

From Disposition to Knowledge: The Cognitive Drift in European VET Learning Outcomes

Wojciech Stęchły*

Abstract

The article analyses how learning outcomes describing transversal key competences are formulated in six European VET systems. This question follows a related article in this issue (Dębowski et al., 2024), which examined where such competences sit in VET curricula and assessment, and why they are almost absent from certification. A corpus of 725 learning-outcome statements from programme documents of Austria, France, Latvia, Norway, Poland and Slovakia was coded on two frames at once, independently by two coders: the EQF knowledge / skills / responsibility and autonomy descriptors and the Bloom–Krathwohl cognitive / psychomotor / affective domains; 684 of the statements carry a category annotation and enter the analyses reported here. The main results hold under each coder’s separate pass, and the one coder-sensitive figure is flagged in the text. The article documents the drift from disposition towards the cognitive domain. On the EQF descriptors the corpus looks like a corpus of skills; on the Bloom–Krathwohl domains three quarters of it is cognitive and 1.5 per cent psychomotor, because the EQF skills category merges the two: within it, cognitive statements outnumber psychomotor ones forty-six to one. Almost a quarter of the corpus is affective. On the EQF frame, responsibility and autonomy accounts for barely a fifth of statements, far less than one might expect for competences built on initiative and self-direction. After adjusting for differences in subject matter, national writing style divides the six countries into two groups of three: those whose certification covers general as well as vocational education

* SGH Warsaw School of Economics, e-mail: wstech@sgh.waw.pl, <https://orcid.org/0000-0003-1359-6272>

write transversal competences more dispositionally, and those whose certification is vocational-only write them more cognitively. The study shows that EQF-based monitoring cannot detect cognitive drift, and links national styles of description to the architecture of certification. In doing so, it extends the related article's commensuration account earlier in the policy process: the outcome statement, not the exam, is where a disposition first becomes a gradable proposition.

Keywords: transversal key competences, learning outcomes, vocational education and training, Bloom's taxonomy, European Qualifications Framework, commensuration

JEL classification: I21, I28, J24, Z13

1. Introduction

Before a competence can be taught for an examination, it must be written down. This requirement is central to the learning-outcomes approach that the European Union has recommended to its member states for two decades, from the Recommendation on key competences for lifelong learning (2006/962/EC, revised as 2018/C 189/01) through the European Qualifications Framework. Education systems are asked to describe what they teach as statements of what a learner knows, understands and is able to do, and to align curricula, teaching and assessment with those statements (Cedefop, 2009; European Parliament and Council of the European Union, 2008/C 111/01; Council of the European Union, 2017/C 189/03). For most occupational content this is demanding but feasible. Transversal key competences are a harder case. Initiative, self-direction, cooperation and judgement must be fixed in sentences precise enough to support teaching and examination, yet fixing them threatens the contextual, dispositional character that makes them transversal. This article asks what happens to a transversal competence when a policy system writes it down.

A related article in this issue (Dębowski et al., 2024) examines what six European VET systems (Austria, France, Latvia, Norway, Poland and Slovakia, all of which award qualifications through state-regulated examinations) do with transversal key competences: where they sit in curricula, how they are assessed, and why they are almost absent from assessment leading to certification. It interprets that absence as means–ends decoupling in Bromley and Powell's (2012) sense, sustained by a com-

mensuration problem: certification requires comparable and defensible judgements, and transversal competence resists such standardisation. The present article moves one step back. It asks in what domain transversal competences are written in the first place: as knowledge or as skill, or instead as disposition. The related article documents a migration towards what can be tested at the point of examination; the question here is whether the same migration is already present in the programme documents.

The evidence is a corpus of 725 learning-outcome statements on transversal key competences, drawn from national programme documents of the six countries in the TRACK-VET project. Each statement was coded on two frames at once: the knowledge / skills / responsibility and autonomy triad of the European Qualifications Framework (Council of the European Union, 2017/C 189/03), and the cognitive / psychomotor / affective domains of the Bloom–Krathwohl taxonomies (Bloom, 1956; Krathwohl et al., 1964; Anderson et al., 2001). Reading the same statements through two frames is the article's method, and the two frames disagree. On the EQF descriptors the corpus looks healthy: 64 per cent of statements fall under skills, which is what a learning-outcomes reform is supposed to produce. On the Bloom–Krathwohl domains, three quarters of the same corpus is cognitive and 1.5 per cent is psychomotor. The two results are consistent, because the second explains the first. The EQF skills category merges cognitive skills (analyse, evaluate, plan) with psychomotor skills (install, prepare, operate). A corpus that is mostly about thinking and almost never about doing therefore still counts, in EQF terms, as a corpus of skills.

The article makes two contributions. The first concerns measurement. Any analysis that uses the EQF descriptors to establish how a competence is described (and they are the common instrument of qualifications frameworks, curriculum audits and comparative research) cannot distinguish cognitive from practical accomplishment, and so cannot detect the conversion of dispositional competences into knowledge about them. This deepens a finding the related article could only signal: there, the EQF triad served to detect drift towards the knowledge domain; here it turns out that the triad detects only part of the drift, and that its skills category conceals the larger part. The second contribution is comparative. National styles of description, separated from differences in subject matter by direct standardisation, form a pattern that matches the architecture of certification described in the related article: the three systems whose final examinations also certify the general education strand write transversal competences in a much more affective and autonomous register than the three whose certification covers only the vocational strand. With only six cases,

this pattern is reported and checked here, and weighed against rival explanations in Section 6.

The article proceeds as follows. Section 2 places the study in the literature on learning outcomes and introduces the two frames, arguing that they are different kinds of instrument: a levelling device and a taxonomy, which is why one merges what the other separates. Section 3 describes the corpus, the coding and its limitations. Section 4 shows what the corpus contains; Section 5, the core of the article, shows in which domain it is written; Section 6 examines country patterns. Section 7 discusses the implications for the measurement infrastructure of European skills policy and for the question, shared with the related article, of what would have to change for a transversal competence to survive its own description.

2. Learning outcomes as a policy technology and its critics

The learning-outcomes approach did not originate in Brussels, but Brussels made it a general-purpose policy technology. Its elements are older: criterion referencing and the ambition to define education as observable behaviour come from mid-twentieth-century American practice, and reached Europe together with Bloom's taxonomy (Kliebard, 1975; Popham, 1971; Bloom, 1956). The European Union added scale and infrastructure. Nearly every lifelong-learning instrument of the past two decades (the European Qualifications Framework, ECVET, ECTS, EQAVET, Europass) is built on learning outcomes, and the approach is often described as a paradigm shift (Adam, 2007; Cedefop, 2009). Its promises are well known: transparent qualifications, closer links between education and the labour market, permeability between sectors, and recognition of learning wherever it occurs (Cedefop, 2009, 2017). Every one of these promises assumes that what a qualification certifies can be carried by written statements.

A substantial critical literature questions that assumption. Allais (2012, 2014) argues that outcomes-based frameworks expect too much of description and substitute the writing of outcomes for the harder work of building educational capacity, and Lassnigg (2012) shows that policy ambitions are regularly lost in translation into curricula and assessment. For Hussey and Smith (2003), outcomes written for accountability acquire a false precision. Brockmann, Clarke and Winch (2008) show

that the core terms, knowledge, skills and competence, mean different things in different national traditions, so similar-looking statements describe different things. Winch (2020) argues that these difficulties are structural: they will not be resolved simply as practice matures. The TRACK-VET synthesis report sums this literature up in an amended Wittgenstein: the meaning of learning outcomes lies in their use (Dębowski et al., 2021). The critique has focused on what descriptions do to teaching, curricula and the balance of power between actors. It has paid less attention to what description does to the competence itself, to the written statement as an object, which is the focus of this article.

