

3 An Instrument for Producing Country Typologies

Placing a VET system within a typology is the first stage towards identifying requirements for adaptation. For example, where a country's system is highly stratified, VET may have a lower status and a poorer reputation. If the intention is to remedy this from a training policy perspective, this approach offers potential for designing programmes. It is impossible for us here to discuss all possible examples of needs and requirements. However, it is quite clear that the identifiable needs must be discussed explicitly with the decision-makers and with those involved and that it is appropriate also to reflect previously unidentified needs (see above). This can be achieved using the transfer analysis instrument described below.

3.1 Elements of the Typology

Existing typologies of VET systems (Steedman 2012; Rauner and Wittig 2009; Crouch et al. 1999) are very often facing some problems. For example Frommberger and Reinisch (1999, pp. 340–343) have noted that typologies of vocational training systems frequently fail to acknowledge the complexity of such systems and the extent to which they are an integral part of a country's general education system, employment environment, and social system (Deißinger 1995, p. 372). To avoid a too narrow approach our new typology combines different perspectives from sociology, political science and also VET pedagogy.

Furthermore, existing comparative research into VET has focused particularly on the macro-level of training systems (Grollmann 2009, p. 255). Consequently, the approach described below is innovative because it integrates all three relevant levels of VET. In other words, elements of the typology are generated not only at the

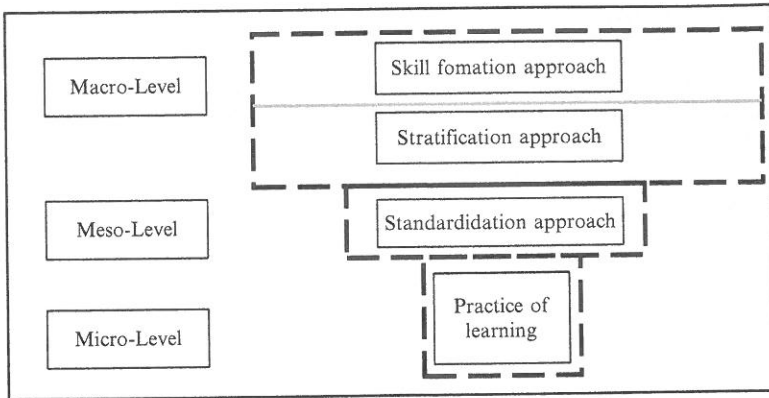


Fig. 26.1 The four elements of the typology (Source: author's own compilation)

macro-level of a VET system – at the level of stakeholders and funding – but also at the meso-level, including elements such as the curriculum, the nature of the institutions involved, certification, and the teaching staff. Moreover – and this is something that is almost entirely absent in existing typologies (Grollmann 2009, p. 255) – our approach aims specifically to analyse the micro-level, the level of concrete teaching and learning. This is important because it is ultimately at this level that the product of any educational process is developed.

The different elements of the new typology can be described as following (Fig. 26.1):

Firstly a model from the field of comparative political economy is considered and used as “collective skill formation” (Busemeyer and Trampusch 2012) is relevant. This approach fits within the tradition of an institutional political economy (Culpepper and Thelen 2008) and focusses on the interaction between political and socio-economic institutions and other stakeholders in the VET context. This model has in the past frequently been used in the international context in a cross-disciplinary way. The model operates primarily at the macro-level. In addition to the influence of stakeholders on VET policy, the issue of direct funding and financial involvement is also of crucial importance (Busemeyer and Trampusch 2012, p. 21). The skill formation model will be taken as the starting point for developing a typology and covers four characteristics. It reveals the influence of the state on VET and the potential for activity by and influence from companies. Where both influences are limited, individual influence may be prioritised as the third value (for example, participation in individually funded training provision organised by the private sector). Where, however, state and companies have a high level of influence, this may be characterised as a mixed system. As a result, differing levels of activity produce a total of four different constellations of stakeholders that can then be illustrated in the form of a matrix. This model is not only the starting point for the entire typologisation process but also links to the stakeholder model, which is important in VET, and issues of educational governance (Berger and Pilz 2009).

Secondly, we have included elements of an approach from the field of sociology, which focuses on the constructs of “stratification” and “standardisation”. This approach was developed by Allmendinger (1989). In particular, it has proved very productive and informative in international comparative research (Shavit and Müller 2000; Pilz and Alexander 2011). In this approach, stratification forms part of the macro-level and relates to issues of “tracking” and of the marked differentiation of and separation between general training courses from vocational ones. Shavit and Müller (2000, p. 443) have related this approach explicitly to the education system and argue that “(t)he term ‘stratification’ refers to the extent and form of tracking that is pervasive in the educational system.” In their research, they then use the term “tracking” to refer to pupils’ different trajectories through the school system, a view that takes in both the distinction between general and vocational education (and the different routes taken into them) and the differentiation of hierarchical levels by access, selection and transition mechanisms (Allmendinger 1989, p. 233). Another relevant issue is the importance of rankings and league tables for education and training institutions, since such ranking systems not infrequently produce a form of “indirect stratification” (Pilz and Alexander 2011). Stratification should also portray the status and image of vocational training courses within individual societies. To simplify, “stratification” needs to be expressed in a duopolistic sense – as either “high” or “low”. It is important to bear in mind that such characteristics are relative values. The same applies to the following assessments.

