Cedefop's framework for comparing VET: Zooming in and out on assessment

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The three-perspective model

Socioeconomic / labour market perspective (pink):
- Links to knowledge production
- Technology and automation
- Work organisation
- Relationship of VET to occupations
- Labour market skills needs
- Type of employment, recruitment & relation to organisation
- Currency of VET qualifications in the labour market
- Role of social partners in VET governance
- Task/process orientation of curricula
- Impact of demographics, economies and technologies on VET
- Etc.

Pedagogical / epistemological perspective (yellow):
- Relation between general and vocational subjects
- Reference points for curriculum design
- Knowledge perspective
- Application of learning objectives and outcomes
- Digital/ Real learning environment
- Teaching approaches
- Learning formats and contexts
- Approach to knowledge acquisition
- Assessment approaches
- Assessment
- Etc.

Centre: KSC Subjects Curricula Programmes Institutions Systems

Education system perspective (blue):
- Organisation of VET and GE at programme and institutional level
- Etc.
- Relationship initial and continuing VET
- Institutional characteristics of VET
- Autonomy / curriculum flexibility of providers
- Co-ordination between education and work – provider and system level
- Progression routes
- Role of VET in overall education and training system destination
- Governance and funding
- VET teacher education
- VET teacher recruitment

Dimension and feature of the pedagogical and epistemological perspective

Dimensions	Variants / Features		
1. **Knowledge approach**	Practical knowledge / experience-based	Theoretical knowledge / subject- or disciplinary-based	
2. **Pedagogical/ didactical approach**	Learning by doing	Instruction-centred learning	
3. **Relation between general and vocational subjects**	Vocationally related subjects (different types, see point 5 below)	General subjects (no difference made between classical, modern or science oriented)	
4. **Reference points for curriculum design**	Subjects /Disciplines	Work/job tasks/ business processes	
5. **Task/process orientation of curricula**	job/task-orientation	Business process orientation	
6. **Breadth or specificity of programmes / qualfications**	Occupation/profession-specific (e.g. brickmaker, nurse)	Related to broader vocational field (e.g. construction, health)	Vocational preparation (various vocational fields, polytechnic)
7. **Learning sites**	Mainly on the job/work-based learning in real work contexts	Multiple learning sites (e.g. some form of duality)	Mainly in classrooms with some practical experiences or workshops
8. **Learning environment (digital/real)**	Digital/simulated learning environments	physical/real learning environments	
9. **Integration of different learning sites**	Strongly integrated/adjusted	Weakly integrated/ separated	
10. **Teacher-learner relationship**	Master-apprenticeship	Teacher-student	Different types of instructors (e.g. teachers and workshop trainers)
11. **Teacher role**	Facilitator, coach, moderator, adviser	Lecturer, teacher (knowledge carrier)	
12. **Control over learning**	Self-directed; student-centred	Instruction-centred; teacher-centred	
13. **Approach to knowledge acquisition**	Knowledge transmission through instruction	Knowledge acquisition through socialisation	
14. **Ethics/ ethical attitude***	professional values/work ethics	citizenship values / democracy	commitment / performance orientation
15. **Assessment**	Individualised, flexible, open formats	Standardised, closed formats	

The importance of combining perspectives: The dimensional ontology by Viktor Frankl