Transversal key competences are the hardest case for description. Tilly (1988, pp. 452–453) called skill “a social product, a negotiated identity”, solid from a distance and vaporous close up. This applies to a social or civic competence: what is described is less a measurable trait than an attribution made in a specific setting. Descriptions of such objects tend towards one of two poles: vague generality, which leaves interpretation to practitioners, or the knowledge domain, where definitions are stable and performance can be observed under controlled conditions. The related article located the second pole at certification, using Espeland and Stevens’s (1998) concept of commensuration: examinations need comparable and defensible judgements, and knowledge about a competence meets that need while the competence itself does not. This article adds one step: commensuration does not begin when the examination is set. It begins when the outcome is written, because programme documents in examination-centred systems are drafted with assessment in mind, and Sections 4 and 5 test that claim empirically. Throughout, “drift” names a register-relative skew, a corpus written further from the disposition domain than the competence’s own definition would predict. It is not a claim that these systems’ documents were once written differently, which a synchronic corpus could not support; Section 3.5 states what follows from that scope.

Detecting such a conversion requires an instrument that distinguishes kinds of accomplishment, and the Bloom–Krathwohl taxonomies provide one. The original taxonomy (Bloom, 1956) divided educational objectives into three domains, cognitive, affective and psychomotor, and elaborated the cognitive domain. The affective domain followed in the second handbook (Krathwohl et al., 1964). The psychomotor domain, announced but never elaborated by Bloom’s committee, received its own taxonomies later (Dave, 1970; Simpson, 1972; Harrow, 1972). The revision by Anderson et al. (2001; Krathwohl, 2002) changed the cognitive levels but kept the three domains. Two properties of the taxonomy matter for this analysis. It classifies what

kind of accomplishment is involved (thinking, valuing, or doing) independently of its difficulty, so that “explains the causes of conflict” and “resolves a conflict responsibly” can be equally demanding while belonging to different domains. And it was built for curriculum and assessment design, exactly the kind of documents this corpus comes from.

The EQF descriptors are a different kind of instrument, and this difference is the basis of the article’s method. The knowledge / skills / responsibility and autonomy triad (Council of the European Union, 2017/C 189/03) is a levelling device: it places qualifications from different systems on eight levels of rising demand and autonomy. It does not classify the character of an outcome. Its definition of skills makes the consequence explicit: skills are cognitive (logical, intuitive and creative thinking) or practical (manual dexterity and the use of methods, materials, tools and instruments). What the taxonomy separates as its most basic distinction, the EQF folds into one category by design. For levelling qualifications this design choice is harmless. It turns into a problem when the descriptors are used, as they routinely are in qualifications frameworks, curriculum audits and comparative research (Winterton, Le Deist & Stringfellow, 2006), to classify what kind of outcome a statement expresses. An instrument that cannot distinguish thinking from doing cannot register a drift from doing to thinking. Section 5 turns that limitation into a measurement result.

Three expectations follow, stated before the evidence. First, if description anticipates assessment, statements on transversal competences should drift towards the cognitive domain, including statements whose EQF class is skills or even responsibility and autonomy, where the drift should appear as thinking about a disposition rather than its exercise. Second, the two frames should disagree in a predictable direction: the corpus should look unremarkable on the EQF descriptors while the Bloom–Krathwohl domains show cognitive dominance, with the disagreement carried by the composite skills category. Third, the drift should vary across countries in line with the certification architecture documented in the related article: stronger where certification stops at the vocational strand, weaker where it covers the general strand and where national traditions provide a language for dispositions. Sections 4 and 5 examine the first two expectations, Section 6 the third.

3. Data and methods

This article uses one strand of the TRACK-VET evidence: the corpus of learning-outcome statements. The project's design, consortium, interviews and document analysis are described in the related article and in the methodology report (Dębowski, Reegård & Stęchły, 2018) and are not repeated here. What needs full description is what was done to the corpus for this analysis, because the two-frame coding was carried out after, and separately from, the work reported there.

3.1 The corpus and its selection

Between 2017 and 2020 the TRACK-VET partners collected, from nationwide programme documents and programmes of particular national interest in the six countries, a repository of statements describing intended learning outcomes related to transversal key competences (TRACK-VET Repository of Learning Outcomes, 2020). Each statement was annotated with one to three of fifteen descriptive categories that operationalise the four competences (eleven assigned to a single competence, four cross-cutting) on a best-fit basis. The categories and their derivation from the 2006 and 2018 Recommendations are set out in the related article (Table 2) and in Annex 4 of the synthesis report (Dębowski et al., 2021). This annotation was done by one member of the team and calibrated on a sample with other project members.

The corpus analysed here is a re-selection of that repository, made after the related study was completed. Of the 740 statements originally collected, near-identical duplicates were merged, and a few entries with no verb and no clear relation to a transversal competence were removed. This leaves 725 statements, of which 684 carry at least one annotation and enter the analyses by category and competence.¹ The 684 annotated statements carry 902 annotations. The national sub-corpora differ greatly in size: Poland contributes 250 annotated statements and Austria 156, together three-fifths of the corpus, while Norway and Slovakia contribute 48 and 46 (Table 1). Equal country weighting, described below, deals with this imbalance.

¹ Counts reported in this article are computed from the repository as re-selected for this deepened analysis and may therefore differ marginally from those in the synthesis report and the related article (for example, 119 rather than 120 statements for understanding of society). The differences reflect the selection of learning outcomes from the repository, not revisions to the underlying data.

Table 1. The corpus by country

Country	Statements coded	Statements annotated	Annotations
Austria	156	156	221
France	114	113	139
Latvia	109	71	97
Norway	48	48	66
Poland	252	250	314
Slovakia	46	46	65
Total	725	684	902

Source: TRACK-VET Repository of Learning Outcomes (2020); author's calculations on the re-selected corpus.

3.2 The two descriptor frames and the coding rules

Each of the 725 statements was read against both frames. On the Bloom–Krathwohl frame, a statement received a flag for every domain it expresses (cognitive, psychomotor, affective) and one leading domain: the domain in which the statement is principally written, judged from its verbs and overall formulation. A statement may also carry a secondary domain. On the EQF frame, a statement received a flag for every descriptor it expresses and one primary class, defined in the same way. The two codings were made independently of each other: “I can explain ways to promote motivation” is knowledge on the EQF frame and cognitive on the Bloom frame because each frame was applied independently, without translating one coding into the other. Coding stayed at the level of the three domains; the psychomotor sub-taxonomies were not used, and the psychomotor domain was coded on the same rules as the other two. All coding used the statements as supplied in the partners’ English translations, for reasons discussed under limitations.

3.3 Double coding and agreement

Both frames were applied by two coders working independently; disagreements were then resolved in discussion. The coders disagreed on 179 of the annotated statements on the Bloom frame and 157 on the EQF frame, and in a small number of these (3 and 40 respectively) the discussion settled on a reading different from both independent passes; the final Bloom coding is close to the second coder’s pass. Raw agreement was 74.4 per cent for the leading domain and 77.5 per cent for the primary EQF class; Cohen’s κ was 0.38 and 0.63. The low κ for the Bloom frame partly reflects the dominance of one category: with three quarters of the corpus cognitive, chance agreement is high (0.59), and the prevalence-adjusted coefficient (PABAK) (Byrt, Bishop, &

Carlin, 1993) is 0.62 for the Bloom frame and 0.66 for the EQF frame. Where the coders disagreed is more informative than the coefficients. Of the 179 discordant Bloom codings, 171 lie on the cognitive–affective boundary; of the 157 discordant EQF codings, 82 lie between skills and responsibility and autonomy. The boundaries that carry this article’s argument are the boundaries trained readers disagree about, which says something about the object and not only about the instrument; the discussion returns to this. The findings do not depend on the reconciliation: on each coder’s independent pass the cognitive share is 69.0 and 75.6 per cent, the psychomotor share 0.7 and 1.6 per cent, and the country pattern of Section 6 holds under both. One result is coder-sensitive and is flagged where it appears: the share of responsibility-and-autonomy statements led by the cognitive domain ranges from 5.9 to 43.3 per cent across the two passes.