Standardisation, by contrast, forms part of the meso-level. The key question here is how the structures and processes underpinning any VET system are standardised and made subject to binding regulation (Müller and Shavit 1998). Shavit and Müller (2000, p. 443) define standardisation as follows:

(...) the degree to which the quality of education meets the same standards nationwide. Variables such as teacher training, school budgets, curricula, and the uniformity of school-leaving examinations are relevant in measuring standardisation.

Standardisation can be given concrete expression and structured by means of differentiating between standardisation activities on the input side, on the process side and on the output side within the VET system. Thus, certification and the accompanying rights and entitlements relate to the output side and are of particular relevance. For example, they may explain whether vocational training courses form part of an exit-based or entry-based system: where follow-on training institutions devalue certificates, this is an entry-based system. Specifically, this element focuses not only on certification but also, and in particular, on curriculum, institutions and teaching staff. Here, too, standardisation is a duopolistic construct.

Thirdly, the explicitly vocational-pedagogical perspective now enters the equation. We cannot directly use existing wide-ranging approaches to typology development but need to adapt approaches from diverse areas of vocational pedagogy and teaching design. Here, the focus is specifically on the concrete relevance to vocational practice or to later roles within the employment system of the teaching and learning processes. To achieve this, we shall fruitfully make use of two established approaches from the pedagogy of VET.

On the one hand, the learning content delivered may be analysed in relation to both its theoretical and its practical content. At operational level, this would, therefore, include aspects such as the skill acquisition expected as a result of a particular learning process or the selection and structuring of the topics covered and the balance between a technical skills orientation and a situational orientation. Of particular significance here is also the question of whether, as part of vocational learning processes, curricula produce a fragmentary and poorly integrated acquisition of skills or whether a system focuses instead on the acquisition of complete and complex performed actions in the context of situated learning (i.e. planning, implementation and review) (Billett 2001).

On the other hand, this last point illustrates the crossover with a further approach, this time related to the kinds of teaching and learning involved and, hence, the teaching process. Heavily teacher-centred learning activities can be interpreted as substantially influenced by theory. Here, the interaction and social relationships between teachers and learners (such as teacher-centred work versus group work or receptive learning versus discovery learning), the level of freedom learners have within the learning process (self-directed learning), and the individualisation of learning processes all play a part. Furthermore, the practical relevance of the media and methods used, including such teaching and learning arrangements as case studies, is also important (Grossman et al. 1989).

In short, a duopolistic scale – “high” or “low” – is needed to assess the practical relevance of teaching and learning processes.

3.2 Typologisation of Different National VET Systems

Below, we allocate individual countries to the typology for illustrative purposes. The main aim here is to demonstrate how the typologisation works. Consequently, we shall not present each country in detail and will only outline the consequences of each assessment in the context of the dimensions used.

Within the skill formation approach, the USA is seen as having a liberal approach with a low level of state and company influence and a high level of individual influence (Busemeyer and Trampusch 2012, pp. 12–14). Both stratification and standardisation are characterised as “low” (Müller and Shavit 1998, p. 14). At micro-level, there is a strong practical orientation to “learning by doing” at the workplace if college courses, which tend to focus more on general training, are excluded (Zirkle and Martin 2012) and the widespread model of skill development at the workplace is given priority (Barabasch and Rauner 2012).

Even if in Canada the impact of the college programs in VET are more important than in the USA, the overall situation in Canada is more or less similar to the one in the USA (Lehmann 2012; Taylor 2006; Kopatz and Pilz 2015).

France, by contrast, is deemed to have a VET system that is primarily state-oriented (Busemeyer and Trampusch 2012, p. 12). Against a backdrop of strongly segmented practice between general and vocational education and training,

stratification can be classified as “high” (Géhin 2007).¹ Standardisation is also classified as “high” (Müller and Shavit 1998, p. 14), and teaching and learning processes are strongly theoretically-oriented with a low level of relevance to practice (Brockmann et al. 2011).

Japan’s VET system is strongly dominated by companies (Thelen and Kume 1999). Stratification can be categorised as “high” if the informal elements of training, which are of importance in Japan, are given appropriate significance (Pilz and Alexander 2011; Kariya 2011).² Standardisation is categorised by Müller and Shavit (1998, p. 14) as “high”, although only if the informal mechanisms are taken into account, while teaching and learning processes within companies are geared to practice (Pilz and Alexander 2011).

Many studies single out Germany for its ‘dual’ training system in which the state and companies share responsibility for vocational training (Busemeyer and Trampusch 2012, p. 12; Deißinger 1995). Both stratification and standardisation are categorised as “high” in Germany (Müller and Shavit 1998, p. 14; Blossfeld 1994), while learning processes are geared to practice or actually form part of practice (Deißinger 1995; Blossfeld 1994).

