.00	0.77	3	3.00	4.00	5.00	5	2.00
5	32	3.56	0.98	2	3.00	4.00	4.00	5	1.00
6	25	3.92	0.91	1	4.00	4.00	4.00	5	0.00
7	66	3.70	0.86	2	3.00	4.00	4.00	5	1.00
8	3	4.00	0.00	4	4.00	4.00	4.00	4	0.00
9	20	3.35	0.59	2	3.00	3.00	4.00	4	1.00
10	6	2.50	0.84	2	2.00	2.00	2.75	4	0.75

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories; IQR - Interquartile Range.

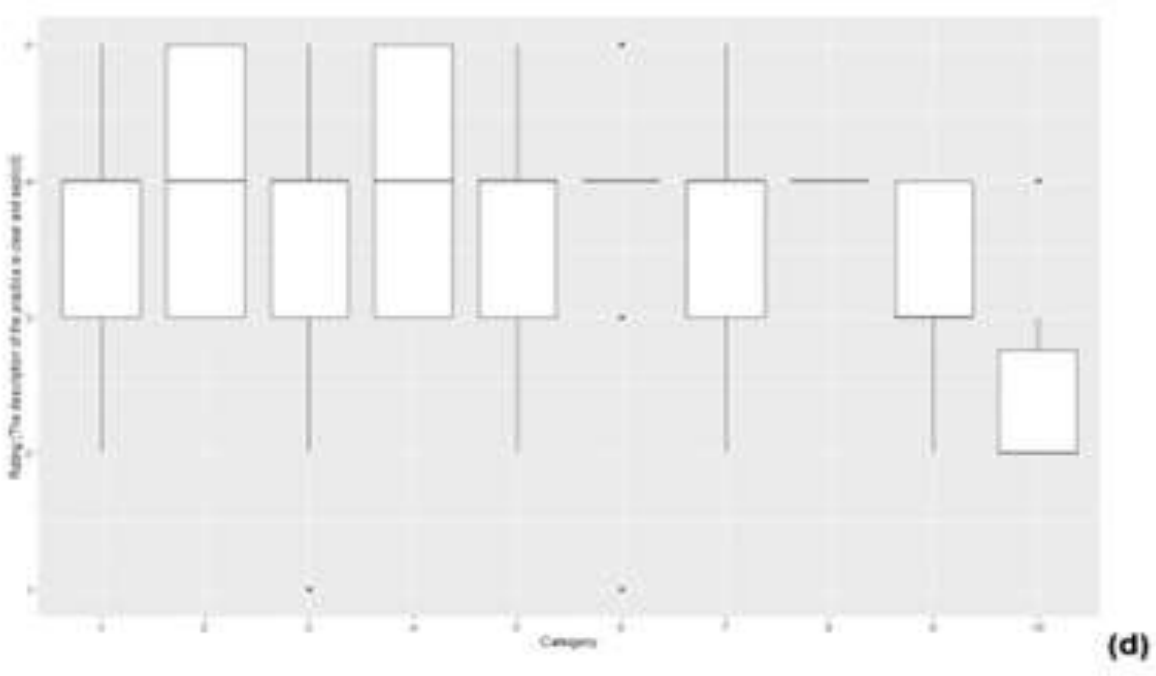

Figure 2d: *Boxplot Showing the Distribution of Ratings Across All Categories for ''The description of the practice is clear and explicit'*

Note. 1 - Governance; 2 - Teaching - a) Inclusive and innovative pedagogies, including the use of technologies; 3 - Teaching - b) Competence based supply (Competence & skill-based pedagogical innovation, including context-based / real world pedagogical innovation); 4 - Assessment and certification (Prior or at the end of the CoVE training programme); 5 - Support services focusing on counselling and guidance - a) Learning support, including special needs support; 6 - Support services focusing on counselling and guidance - b) Career, educational and vocational support; 7 - Support services focusing on counselling and guidance - c) Work and social related inclusion and transition support; 8 - Research & development; 9 - VET team professional development; 10 - Undefined categories.

Discussion

Summary of Findings

The present paper has looked into how practices in inclusive vocational excellence (IVE) can be described in an effective and transparent manner. Specifically, we have proposed a framework for the description of such practices, have collected with this framework descriptions from an international sample of providers and have then rated with the help of a sample of experts the quality of these descriptions, in terms of how much they respect the proposed structure, provide relevant information about the proposed practice, provide relevant information about the manner in which the practice was implemented and offers a clear and explicit description. Statistical analyses have then revealed that the framework generates more consistent descriptions for some domains then for others.