3.4 Units of analysis and measures

Three units of analysis appear in the tables, and each table states which it uses. The statement is the unit for distributions over domains and classes ($n = 684$ annotated; totals are also reported for all 725). The annotation is the unit where a statement enters every category or competence it carries ($n = 902$), so rows in such tables do not sum to 684. The statement–category pair is the unit of the standardisation in Section 6; a statement with two annotations enters twice, which is why observed values there differ slightly from the statement-level table. The analytical toolkit is deliberately simple, because six countries make a set of cases rather than a statistical sample. Distributions are reported as shares. Robustness to corpus imbalance is checked by recomputing with each country weighted equally and comparing orderings by rank correlation. Association in cross-tables is summarised by Cramér’s V , with p -values checked by permutation because several cells are small. National style is separated from subject-matter composition by direct standardisation, explained where it is used. The analysis uses no method that treats the six countries as a sample: no regression, clustering, latent-class models or configurational analysis.

3.5 Limitations

Five limitations apply. First, the corpus is not balanced: partners collected statements from nationwide documents and programmes of particular interest, not from a

sampling frame, so frequencies show relative emphasis within the corpus and support no statistical claims about any country. Second, the type of source document, whether general core curriculum, vocational unit or assessment standard, was not kept as a variable, and the mix of document types differs by country. This is the most serious limitation for the country comparison: a sub-corpus drawn mainly from general-education subject content will look cognitive whatever the national style. Section 6 names it as a rival explanation the data cannot exclude. Third, statements were mostly supplied in the partners' own English translations and were accepted as provided; in a field where the core terms differ across languages (Brockmann et al., 2008), some slippage in translation is likely, and the coding inherits it. Fourth, the annotation to categories was made by a single calibrated coder, and the author was a member of the consortium whose documents are analysed; the double coding of the two frames was introduced to discipline this, but the analysis remains partly a self-evaluation. Fifth, the corpus is synchronic and drawn from a single documentary genre, the learning-outcome statement itself. Nothing here compares these systems' documents to how the same competences were described before the outcomes reform, or to how they are described in other genres today, so the design cannot establish whether the outcomes format itself does the causal work or is simply the current vehicle for a more general anticipatory pressure. These limits define what the article can claim: how six systems write transversal competences down, not what their schools teach or their learners acquire.

4. What the corpus contains

What the statements describe must be established before asking how they are written, because the two questions are linked: part of the corpus is cognitive by definition, and a claim about cognitive drift has to be separated from the composition of the material. This section reports the distribution across the fifteen categories and the four competences, checks its robustness to the imbalance of the national sub-corpora, and describes what the largest categories contain. Table 2 lists the categories with annotation counts; Table 3 breaks them down by country.

Table 2. The fifteen descriptive categories: competence assignment and annotation counts

Descriptive category	Transversal key competence	Annotations
Social and interpersonal relations	Personal, social and learning	156
Realisation of initiatives	Entrepreneurship	146
Understanding of society	Civic	119
Critical thinking	Related to more than one TKC	81
Media literacy	Related to more than one TKC	63
Problem solving	Related to more than one TKC	59
Taking action and making decisions	Entrepreneurship	56
Maintaining well-being	Personal, social and learning	49
Values and identity	Civic	43
Motivation and autonomy of learning	Personal, social and learning	31
Understanding and appreciation of culture	Cultural awareness and expression	30
Methods and strategies of learning	Personal, social and learning	25
Participation in public affairs	Civic	20
Creativity and innovation	Related to more than one TKC	16
Cultural expression	Cultural awareness and expression	8
Total		902

Note: N = 684 annotated statements carrying 902 annotations (a statement carries up to three). Category–competence assignment follows Dębowski et al. (2018); see also Dębowski et al. (2024), Table 2. Source: author's calculations.

Table 3. Annotations by country and descriptive category

Descriptive category	AT	FR	LV	NO	PL	SK	Total
Social and interpersonal relations	57	41	14	2	21	21	156
Realisation of initiatives	58	26	38	11	10	3	146
Understanding of society	12	9	4	23	68	3	119
Critical thinking	16	11	7	6	31	10	81
Media literacy	4	1	6	2	46	4	63
Problem solving	16	7	4	3	20	9	59
Taking action and making decisions	17	6	0	3	26	4	56
Maintaining well-being	3	4	6	3	33	0	49
Values and identity	11	13	5	4	6	4	43
Motivation and autonomy of learning	10	6	6	2	5	2	31
Understanding and appreciation of culture	4	2	0	3	21	0	30
Methods and strategies of learning	6	4	3	2	8	2	25
Participation in public affairs	3	6	0	1	9	1	20
Creativity and innovation	4	3	2	1	5	1	16
Cultural expression	0	0	2	0	5	1	8
Total annotations	221	139	97	66	314	65	902

Note: annotation counts; a statement enters every category it carries. Source: author's calculations.

The pooled ordering runs from social and interpersonal relations (156 annotations), realisation of initiatives (146) and understanding of society (119) at the top, through critical thinking (81), media literacy (63) and problem solving (59), down to motivation and autonomy of learning (31), understanding and appreciation of culture (30), methods and strategies of learning (25), participation in public affairs (20), creativity and innovation (16) and cultural expression (8). Poland and Austria supply three-fifths of the annotations, so this ordering could in principle be a Polish-Austrian artefact. It is not: with each country weighted equally, the distribution correlates with the pooled one at 0.97 (Spearman); the four largest categories keep their positions;

and no category shifts by more than 1.9 percentage points. Removing any single country leaves the ordering correlated with the full one at 0.87 or above (the minimum without Poland). The pooled ordering of Table 2 therefore describes all six countries reasonably well, including the four smaller contributors.

Read against the four competences, the distribution repeats at corpus level a finding the related article established at curriculum level. The personal, social and learning competence is the best represented, with 261 of the 902 annotations, but its internal composition is skewed: social and interpersonal relations (156) and maintaining well-being (49) carry it, while its self-regulatory core, methods and strategies of learning (25) and motivation and autonomy of learning (31), sits near the bottom. What the documents describe under this heading is mostly sociability and stress management. Yet learning to learn is the competence stakeholders across the six countries most consistently ranked highest, sometimes above professional competence (Dębowski et al., 2024, Section 4.6), and learning is, in Le Deist and Winterton's (2005) phrase, the meta-competence. The gap between what is valued and what is written recurs inside the corpus itself: learning to learn is both the most prized competence and among the least described.

Three observations from the qualitative review of the corpus (Dębowski et al., 2021, Section 3.5) bear on what follows. First, the large categories differ in kind. Social and interpersonal relations covers teamwork, cooperation, leadership and communication, content that can be written dispositionally. Understanding of society names its own domain: it collects knowledge about society, economy and polity, and more than sixty of its annotations come from one examinable Polish general-education subject, "knowledge of society". Realisation of initiatives spans knowledge of planning methods, project work and attitudes of pro-activity; the same content can be written as knowledge, procedure or disposition, which makes the category diagnostic for Section 5. Second, the scarce categories are telling: cultural expression (8) and creativity and innovation (16) presuppose production rather than reception, and the content-creation side of media literacy is also barely present. Third, well-being owes much of its presence to ergonomics and occupational health and safety; some of the corpus reaches transversal territory through vocational routes.

One structural feature of the national documentation frames what follows, and the related article documents it fully. Transversal competences appear in the strategic acts of all six countries as declarations of intent. One tier below, they are specified in programme documents, assessment requirements and teacher guidelines, most often in the subject requirements of the general core curriculum, in separate units

or modules, or as cross-curricular requirements in the vocational core curriculum. Two consequences follow. Because education is organised into general and vocational strands with separate requirements, transversal content must be duplicated or contextualised in both. And because subjects, not overarching outcomes, remain the organising unit of teaching and assessment, much transversal content is delivered through examinable general-education subjects such as history, civic education, mother tongue or biology. The corpus inherits this geography: statements from subject requirements arrive with the register of the subject. The consequences appear in Section 5, and their implications for the country comparison in Section 6.