Abb. 2²

Abb. 1²
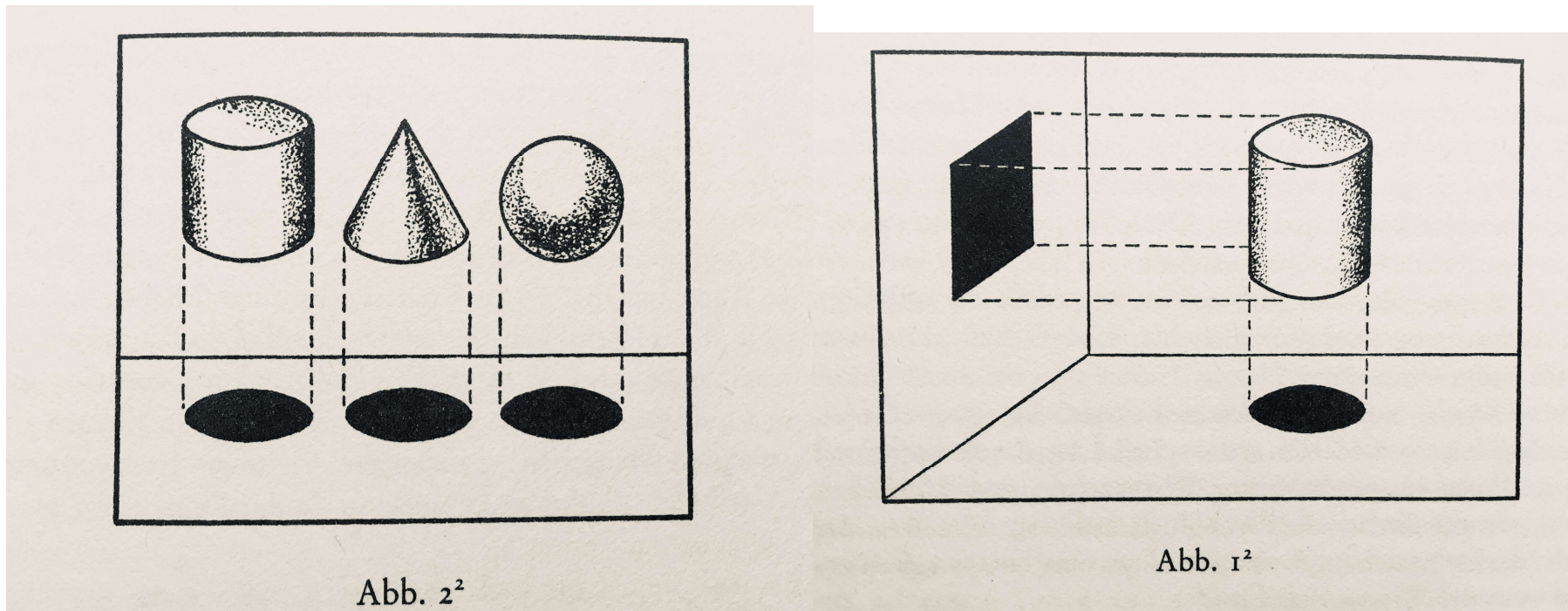
Frankl, Viktor. E. (1970). Der Pluralismus der Wissenschaften und das Menschliche im Menschen. In: Das neue Menschenbild – Die Revolutionierung der Wissenschaften vom Leben, Ein internationales Symposium, hrsg. Von Arthur Koestler und J.R.Smythies, Wien-München-Zürich, S. 374-385.
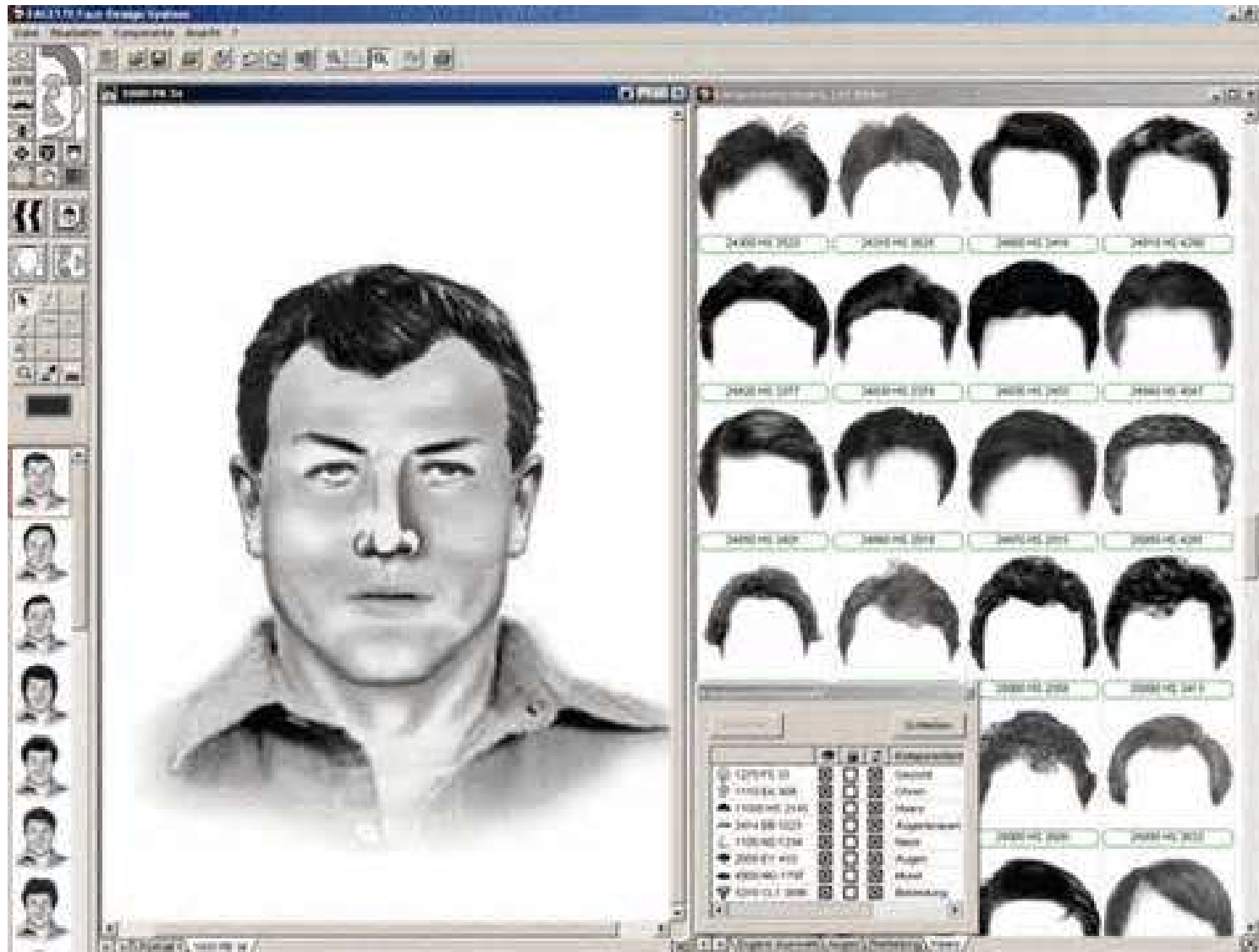
The three-perspective model and the morphological box by Fritz Zwicky