The dominant context in India is one of low levels of state and company influence, even if some Industrial Training Institutes exist (Mehrotra 2014; Pilz 2016). Stratification is considered “high”, in particular because of the strict separation between general and vocational training (Singh 2012; Pilz and Li 2014). By contrast, skill formation in the Indian system is dominated by informal structures and processes, with VET institutions, certificates and formal curricula playing only a minor part. As a result, standardisation is classified as “low”, and within this predominantly informal system, learning processes tend to be directly linked to practice (Singh 2012).³

In Mexico the situation is quite similar to the one in India. General and academic education is strictly separated from the vocational track. The VET system is very small by number of participants and partially shaped by the different provinces in Mexico to meet their own demands. The formal VET system is predominantly located in state regulated vocational institutions with low connection to the working life. But the major vocational training, which is of interest here, is unorganised and follows a “learning by doing” approach, mostly on the basis of private motivation (Kis et al. 2009).

China can be regarded as a country with a strong state influence on VET (Pilz and Li 2014). The clear separation of vocational training from general education and training, along with restricted scope for ‘progression’ within VET, suggest a

¹Müller and Shavit’s slightly different assessment (Müller and Shavit 1998, p. 14; medium stratification) is the result of their three-point scale; we are using a two-point scale here.

²These findings diverge from those of Müller and Shavit (1998, p. 14; low stratification), who argue primarily at the formal level.

³By contrast with informal skill formation, the formal VET system in India is less important in quantitative terms (Pilz et al. 2015).

Table 26.1 Typologisation of selected VET systems

	Skill formation	Stratification	Standardisation	Practice of learning
USA	Individualised (low state, low employer activity)	low	low	high
Canada	Individualised (low state, low employer activity)	low	low	high
France	State dominance	high	high	low
Japan	Company dominance	high	high	high
Germany	State and company dominance	high	high	high
India	Individualised (low state, low employer activity)	high	low	high
Mexico	Individualised (low state, low employer activity)	high	low	high
China	State dominance	high	high	low

Source: author's own compilation

high level of stratification (Shi 2012). Standardisation in VET is “high”, but training is not highly geared to practice (Shi 2012; Pilz and Li 2014) (Table 26.1).

The classification of real types to individual dimensions and the emergence of recurring patterns of ideal types may be achieved by forming and analysing clusters. Visually, this can be illustrated in a three-dimensional graphic illustration: Fig. 26.2 demonstrates this for the few examples discussed in the previous section.⁴ As already noted above, categorisation as “high” and “low” should be interpreted relatively. The various sub-criteria of each dimension may be weighted differently according to their country-specific importance. Moreover, we would again point out that categorisation does not constitute a cross-country measure and, therefore, says nothing about the relative value and quality of individual VET systems in the comparison (Fig. 26.2).

Even these few illustrative country categorisations throw up some interesting findings. For example, two countries with differing skill formation modes (Japan and Germany) correlate to a substantial extent on all three of the remaining dimensions and, thus, across all three levels. By contrast, countries with an identical skill formation mode (USA and India) diverge substantially on the stratification dimension. It is not possible here to enter into a more detailed discussion on the basis of the small number of country categorisations already carried out and the limited options for implementation: we are focussing here on illustrating how the model works rather than generating findings from the typology.

⁴To determine the scale and/or relevance of a particular aspect of the VET system as a whole (see discussion above), the relative number of participants in a programme can be quantified as a proportion of all participants in VET. This proportion can then be reflected in terms of the size of the relevant symbol. Thus, a large symbol may represent extensive uptake (for example, 80–100 % of an age cohort in VET complete the relevant part of the system), while a small symbol signifies a smaller importance (below 50 %, for example).

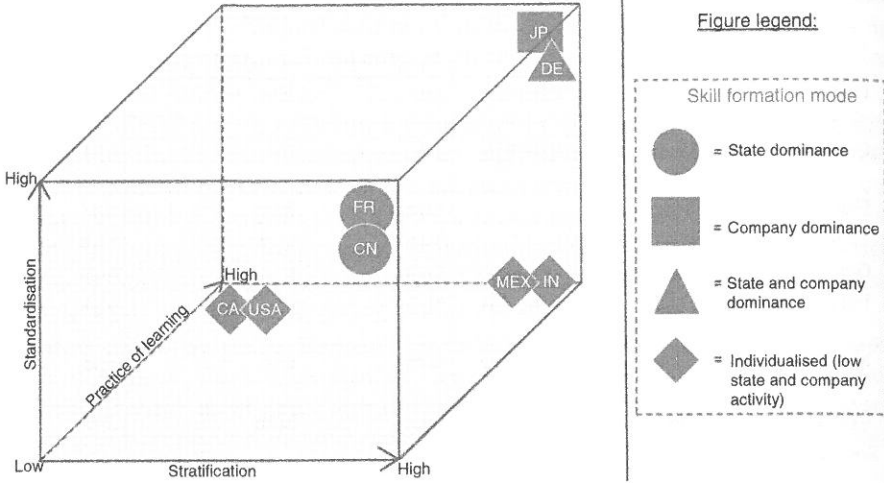


Fig. 26.2 Visualisation of the findings for individual countries (Source: author's own compilation)

CA Canada, USA USA, FR France, CN China, IN India, MEX Mexico, DE Germany, JP Japan