In sum, the corpus is dominated by categories where authors had a real choice of register (relations, initiatives, action), next to one large category that is cognitive by construction and several scarce categories of production and self-regulation. Section 5 asks how that choice was exercised.

5. In which domain are transversal competences written?

This section reads the corpus through the EQF frame (5.1), through the Bloom–Krathwohl frame (5.2), then through both at once (5.3); it breaks the result down by competence and category (5.4) and ends with the statements themselves (5.5). Each frame alone supports a firm but different conclusion; only the cross-tabulation shows which one survives.

5.1 The corpus on the EQF descriptors

On the EQF descriptors the corpus looks like a success of the learning-outcomes reform (Table 4, upper panel). Of the 684 annotated statements, 64.2 per cent have skills as their primary class, 15.5 per cent knowledge and 20.3 per cent responsibility and autonomy. Weighting the countries equally changes these shares by about a percentage point (65.8, 14.7 and 19.5), and counting all 725 statements changes little. A corpus with fewer than one statement in six classed as knowledge is what two decades of drafting guidance were meant to produce. One share should give pause, however. These are transversal key competences, competences of initiative, self-direction and responsibility, for which the EQF's responsibility and autonomy descriptor seems

made. On any prior expectation, that class should dominate this corpus. It is barely a fifth, and in the multi-label counts responsibility and autonomy appears in under a third of statements, against nearly three-quarters for skills. The EQF frame shows a corpus written in the register of application, with the register of responsibility unexpectedly scarce, though the frame itself cannot say what kind of application is involved.

Table 4. The two descriptor frames applied to the same statements: totals

Domain / class	Multi-label n	%	Primary or leading n	%
EQF descriptors				
Knowledge	191	27.9	106	15.5
Skills	497	72.7	439	64.2
Responsibility and autonomy	216	31.6	139	20.3
Bloom–Krathwohl domains				
Cognitive	604	88.3	513	75.0
Psychomotor	15	2.2	10	1.5
Affective	240	35.1	161	23.5

Note: annotated statements (n = 684). Multi-label counts sum to more than 100 per cent because a statement may express more than one domain or descriptor; the primary class and leading domain are single assignments. Source: author's calculations.

5.2 The corpus on the Bloom–Krathwohl domains

The Bloom–Krathwohl frame says something else about the same statements (Table 4, lower panel). Three quarters of the corpus, 513 of 684 statements, has the cognitive domain as its leading domain; 23.5 per cent the affective; 10 statements, 1.5 per cent, the psychomotor. Equal weighting changes almost nothing (75.9, 22.6 and 1.4). The multi-label flags sharpen the picture: 88.3 per cent of statements express the cognitive domain somewhere in their formulation, against 35.1 per cent affective and 2.2 per cent psychomotor. The psychomotor figure needs careful reading: the corpus consists of statements selected for their relation to transversal competences, and such competences are not usually psychomotor. The near-absence of the domain therefore reflects the sampling frame, not vocational programmes, whose occupation-specific outcomes lie outside this corpus by construction. What the psychomotor share does establish is a boundary condition for the next step: whatever the EQF skills category captures here, it is almost never bodily doing. A corpus that the EQF frame presents as application turns out, on a frame that can distinguish kinds of application, to be about thinking: about society, planning, conflict, motivation.

5.3 Inside the skills category

Table 5 cross-tabulates the primary EQF class against the leading Bloom domain, and carries the article's central result. Of the 439 statements classed as skills, 366 are cognitive and 8 psychomotor: EQF skills in this corpus means cognitive skills, at a ratio of forty-six to one. The knowledge class behaves as expected (92 of 106 statements cognitive), and the overall association between the frames is strong (Cramér's $V = 0.305$; $\chi^2(4) = 127.7$, $p < 0.001$ by permutation). What the structure of that association shows matters more than its strength. Two of the three EQF classes, knowledge and skills, together four-fifths of the corpus, are internally the same thing: statements led by the cognitive domain at 86.8 and 83.4 per cent. The distinction the reform frame draws most confidently, knowledge versus application, is here largely a distinction between two ways of writing cognition. The distinction that matters for transversal competences, between thinking about a disposition and exercising it, the frame cannot draw at all: its skills category merges the cognitive and the psychomotor by design (Section 2), and its knowledge and skills categories split the cognitive between them. This generalises beyond TRACK-VET: any audit or comparative study that uses the EQF descriptors to ask where a competence is described will register a corpus like this one as healthy, and will miss the conversion documented here. The two frames converge only in the third class: of the 139 responsibility-and-autonomy statements, 83 are affective, and the cognitive share falls to 39.6 per cent. Even here a qualification is needed. That 55 of the 139 are nonetheless cognitive suggests that reaching the right EQF class does not guarantee leaving the cognitive register, thinking about responsibility rather than exercising it. But this figure is the one result sensitive to the coder (Section 3.3: 5.9 to 43.3 per cent across the passes), and it is an indication, not a measurement.

Table 5. Primary EQF class against leading Bloom–Krathwohl domain

EQF primary class	Cognitive	Psychomotor	Affective	Total	Cognitive %
Knowledge	92	1	13	106	86.8
Skills	366	8	65	439	83.4
Responsibility and autonomy	55	1	83	139	39.6
Total	513	10	161	684	75.0

Note: annotated statements ($n = 684$). Cramér's $V = 0.305$; $\chi^2(4) = 127.7$, $p < 0.001$ by permutation. Source: author's calculations.

5.4 By competence and by category

Broken down by competence (Table 6, upper panel), the ordering tracks the first expectation of Section 2. The personal, social and learning competence, covering self-direction, motivation and relations with others, is the least cognitively written (60.3 per cent of its 247 statements) and the most affectively (37.2 per cent). Civic competences (76.2 per cent cognitive), cultural awareness and expression (73.0) and the cross-cutting categories (87.6) are progressively more cognitive; the last is no surprise, since critical thinking and problem solving are cognitive by definition, and stating the figure keeps the comparison with the other blocks clear. Entrepreneurship is the sharpest case: 78.1 per cent cognitive, 26.0 per cent responsibility and autonomy. A competence defined by taking initiative under uncertainty is described, three times out of four, as something to understand.

Table 6. Leading domain and primary EQF class by competence and by descriptive category

	n	K %	S %	RA %	Cognitive %	Affective %
By transversal key competence						
Personal, social and learning	247	17.8	51.0	31.2	60.3	37.2
Civic competences	168	20.2	61.9	17.9	76.2	22.6
Entrepreneurship	196	10.2	63.8	26.0	78.1	21.4
Cultural awareness and expression	37	24.3	56.8	18.9	73.0	21.6
Cross-cutting categories	186	7.5	78.0	14.5	87.6	11.8
By descriptive category (ordered by cognitive share)						
Critical thinking	81	3.7	75.3	21.0	93.8	6.2
Understanding of society	119	23.5	73.1	3.4	92.4	5.9
Problem solving	59	6.8	81.4	11.9	91.5	8.5
Methods and strategies of learning	25	8.0	48.0	44.0	88.0	12.0
Media literacy	63	11.1	84.1	4.8	85.7	12.7
Taking action and making decisions	56	7.1	71.4	21.4	83.9	16.1
Understanding and appreciation of culture	30	30.0	50.0	20.0	76.7	23.3
Realisation of initiatives	146	11.0	61.0	28.1	76.0	23.3
Creativity and innovation	16	0.0	93.8	6.2	68.8	31.2
Maintaining well-being	49	38.8	51.0	10.2	67.3	22.4
Motivation and autonomy of learning	31	25.8	22.6	51.6	64.5	35.5
Cultural expression	8	0.0	87.5	12.5	62.5	12.5
Social and interpersonal relations	156	12.2	54.5	33.3	54.5	44.9

	n	K %	S %	RA %	Cognitive %	Affective %
Participation in public affairs	20	15.0	55.0	30.0	45.0	55.0
Values and identity	43	14.0	30.2	55.8	41.9	58.1

Note: a statement is counted once for every competence or category it is annotated to, so rows do not sum to 684. K, S and RA denote the primary EQF classes; psychomotor shares are omitted for legibility (1.5 per cent pooled). Source: author's calculations.