Number of legs	0	1	3	4	5	100
Material	Wood	Glass	Plastic	Cork	Fabric	Rubber
Height from the floor in cm	0	20	50	70	100	200
Form	round	square	rectangular			

- Obvious similarities between our approach and Fritz Zwicky's morphological approach

- Not a theory, but a creativity/ problem solving technique

- Used in engineering design, policy analysis and scenario modelling

Zwicky, F. (1967). The morphological approach to discovery, invention, research and construction. In New methods of thought and procedure. Springer, Berlin,

An Identity Kit for abstract problems

Zooming in on Assessment

Dimensions	Variants / Features		
1. Knowledge approach	Practical knowledge / experience-based	Theoretical knowledge / subject- or disciplinary-based	
2. Pedagogical/ didactical approach	Learning by doing	Instruction-centred lear...	
3. Relation between general and vocational subjects	Vocationally related subjects (different types, see point 5 below)	General subjects (no diff... between classical, mode... oriented)	
4. Reference points for curriculum design	Subjects /Disciplines	Work/job tasks/ business processes	
5. Breadth or specificity of learning outcomes	Occupation/profession-specific (e.g. brickmaker, nurse)	Related to broader vocational field (e.g. construction, health)	Vocation... (various ... fields, po...
6. Learning sites	Mainly on the job/work-based learning in real work contexts	Multiple learning sites (e.g. some form of duality)	Mainly in... with som... experien... workshop...
7. Learning environment (digital/real)	Digital/simulated learning environments	physical/real learning en...	
8. Integration of different learning sites	Strongly integrated/adjusted	Weakly integrated/ separ...	
9. Teacher-learner relationship	Master-apprenticeship	Teacher-student	Different instructor... teachers ... trainers)
10. Teacher role	Facilitator, coach, moderator, adviser	Lecturer, teacher (knowl...	
11. Control over learning	Self-directed; student-centred	Instruction-centred; teach...	
12. Approach to knowledge acquisition	Knowledge transmission through instruction	Knowledge acquisition th... socialisation	
13. Assessment	Individualised, flexible, open formats	Standardised, closed formats	