Overall, the evaluation shows that most categories adhere well to the prescribed structure, with some showing moderate inconsistencies. However, there are specific categories with higher variability and lower performance that need attention. This does not suggest the entire evaluation is flawed, but rather that practices that come from certain areas tend to be less coherent and could benefit from targeted attention, as they seem to be more difficult to describe. Specifically, categories 4 (Assessment and certification), 8 (Research & development), and 1 (Governance) generally showed high adherence and low variability. This suggests a robust and consistent descriptions for examples that fall into these categories. Categories such as 2 (Teaching - a) and 6 (Support services - b) exhibited moderate variability with good performance. The standard deviations are slightly higher, indicating some inconsistencies but not to a degree that would suggest the evaluation is fundamentally flawed. Categories 10 (Undefined categories) and 5 (Support services - a) displayed significant variability with lower mean scores. This suggests these practice descriptions that fall into these categories are less consistent in adhering to the prescribed structure, which points to some issues but not necessarily a complete breakdown in the evaluation process. Categories such as 9 (VET team professional development) and 7 (Support services - c) showed moderate relevance and clarity, indicating room for improvement. The variability in these categories suggests inconsistencies in some descriptions.

Theoretical and Practical Implications

This paper and especially the framework that we propose should help in the formulation of future theory regarding IVE practices, providing a glimpse into the domains on which these practices are focused and into the way in which they are usually structured by those who deliver them.

From a practical point of view, the value the present study is twofold. First, it provides practitioners of the IVE/VET domain with a manner in which to structure the description of the practices that they develop, in such a way as to make them communicable and transparent for colleagues who may want to draw inspiration from other experiences, or to simply transfer the success of such completed projects. Second, it provides practitioners with an insight into the domains that are potentially more problematic in the descriptions that can be drawn up - these are domains of practice where special care needs to be given, either to how the description is structured, or to its relevance, its implementation or its clarity.

Strengths and Limitations

This study has a number of limitations. First, descriptions of practices were not collected in a systematic manner. The 44 descriptions were collected as part of a project in which Centres of Vocational Excellence (CoVEs) from four countries participated; these CoVEs described all

their practices. At the same time, it is possible that other countries favour other domains of practice. Second, the study is obviously a preliminary approach to the issue of transparency as a first step in the reproducibility of IVE/VET practices. It relied only on experts to assess how well the described practices were presented and understood, and future studies should take a more diverse path, discussing with various stakeholders if the descriptions provided are sound and applicable. Third, in spite of providing a common template and background to the collection exercise, cultural differences, both national and organizational, might have influenced the team in its approach.

Conclusion

Being aware of all these limitations, we consider the present study a contribution to better understand how we can learn from experience in the newly articulated domain of IVE. Employing a grounded theory inspired approach, we analysed relevant practices and provided a better ground for collecting and structuring practices as they can become part of a relevant body of knowledge for advancing simultaneously understanding (research), systemic interventions (policy) and immediate action (practices) in IVE. If we look to broader implications of this analysis and of future similar research, there are some promising areas for further contributions.

1. Enhanced Understanding: by systematically analysing and categorizing IVE practices, this study helps in consolidating the concept of inclusive vocational excellence. It provides a clearer understanding of what constitutes effective IVE practices and how they can be implemented across different contexts.
2. Consistency and Clarity: the emphasis on clear and consistent practice descriptions can improve the overall quality of VET systems. It ensures that best practices are not only identified but also effectively communicated and implemented.
3. Professional Development: providing a structured approach to documenting IVE practices can support the professional development of VET educators and administrators. It can serve as a tool for training and development, helping practitioners understand and apply the principles of inclusive excellence in their work.
4. Policy Development: the insights gained from this study can inform policymakers about the key elements that contribute to successful inclusive VET programs. This can lead to the development of more targeted and effective policies that support inclusivity and excellence in vocational education.
5. Innovation: by highlighting areas of strength and weakness, the study encourages ongoing innovation in VET practices. It provides a benchmark against which new approaches can be measured and evaluated.
6. Future Research: the type of analysis and findings from this study lay the groundwork for future research in the field of inclusive vocational excellence. It opens new directions for

exploring how different elements of VET contribute to inclusivity and excellence, and how these elements can be optimized for better outcomes.

In conclusion, this study underscores the importance of structured and clear descriptions of IVE practices within VET. By identifying the strengths and weaknesses across different categories, it provides a roadmap for enhancing the quality and consistency of VET practice descriptions, ultimately contributing to the development of more effective and inclusive vocational education systems.

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Declaration of interest

We have no conflicts of interest to disclose.

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