The category-level breakdown (Table 6, lower panel) locates the drift, and the two ends of the table carry it. At the top, categories whose names promise disposition or action are written cognitively: methods and strategies of learning at 88.0 per cent, taking action and making decisions at 83.9, realisation of initiatives at 76.0. At the bottom, only three categories fall below sixty per cent cognitive: values and identity (41.9), participation in public affairs (45.0) and social and interpersonal relations (54.5), which are the three where the affective register survives. Between them sits the diagnostic case. Motivation and autonomy of learning has the highest responsibility-and-autonomy share in the corpus (51.6 per cent), since its content, self-directed learning, maps almost directly onto the descriptor, and it is still cognitive in 64.5 per cent of its statements. Even where a system reaches the right EQF domain, it tends to write knowledge about motivation rather than motivated conduct. The pattern predicted by the first expectation of Section 2 shows up category by category as well as in the pooled table.

5.5 The statements themselves

Distributions summarise the drift; the statements show it. Table 7 presents specimens in two groups, each annotated to a category naming a disposition or an action. Group A shows the drift. Under motivation and autonomy of learning, an Austrian programme requires that the learner “can explain ways to promote motivation” and “can explain the importance of lifelong learning for my personal and professional development”. Under taking action and making decisions, a French document requires the candidate to “Describe entrepreneurial spirit”, and a Polish one certifies that the learner “Knows the benefits of planning your own activities and investing in yourself”. Under participation in public affairs, a Polish statement asks that the learner “characterizes Poland’s defense policy; NATO membership, participation in international peacekeeping missions and military operations”. Under maintaining well-being, Polish statements require that the learner “explains the role of hormones in response to stress” and “describes the chemical aspects of stress”. Under realisation

of initiatives, an Austrian statement reads “I know the most important taxes and their effects”; under social and interpersonal relations, “I can explain the tasks and functions in a group”; and under values and identity, a Latvian entry is the bare noun phrase “principles of professional ethics”, a syllabus heading where an outcome should be.

Group B shows that the drift is a choice rather than a property of the competences. The same categories are written dispositionally elsewhere in the same corpus: “act socially responsible, which is shown in respect, authenticity and responsibility”; “contribute cooperatively, responsibly and result-oriented”; “I can show commitment and perseverance to complete tasks in a results-oriented manner”; “I can keep agreements”; “I can make decisions responsibly”; “implement lifelong learning as an integral part of life and career planning”; “develop a spirit of citizenship: be sensitive to other people’s needs and become part of the community”. Set side by side, the two groups show that for every category in Group A the corpus contains a formulation that stays with the disposition, so the cognitive versions were not the only ones available.

Table 7. Specimens: learning outcomes about transversal competences, as written

Country	Descriptive category	Learning outcome as written	EQF	Bloom
Group A – the cognitive drift				
AT	Motivation and autonomy of learning	„I can explain ways to promote motivation.”	K	Cognitive
AT	Motivation and autonomy of learning	„I can explain the importance of lifelong learning for my personal and professional development.”	K	Cognitive
PL	Motivation and autonomy of learning	„Presents the characteristics of an entrepreneur” [comment on translation: presents as in writing or speaking]	S	Cognitive
FR	Taking action and making decisions	„DESCRIBE Entrepreneurial spirit”	K	Cognitive
PL	Taking action and making decisions	„Knows the benefits of planning your own activities and investing in yourself”	K	Cognitive
PL	Taking action and making decisions	„Characterizes his social roles and typical behaviors”	K	Cognitive
PL	Participation in public affairs	„Characterizes Poland’s defense policy; NATO membership, participation in international peacekeeping missions and military operations”	K	Cognitive
AT	Participation in public affairs	„I can describe ways in which I can help shape social areas of life.”	K	Cognitive
PL	Maintaining well-being	„Explains the role of hormones in response to stress”	K	Cognitive
PL	Maintaining well-being	„Describes the chemical aspects of stress”	K	Cognitive
LV	Values and identity	„Principles of professional ethics”	K	Cognitive
SK	Values and identity	„describe human rights, duties, interests, limitations and needs,”	K	Cognitive
AT	Social and interpersonal relations	„I can explain the tasks and functions in a group.”	K	Cognitive
AT	Social and interpersonal relations	„I can describe what a communication content says on the relationship or factual level.”	K	Cognitive

Country	Descriptive category	Learning outcome as written	EQF	Bloom
AT	Social and interpersonal relations	„I can see signs of an emerging conflict.”	K	Cognitive
AT	Realisation of initiatives	„I can describe the causes, triggers and content of conflicts.”	K	Cognitive
AT	Realisation of initiatives	„I know the most important taxes and their effects.”	K	Cognitive
AT	Realisation of initiatives	„I can explain the aims, methods and importance of human resources development and of human resource allocation.”	K	Cognitive
AT	Methods and strategies of learning	„I can explain changes as part of development.”	K	Cognitive
AT	Methods and strategies of learning	„I can see essential work and learning steps.”	K	Cognitive
Group B – the affective counter-examples				
AT	Motivation and autonomy of learning	„Implement lifelong learning as an integral part of life and career planning”	RA	Affective
LV	Motivation and autonomy of learning	„Ability to pursue self-education and improvement of own professional competence.”	RA	Affective
AT	Social and interpersonal relations	„act socially responsible, which is shown in respect, authenticity and responsibility”	RA	Affective
AT	Social and interpersonal relations	„contribute cooperatively, responsibly and result-oriented”	RA	Affective
AT	Values and identity	„I can respect other people and their attitudes and behaviors regardless of my own opinion.”	RA	Affective
AT	Taking action and making decisions	„I can make decisions responsibly.”	RA	Affective
AT	Realisation of initiatives	„I can show commitment and perseverance to complete tasks in a results-oriented manner.”	RA	Affective
AT	Realisation of initiatives	„I can keep agreements.”	RA	Affective
FR	Participation in public affairs	„Develop a spirit of citizenship: Be sensitive to other people’s needs and become part of the community”	RA	Affective
FR	Taking action and making decisions	„Autonomy and motivation to implement one’s career plan Sense of initiative”	RA	Affective

Note: statements quoted verbatim from the corpus, in the partners’ English renderings; EQF = primary class (K knowledge, S skills, RA responsibility and autonomy); Bloom = leading domain. Source: TRACK-VET Repository of Learning Outcomes (2020).

Where the two groups come from supplies the mechanism examined at country level in Section 6. The Group A specimens cluster in examinable subject content: both Polish well-being statements are the biology and chemistry of stress, drawn from general-education subject requirements, and, as noted in Section 4, more than sixty understanding-of-society annotations come from the examinable Polish subject “knowledge of society”. The Group B specimens cluster in dedicated competence frameworks: mostly the Austrian educational standards for social and personal competences and the French framework documents. Because the corpus has no document-type variable (Section 3.5), the point here is descriptive: where a transversal competence is delivered through an examinable school subject, it enters the corpus already converted into subject knowledge; where a system keeps a dedicated instru-

ment for describing dispositions, the affective register survives. Description reflects how documents are organised around examinable subjects rather than any inability among authors to write dispositions; Section 6 asks whether examination systems also leave a national-level signature.

6. Country patterns and the architecture of certification

Six countries are a set of cases, not a sample, and this section treats them as such. It shows how the national sub-corpora differ (6.1), separates what countries describe from how they write (6.2), sets the pattern against the institutional architectures documented in the related article (6.3), and ends with the three national models of description (6.4). The aim is to display structure and to discipline its interpretation.