Pedagogical-epistemological perspective

Dimensions	Features		
A. Purposes and functions			
1. Purpose of assessment	Assessment *for* learning (formative assessment)	Assessment *of* learning (summative assessment)	Assessment for qualification and certification (specific form of summative assessment)
2. Basis for awarding a qualification	Assessment of each component of a programme/qualification (i.e. accumulation of units, modules) *without* a final assessment	Assessment of each component of a programme/qualification (units, modules) *and* final (end point) assessment	Final (end point) assessment (separated from education and training process) only
B. Content			
3. Types of learning outcomes	Occupation specific knowledge, skills and competences	Transversal knowledge, skills and competences	General knowledge subjects
4. Integration or separation of different types of learning outcomes	Separate assessment of occupation-specific KSC, transversal KSC and general knowledge subjects	Partly separated, partly integrated assessment	Integrated assessment
5. Learning contexts	Assessment explicitly includes learning outcomes from formal learning context only		Assessment explicitly includes learning outcomes from formal, non-formal and informal learning contexts
6. Basis of assessment	Norm-referenced assessment		Criterion-referenced assessment
C. References			
7. Reference points to support summative assessment	Assessment specifications and standards are not explicitly defined	Assessment specifications and standards are explicitly defined, but only at a general level	Assessment specifications and standards are explicitly defined and translated into assessment criteria, formulated to specify and articulate different levels of performance /mastery/ achievement

Extract: 7 of 18 assessment dimensions

The 'Assessment Framework'

Dimensions	Features		
A. Purposes and functions — **1. Purpose of assessment**	Assessment *for* learning (formative assessment)	Assessment *of* learning (summative assessment)	Assessment for qualification and certification (specific form of summative assessment)
A. Purposes and functions — **2. Basis for awarding a qualification**	Assessment of each component of a programme/qualification (i.e. accumulation of units, modules) *without* a final assessment	Assessment of each component of a programme/qualification (units, modules) *and* final (end point) assessment	Final (end point) assessment (separated from education and training process) only
B. Content — **3. Types of learning outcomes**	Occupation specific knowledge, skills and competences	Transversal knowledge, skills and competences	General knowledge subjects
B. Content — **4. Integration or separation of different types of learning outcomes**	Separate assessment of occupation-specific KSC, transversal KSC and general knowledge subjects	Partly separated, partly integrated assessment	Integrated assessment
B. Content — **5. Learning contexts**	Assessment explicitly includes learning outcomes from formal learning context only	Assessment explicitly includes learning outcomes from formal, non-formal and informal learning contexts	
C. References — **6. Basis of assessment**	Norm-referenced assessment	Criterion-referenced assessment	
C. References — **7. Reference points to support summative assessment**	Assessment specifications and standards are not explicitly defined	Assessment specifications and standards are explicitly defined, but only at a general level	Assessment specifications and standards are explicitly defined and translated into assessment criteria, formulated to specify and articulate different levels of performance /mastery/ achievement

Quality of assessment

Dimensions	Features		
8. Sources/methods for collecting evidence related to theoretical knowledge	Written test		Oral test
9. Sources/ methods for collecting evidence related to practical knowledge	Direct evidence (e.g. observations - skills demonstrations at workplaces, simulation exercises, role plays; oral questioning - reflections and justifications of actions or decisions)	Indirect evidence (e.g. review of work samples or products)	Supplementary evidence (e.g. third-party feedback, work diaries)
D. How: Methods, tools — **10. Internal/external**	Internal assessment (e.g. teachers from the VET institution)	Both internal and external assessment	External assessment (e.g. third-party organisation, external agency such as national assessment centre)
D. How: Methods, tools — **11. Environment**	Face-to-face (individual or group)		Online (using digital tools)
D. How: Methods, tools — **12. Location**	Class-room at VET institution	Laboratory, workshop etc. at VET institution	Workplace
D. How: Methods, tools — **13. Authenticity**	Low degree of authenticity (e.g. written examination in the class room)	Some degree of authenticity (e.g. assessment based on simulation of real working-life situations in VET institutions)	High degree of authenticity (e.g. assessment in the work context)
D. How: Methods, tools — **14. Standardisation**	Low degree of stan-dardisation (e.g. assessment designed and implemented de-centrally in a flexible way)	Combined forms of assessment: some parts are standardised, other parts are not standardised	High degree of standardisation (e.g. assessment designed and implemented externally)
D. How: Methods, tools — **15. Assessors**	Teachers	Trainers, workplace instructors or other labour market stakeholders	External agencies
D. How: Methods, tools — **16. Learner involvement**	No involvement of learners	Peers (peer assessment)	Candidate (self-assessment)
E. Alignment — **17. Alignment**	Overall strong alignment between intended learning outcomes, delivery model and assessment	For some parts of the qualification/programme there is a strong, for others a loose alignment between intended learning outcomes, delivery model and assessment	Overall loose alignment between intended learning outcomes, delivery model and assessment