6.1 National distributions

Table 8 reports the leading Bloom domain and the primary EQF class by country, together with the certification-scope variable used below. The range is wide: France writes least cognitively (54.9 per cent of its 113 statements) and most affectively (43.4 per cent), with the highest responsibility-and-autonomy share (41.6 per cent), and Austria and Latvia follow (75.0 and 63.4 per cent cognitive; 32.1 and 29.6 per cent responsibility and autonomy). Poland and Slovakia write cognitively at 81.6 and 84.8 per cent, with responsibility-and-autonomy shares of 7.2 and 6.5 per cent. Norway is extreme on both frames: 95.8 per cent of its statements are cognitive, one statement is affective, and not a single statement has responsibility and autonomy as its primary class, a structural zero rather than a rounding. The associations are moderate (country $\times$ leading domain: Cramér's $V = 0.201$, $\chi^2(10) = 55.1$; country $\times$ primary class: $V = 0.282$, $\chi^2(10) = 108.9$; both $p < 0.001$ by permutation). The usual cautions apply: the Slovak and Norwegian sub-corpora have 46 and 48 statements, so these figures are a property of the corpus collected and say less about either national system than the headline percentages suggest.

Table 8. Leading domain and responsibility-and-autonomy share by country, with the scope of certification

Country	n	Cognitive %	Psychomotor %	Affective %	EQF RA %	Certification scope
Austria	156	75.0	0.0	25.0	32.1	general and vocational
France	113	54.9	1.8	43.4	41.6	general and vocational
Latvia	71	63.4	2.8	33.8	29.6	general and vocational
<i>Group mean</i>		<i>64.4</i>	<i>1.5</i>	<i>34.1</i>	<i>34.4</i>	
Norway	48	95.8	2.1	2.1	0.0	vocational only
Poland	250	81.6	2.0	16.4	7.2	vocational only
Slovakia	46	84.8	0.0	15.2	6.5	vocational only
<i>Group mean</i>		<i>87.4</i>	<i>1.4</i>	<i>11.2</i>	<i>4.6</i>	
All six, pooled	684	75.0	1.5	23.5	20.3	
<i>Equal country weight</i>		<i>75.9</i>	<i>1.4</i>	<i>22.6</i>	<i>19.5</i>	

Note: annotated statements (n = 684). Certification scope from Dębowski et al. (2024), Table 5. Source: author's calculations.

6.2 Composition against style

The obvious objection to reading Table 8 as national style is composition: countries describe different mixes of categories, and some categories are cognitive by construction. A sub-corpus rich in understanding-of-society content will look cognitive whatever the style. Direct standardisation separates the two. For each country an expected share is computed: the share it would show if every category it describes behaved at the corpus-average rate for that category. The residual, observed minus expected, is the part of a country's share due to how it writes rather than what it describes. The unit is the statement–category pair (Section 3.4), so observed values differ slightly from Table 8. On the responsibility-and-autonomy residual (Table 9) the pattern survives intact: Austria, France and Latvia write with more responsibility and autonomy than their subject matter predicts (+12.7, +17.5 and +1.1 points), Norway, Poland and Slovakia with less (−18.6, −9.0 and −19.7). France writes 15.7 points less cognitively than its composition predicts, Norway 12.9 and Slovakia 11.7 points more. The cognitive residual is weaker (Poland at +2.1 and Austria at +1.3 are close to expectation), so the responsibility-and-autonomy residual leads the argument and the cognitive residual corroborates it. Composition explains part of Table 8, but a national style remains once it is removed, and the first rival explanation therefore fails.

Table 9. Composition against style: direct standardisation

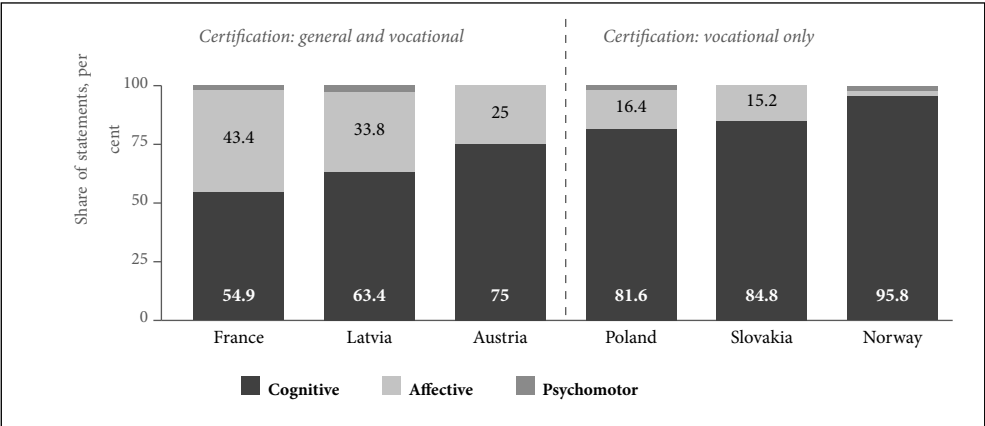
Country	Obs. Cog %	Exp. Cog %	Cog residual (pp)	Obs. RA %	Exp. RA %	RA residual (pp)
Austria	73.3	72.0	+1.3	40.3	27.6	+12.7
France	52.5	68.3	−15.7	46.8	29.2	+17.5
Latvia	69.1	73.0	−4.0	27.8	26.7	+1.1
Norway	93.9	81.1	+12.9	0.0	18.6	−18.6
Poland	82.5	80.3	+2.1	6.7	15.7	−9.0
Slovakia	84.6	72.9	+11.7	6.2	25.8	−19.7

Note: unit of analysis is the statement–category pair, which is why observed values differ marginally from Table 8. Expected = the share the country would show if every category it describes behaved at the corpus-average rate; residual = observed – expected, in percentage points. Source: author’s calculations.

6.3 The alignment and its rival explanations

Now set the six countries against the assessment architecture documented in the related article (Dębowski et al., 2024, Table 5). In Austria, France and Latvia, the examinations leading to a VET qualification certify the general education strand as well as the vocational one; in Norway, Poland and Slovakia they certify only the vocational strand. The match with the styles of description is exact: three against three, with no overlap on any measure. The general-and-vocational group has a mean cognitive share of 64.4 per cent, a mean affective share of 34.1 and a mean responsibility-and–autonomy share of 34.4; the vocational-only group 87.4, 11.2 and 4.6 (Figure 1). The countries that certify the strand where most transversal content sits write transversal competences as dispositions; the countries that exclude it write them as knowledge.

Figure 1. Leading Bloom–Krathwohl domain by country, ordered by cognitive share, with the certification-scope split



Note: shares of annotated statements (n = 684). Source: author’s calculations; certification scope from Dębowski et al. (2024), Table 5.

A pattern this clean on six cases needs discipline before interpretation, and four points provide it. First, the match is specific to this dichotomy. The related article documents another institutional divide, between examinations designed and judged by teachers (Austria, France, Slovakia) and by an external agency (Latvia, Norway, Poland), and the styles of description do not follow it: Slovakia writes cognitively despite teacher judgement, Latvia dispositionally despite external judgement. Nor do they follow the skill-formation grouping used in the related article: on that reading Latvia, Poland and Slovakia should sit together as post-socialist systems, and Latvia does not, since its residuals place it with Austria and France, where its certification scope predicts. That the pattern follows certification scope and not the other divides strengthens this reading, but it also illustrates the general hazard: with six cases and several available dichotomies, some alignment can always be found, and the honest report is that this one was found while the alternatives fail. Second, one rival explanation survives: the documentary one. The type of source document was not kept as a variable (Section 3.5), and the national sub-corpora mix document types differently. Given the mechanism in Section 5.5, a sub-corpus drawn heavily from examinable subject content will look cognitive whatever the style. The standardisation controls for categories, not for documents, and the alignment must be read with that limit. Third, France, the strongest counter-cognitive case, differs from the vocational-only group on two dimensions at once: its certification covers the general strand, and its assessment increasingly runs continuously during training rather than in a final examination. Scope and mode are confounded in the very case that anchors the affective pole, and six cases cannot separate them. Fourth, a general-difficulty account, on which the skew simply reflects an inability to specify these competences formally regardless of institutional pressure, predicts uniformity across the six systems and predicts that no dispositional formulation should survive anywhere in the corpus. Neither prediction holds: the corpus contains, category by category, formulations that stay with the disposition alongside ones that convert it into knowledge (Section 5.5), and the six systems do not skew uniformly but split cleanly on the institutional variable the architecture account names. Such an account is not excluded where no dedicated dispositional instrument exists; it is excluded as the whole story, because the corpus also documents where one does exist and what it does.

With those cautions in place, the configuration can be stated without causal language, because this is where the two articles meet. Where the certifying examination covers the general strand, the documents that describe transversal competences will be examined, and their authors have written dispositions that assessors will have

to judge. Where certification stops at the vocational strand, the general-strand documents in which transversal content mostly sits are inert from the standpoint of the qualification, and there the cognitive conversion is deepest. The pattern is reported as an association and not as a cause. A further conjecture, consistent with the residuals but untestable on six cases, is conceptual rather than architectural: the two countries with the strongest dispositional registers are also the two whose traditions supply a ready language for dispositions (the French *savoir*, *savoir-faire*, *savoir-être* and the Austrian-German tradition of holistic occupational competence with its personal and social components; Le Deist & Winterton, 2005; Brockmann et al., 2008), while the systems that rebuilt their VET after 1989 inherited, as the related article puts it, a thin stock of competence concepts. On six cases the two explanations cannot be told apart, and the article does not choose between them.

6.4 Three institutional answers to the problem of description

The synthesis report distinguishes three national models for describing transversal competences (Dębowski et al., 2021, Section 3.6), and the corpus allows a partial audit of each. Austria's educational standards (Bildungsstandards, BIST) are the strong conceptual reference point: a matrix in which social and personal competences form their own dimension, separate from knowledge and skills. If a dedicated dispositional dimension protects the dispositional register, Austria should write with more responsibility and autonomy than its content predicts, and it does (+12.7, the second-highest residual), with its Group B specimens drawn mostly from the BIST. France's model is a network of overlapping categorisations with no single reference point, which the report reads as preserving interpretive richness at the cost of clarity; that richness survives into the written register, France being the least cognitive and most affective case both observed and net of composition. The third model, the unitised programmes of Latvia, Poland and Slovakia, where transversal content sits in dedicated units and modules, gets a split verdict: Latvia has a positive responsibility-and-autonomy residual, Poland and Slovakia the two most negative. Unitisation as such neither protects nor converts. What seems to matter is what the other two models also track: whether the instrument that carries the competence is connected to what the system examines and certifies, a question the concluding section returns to directly.

7. Discussion and conclusions

The findings can be stated in four sentences. A corpus of 684 learning-outcome statements on transversal key competences in six VET systems looks, on the EQF descriptors, like a corpus of applied skills; on the Bloom–Krathwohl domains the same corpus is three-quarters cognitive and almost never psychomotor, because the EQF skills category merges the two kinds of accomplishment, here at forty-six to one. The conversion is not forced by the competences: for every category written as knowledge about a disposition, the corpus also contains formulations that stay with the disposition. The conversion is patterned: it is deepest in statements from examinable subject content, and the three systems whose certification stops at the vocational strand write transversal competences almost entirely cognitively, while the three whose certification covers the general strand keep an affective and autonomous register, a pattern that survives standardisation for composition. Each element was anticipated by the expectations of Section 2.

Theoretically, the findings extend the related article one step back along the policy chain. That article read the absence of transversal competences from certification as means–ends decoupling sustained by commensuration: examinations need comparable, defensible judgements, and dispositional competence resists the required decontextualisation (Bromley & Powell, 2012; Espeland & Stevens, 1998). The corpus shows that commensuration does not wait for the examination. In systems built around examinable subjects, the outcome statement is already a commensurating instrument: it turns a disposition into a proposition about the disposition, because propositions are what the downstream machinery (syllabus, test, marking scheme, appeal) can process. Certification completes a conversion that description begins. The inter-coder evidence of Section 3.3 belongs to this account. The boundaries the two coders disagreed about most, cognitive against affective and skills against responsibility, are exactly the ones Tilly’s (1988) view of skill as negotiated identity predicts will be unstable: what a statement like “I can make decisions responsibly” describes is less a fact about a learner than an attribution settled, in each setting, by use. That instability is itself the phenomenon, seen at the scale of two coders instead of six systems.

The first implication concerns measurement, and it reaches beyond this study. The EQF descriptors are the common instrument through which European qualifications frameworks, curriculum audits and comparative projects describe learning outcomes,

and the central result here is that this instrument cannot register the conversion documented above: a corpus can drift from doing and disposition into cognition while its EQF profile improves, because statements moving from the knowledge class to the skills class look like reform succeeding. The EQF's descriptors were designed to level qualifications, and they did useful work in this study: the scarcity of the responsibility-and-autonomy class, barely a fifth of a corpus devoted to competences of responsibility and autonomy, is a finding the EQF frame itself delivers. The argument concerns repurposing: when the question is the character of outcomes rather than their level, the levelling frame needs a domain-sensitive partner, and the pairing is cheap, since the taxonomies have existed since 1956. Monitoring that reports the knowledge–skills–competence composition of curricula as evidence of what education systems cultivate should be read with this blindness in mind.

The second implication concerns policy, and follows from what the corpus proves possible. Austria and France write transversal competences dispositionally inside state-regulated, examination-centred systems, so the constraint on the other four is architectural, not linguistic. Writing “I can keep agreements” into a programme document makes sense only where some assessment may judge whether agreements were kept. Where certification cannot count such evidence, converting the competence into examinable knowledge about it is a rational adaptation, the drafting-room version of the equilibrium the related article found in examination agencies. The two articles end on one conclusion, reached from opposite ends of the policy chain. The related article argued that the workable question is not how to test transversal competence but which evidence a qualification system allows itself to count. This article adds that the answer shows up earlier, in the sentences systems write, before any test is designed. A system that widens the boundary of admissible evidence lets its drafters keep dispositions in the text. A system that narrows it will find, a curriculum cycle later, that its documents have converted transversality into subject knowledge, and its EQF-based monitoring will describe that outcome as evidence of a healthier corpus.

These conclusions hold within the limits of Section 3.5, which can be compressed into what is settled and what is open. Settled, within this corpus: the two frames disagree because the disagreement is carried by the composite skills category, and the finding survives both independent codings, equal country weighting and standardisation. Open: whether the country alignment is causal, which six cases, one surviving documentary rival and one confounded case (France) cannot decide; whether the drift extends beyond these systems and beyond VET; and what the corpus cannot

show by construction, namely how the statements are enacted in classrooms. The evidence settles the measurement claim and leaves the institutional claim as a configuration worth explaining.

Four lines of further inquiry follow, in rising order of cost. First, recover the document-type variable from the national reports and repository sources. With statements nested in documents nested in countries, the question whether the drift belongs to national style or to a document's proximity to examination, which is the sharpest version of the country question, becomes answerable on several hundred documents instead of six cases. Second, replicate the two-frame method, which needs only a corpus and two coders: occupational standards, higher-education frameworks and the curricula of non-examination systems would each test whether the forty-six-to-one merger is a property of this corpus or of the descriptor architecture. Third, treat interpretive disagreement as data: if the domain of a dispositional statement is settled by use, comparing how differently placed readers (examiners, teachers, employers) assign domains to the same statements would map the negotiation this article glimpsed in two coders. Fourth, and most direct on what the outcomes format itself contributes: set these six systems' current outcome statements against programme documents from before the 2006 and 2018 Recommendations, or against non-outcome genres coexisting with them today. Held constant for country and certification architecture, only that comparison could separate what the learning-outcomes format does from what any documentary technology written in anticipation of examination would do.