Zooming in and zooming out

Dimensions	Individualised, flexible, open formats	Standardised, closed formats
Purpose of assessment	Assessment *for* learning (formative assessment)	Assessment *of* learning (summative assessment)
Types of learning outcomes	Transversal knowledge, skills and competences usually included	Transversal knowledge, skills and competences rarely included
Integration or separation of different types of learning outcomes	Integrated or Partly separated, partly integrated assessment	Separate assessment of occupation-specific KSC, transversal KSC and general knowledge subjects
Learning contexts	Assessment explicitly includes learning outcomes from formal, non-formal and informal learning contexts	Assessment explicitly includes learning outcomes from formal learning context only
Sources/methods for collecting evidence related to practical knowledge	Indirect and supplementary evidence are also used	Only direct evidence is used
Internal/external	Internal assessment is also included	Focus is on external assessment
Location	Other locations are also included (Laboratory, workshop etc. at VET institution, Workplace)	Mainly class-room at VET institution
Authenticity	High degree	Low degree
Standardisation	Low degree	High degree
Assessors	Various types of assessors	Focus is on external agencies
Learner involvement	Candidates and peers are also involved	No involvement of learners

Trends identified in VET assessment

Often parallel trends, for example:

- stronger focus on formative assessment and VET learners' self-assessment (at least as policy intention linked to a learner-centered approach) & using summative assessment to monitor the performance of VET institutions

- increased assessment of separate units or modules & stronger focus on end-point assessments

- standardised assessment approaches & individual and flexible forms of assessment (incl. opportunities for VNFIL)

- increasing use of final practical exams or assignments, skills demonstrations in real work environments & trends towards using digital assessment forms

Further applications of the Framework

- Analysing different national VET conceptions
  (Cedefop, 2017)

- Defining and analysing VET at higher levels
  (Cedefop, 2019)

- Developing European VET scenarios for Europe
  (Cedefop, 2020).

- Comparative VET curricula in Europe
  (Cedefop, 2022)

- Comparing the extent to which IVET institutions in Europe
  have been opening up to adult learners
  (Cedefop, forthcoming)

Benefits of the framework

- it provides a holistic approach to VET systems and integrates many components that are usually not integrated;

- it allows to connect different levels of analysis and to combine rough initial assessment with subsequent detailed analysis;

- it allows for analysing whole VET systems as well as parts of it (e.g. higher VET) as well as specific aspects (e.g. assessment);

- it is flexible, adaptable and connectable to newly emerging issues in VET policy and practice;

- it is particularly suited to 'clear the ground' for policy work and as such provides a model for how research supports policy;

- it is useful to structure policy debates, strategic thinking and scenario development in VET.

Challenges in developing & applying the framework

- Comprehensive review and overview of the subject needed

- Limits of applying theoretical concepts in practice

- Separation and differentiation of dimensions may appear artificial

- Binary (mutually exclusive) features vs. poles of a spectrum

Common distinctions made in VET curricula in Europe

	In School		Outside School
	Classroom / Homework	**Workshops / Laboratories**	**Workplaces / Companies**
general	**(a)** general/academic knowledge (e.g. maths, chemistry, foreign language general)	(e.g. skills learned in language labs or chemistry labs)	(e.g. improving communication or team skills)
vocational	**(b)** Theoretical VET knowledge (e.g. marketing, engineering, domain specific foreign language)	**(c)** practical vocational skills (e.g. free hand drawing, programming)	**(d)** Job-specific skills (company-specific, local knowledge)
	theoretical	practical	

Source: Cedefop 2022, p. 28

Thank you for your attention!

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