An outcome statement is a small object on which to rest an account of what qualification systems do to competence. But it is the object through which the learning-outcomes approach chose to govern, and it records the pressures under which it was written: what the system will examine and what its frameworks can, and cannot, see. Before a competence can be taught for an examination, it must be written down. Whether it survives the writing depends less on drafting skill than on the architecture into which the sentence will be read.

Acknowledgements

This article draws on the project "Developing, assessing and validating transversal key competences in the formal initial and continuing VET" (TRACK-VET), co-funded by the European Union under the Erasmus+ Programme and coordinated by SGH

Warsaw School of Economics. The author thanks the project partners: öibf (Austria), Fafo (Norway), Céreq (France), NÚCEM and Matej Bel University (Slovakia) and VISC (Latvia). The views expressed are those of the author.

Data availability statement

The corpus with annotations is available on-line at: https://docs.google.com/spreadsheets/d/1Iwrbv3MTXiNW8d5Xa-AXtZsSvahmvBn-gA83H_Yz3BE. Further data is available on request.

References

- Adam, S. (2007). An introduction to learning outcomes: A consideration of the nature, function and position of learning outcomes in the creation of the European Higher Education Area. In *EUA Bologna Handbook: Making Bologna Work*. Raabe Verlag. <https://www.semanticscholar.org/paper/An-introduction-to-learning-outcomes-A-of-the-,and-Adam/bf2607a8f2cd033926cfa45c534972f586165d73>
- Allais, S. (2012). Claims vs. practicalities: Lessons about using learning outcomes. *Journal of Education and Work*, 25(3), 331–354. <https://doi.org/10.1080/13639080.2012.687570>
- Allais, S. (2014). *Selling out education: National qualifications frameworks and the neglect of knowledge*. Springer. <https://doi.org/10.1007/978-94-6209-578-6>
- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman. https://openlibrary.org/works/OL16641840/W/A_taxonomy_for_learning_teaching_and_assessing
- Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. McKay. https://openlibrary.org/books/OL7880123M/Taxonomy_of_Educational_Objectives_Handbook_1
- Brockmann, M., Clarke, L., & Winch, C. (2008). Knowledge, skills, competence: European divergences in vocational education and training (VET) – the English, German and Dutch cases. *Oxford Review of Education*, 34(5), 547–567. <https://doi.org/10.1080/03054980701782098>
- Bromley, P., & Powell, W. W. (2012). From smoke and mirrors to walking the talk: Decoupling in the contemporary world. *Academy of Management Annals*, 6(1), 483–530. <https://doi.org/10.5465/19416520.2012.684462>
- Byrt, T., Bishop, J., & Carlin, J. B. (1993). Bias, prevalence and kappa. *Journal of Clinical Epidemiology*, 46(5), 423–429. [https://doi.org/10.1016/0895-4356\(93\)90018-V](https://doi.org/10.1016/0895-4356(93)90018-V)
- Cedefop. (2009). *The shift to learning outcomes: Policies and practices in Europe*. Publications Office of the European Union. https://www.cedefop.europa.eu/files/3054_en.pdf
- Cedefop. (2017). *Defining, writing and applying learning outcomes: A European handbook*. Publications Office of the European Union. https://www.cedefop.europa.eu/files/4156_en.pdf
- Council of the European Union. (2017). *Council Recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning* (2017/C 189/03). Official Journal of the European Union. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017H0615\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017H0615(01))
- Council of the European Union. (2018). *Council Recommendation of 22 May 2018 on key competences for lifelong learning* (2018/C 189/01). Official Journal of the European Union. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01))
- Dave, R. H. (1970). Psychomotor levels. In R. J. Armstrong (Ed.), *Developing and writing behavioral objectives*. Educational Innovators Press. <https://files.eric.ed.gov/fulltext/ED054605.pdf>
- Dębowski, H., Reegård, K., & Stęchły, W. (2018). *TRACK-VET: Information about the project and methodology for preparing country reports*. SGH Warsaw School of Economics. <https://track-vet.sgh.waw.pl/system/files/Methodology%20Report%20TRACK-VET.pdf>
- Dębowski, H., Stęchły, W., Tomengová, A., Reegård, K., & Valovic, J. (2021). *Development and assessment of transversal key competences in the VET sector – Model solutions and practices in six European countries*. SGH Warsaw School of Economics. https://track-vet.sgh.waw.pl/system/files/TRACK-VET_Synthesis_Report.pdf

- Dębowski, H., Stęchły, W., Tomengová, A., Valovič, J., & Reegård, K. (2024). *Development and assessment of transversal key competences in vocational education and training: Practices and experiences of six European countries*. Warsaw Forum of Economic Sociology, 15(29/30).
- Espeland, W. N., & Stevens, M. L. (1998). Commensuration as a social process. *Annual Review of Sociology*, 24, 313–343. <https://doi.org/10.1146/annurev.soc.24.1.313>
- European Parliament and Council of the European Union. (2006). *Recommendation of 18 December 2006 on key competences for lifelong learning* (2006/962/EC). Official Journal of the European Union. <https://eur-lex.europa.eu/eli/reco/2006/962/oj/eng>
- European Parliament and Council of the European Union. (2008). *Recommendation of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning* (2008/C 111/01). Official Journal of the European Union. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008H0506\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008H0506(01))
- Harrow, A. J. (1972). *A taxonomy of the psychomotor domain: A guide for developing behavioral objectives*. David McKay. https://books.google.com/books/about/A_Taxonomy_of_the_Psychomotor_Domain.html?id=at87AAAAIAAJ
- Hussey, T., & Smith, P. (2003). The uses of learning outcomes. *Teaching in Higher Education*, 8(3), 357–368. <https://doi.org/10.1080/13562510309399>
- Kliebard, H. M. (1975). The rise of scientific curriculum making and its aftermath. *Curriculum Theory Network*, 5(1), 27–38. <https://www.semanticscholar.org/paper/The-Rise-of-Scientific-Curriculum-Making-and-Its-Kliebard/4ccf0ce0b82c751464ad6d21103921942f2447d3>
- Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, 41(4), 212–218. https://doi.org/10.1207/s15430421tip4104_2
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives, Handbook II: Affective domain*. McKay. <https://search.worldcat.org/oclc/768451499>
- Lassnigg, L. (2012). 'Lost in translation': Learning outcomes and the governance of education. *Journal of Education and Work*, 25(3), 299–330. <https://doi.org/10.1080/13639080.2012.687573>
- Le Deist, F. D., & Winterton, J. (2005). What is competence? *Human Resource Development International*, 8(1), 27–46. <https://doi.org/10.1080/1367886042000338227>
- Popham, W. J. (1971). Criterion-referenced measurement: An introduction. *Educational Technology Publications*. <https://files.eric.ed.gov/fulltext/ED053200.pdf>
- Simpson, E. J. (1972). *The classification of educational objectives in the psychomotor domain*. Gryphon House. <https://files.eric.ed.gov/fulltext/ED010368.pdf>
- Tilly, C. (1988). Solidary logics: Conclusions. *Theory and Society*, 17(3), 451–458. <https://doi.org/10.1007/BF00160847>
- TRACK-VET. (2020). *Repository of learning outcomes describing transversal key competences* (June 2020). TRACK-VET consortium. <https://track-vet.sgh.waw.pl/publications/repository-learning-outcomes-describing-tkc>
- Winch, C. (2020). The learning outcome approach to European VET policy tools: Where are the arguments and the evidence? In M. Pilz & J. Li (Eds.), *Comparative vocational education research: Enduring challenges and new ways forward* (pp. 81–95). Springer. https://doi.org/10.1007/978-3-658-29924-8_5
- Winterton, J., Le Deist, F. D., & Stringfellow, E. (2006). *Typology of knowledge, skills and competences: Clarification of the concept and prototype*. Cedefop. https://www.cedefop.europa.eu/files/3048_en.pdf