

Chapter 17

Differences in the Organisation of Apprenticeship in Europe: Findings of a Comparative Evaluation Study

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Introduction

On the basis of a theoretical framework for the evaluation of the governance and support systems, quantitative and qualitative assessment of the VET systems was carried out by national experts in 2008. This international comparative study initiated by the Bertelsmann Stiftung brought to light the prevailing differences in the dual VET systems of four European countries and led to various recommendations among others to modernise occupational profiles towards open European core occupations (cf. Bertelsmann Stiftung 2009).

In international comparative vocational education and training research, the countries with a well-developed dual system of vocational education (apprenticeship system) are typically grouped as *one* type of vocational education. The differences that actually exist between the dual VET systems of Austria, Denmark, Germany and Switzerland often escape attention. One indicator for the variety of the systems is the transition rate from the school into vocational education.

The topic of this chapter is a comparison and evaluation of the dual systems of vocational education and training in Austria, Denmark, Germany and Switzerland with a view to identifying strengths and weaknesses. This comparison is based on

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country studies and a combined qualitative-quantitative evaluation tool for expert workshops. The study was carried out with the aim to assess the performance of the German VET system in an international perspective with a particular emphasis on the optimisation of administrative structures. It is these governance and support structures that have a crucial influence on the quality of VET systems.

Dual vocational education and training is often perceived as a particularity of the German education system. It is a feature that is rooted in the German industrial culture and contributes to the competitiveness of the national economy. At the same time, this alleged particularity seems to be the reason for the relatively low acceptance of dual apprenticeship training in the international context. This, however, is a misconception which is based on a somewhat fuzzy terminology in the discourse on vocational education and training.

The acquisition of vocational competence (professionalism) requires reflected working experience, which is the crucial point of vocational learning and development processes. Professional working experience alone is insufficient, as is the impartation of subject-specific theoretical knowledge. Therefore, the *combination* of professional working experience and the acquisition of related theoretical knowledge is fundamental for vocational education and training. This means that each occupation, be it mathematician, medical doctor or bank clerk, must ultimately be learned on the job as well. The dual organisation of vocational education and training is therefore no special type of vocational education but its constitutive feature.

Two types of dual vocational education and training can be distinguished: (1) the one-phase or integrated duality and (2) the two-phase or alternating duality. Higher vocational education at universities is typically organised according to the two-phase model. A study programme relevant for the chosen occupation is followed, after graduation, by a phase of practical training on the job, e.g. by means of a preparatory service. In nonacademic VET, the two models compete with each other.

Given a differentiated understanding of duality, one can observe that dual vocational education and training is by no means a German specialty but the genuine form of vocational education and training, which is established in any place where prospective skilled workers are qualified for their tasks. The dual organisation of vocational education for nonacademic occupations presupposes a plural administration, the quality of which varies considerably from country to country.

Research Problem

In vocational education and training, three ideal types of regulation and governance (cf. Benz et al. 2007) are usually distinguished on the basis of the roles of the agents and the underlying rationale of agency. The dominant influence may come either from the state, the market or professional groups. On the basis of the categories of social regulation that have been commonplace in sociology since the time of Max Weber – tradition, market and bureaucratic rationality – the prevalent typology

in the social sciences distinguishes three models of governance, which can be termed market-driven, state-controlled and occupation-driven or corporatist VET governance (see Greinert 1998, 19–22; Clematide et al. 2005, 3–4).

The market-driven model of VET governance is characterised by the immediate control of vocational qualification by the employment system and the demand on the labour market. Vocational qualification is oriented towards the requirements of employers and takes place on the job and in a private sector of training providers offering job-related learning modules. The responsibility for the training process rests with the learners, who are expected to acquire the qualifications required by employers on their own. Typical examples of this model are the United States, the UK and Japan, where the relative absence of a regulated VET system is associated with a large number of students attending upper secondary schools and higher education.

The state-controlled model of VET is characterised by a dominance of school-based vocational education, which is subject to a relatively tight regulation by state authorities. In this model, which is prevalent, for instance, in France or China, the regulation is based on the school's logic of action and includes a focus on civic education. Enterprises do not have an institutionalised role in this system but serve as suppliers of internships while all regulatory functions – planning, management and control – are concentrated in the public sector. The contents of vocational education are typically based on theoretical and academic types of education (cf. Greinert 1998, 21–22). Due to the integration into the state-controlled education system, there is a relatively close connection to general education. Moreover, the supply of training opportunities is independent of the provision of training places by private companies. The major difficulty of this system is the weak linkage to the labour market (cf. Clematide et al. 2005, 3).

The third model is usually referred to as traditional occupation-based or corporatist regulation (cf. Greinert 1998, 19–20). Historically, this model is derived from the apprenticeship tradition in the craft trades. It is characterised by a strong influence of the training companies and the chambers (i.e. the corporate bodies or associations that represent the business community at the local or regional level). This concerns the access to training as well as the definition of training contents and the responsibility for examinations. Today occupation-based regulation is part of 'mixed' systems of cooperative governance in which the regulation of vocational education takes place in a plural network of state bodies, enterprises or employers' associations as well as trade unions or professional associations. Variations of these mixed models of regulations can be found in systems of cooperative (dual or alternating) VET as they exist in Austria, Denmark, Germany and Switzerland. In what follows, it will be discussed how the systems of dual or alternating apprenticeship training in Austria, Denmark, Germany and Switzerland can be characterised and situated with regard to their governance structures and how this affects the performance of the systems. The epistemic interest is to identify examples of good practice in plural administration that can serve as a basis for policy recommendations.

Methodology

Plural governance systems in which state-controlled and market-driven or corporatist types of governance overlap can be classified on the basis of two dimensions of the governance process. *The first dimension* is the degree of coordination between the different agents with their respective internal logic or, to put it differently, the *integration of the system*. At one end of the scale, the ‘plural administration’ may be completely fragmented. In this case, the public and private or corporative agents act autonomously within the legal framework and follow their own internal logic of agency without coordinating their activities. The responsibilities are not allocated according to functions of rule-making; execution and monitoring are dispersed across all types of bodies in varying constellations.

The *second dimension* distinguishes between an *input-oriented* type of management by rules and resources and an *output-oriented* management by means of the products and services to be achieved by the management process (cf. Jann 2001; Stöbe-Blossey 2001). Input control is typical of the traditional bureaucratic model of public administration, which is primarily concerned with the implementation of the law. Output control, on the other hand, is one of the cornerstones of the new public management approach, which claims to improve the efficiency of the public sector by means of management techniques adapted from the private business sector (cf. Osborne and Gaebler 1993; Spicer 2004).

These two dimensions allow for the construction of a coordinate system whose four quadrants represent the different types of plural corporatist governance system in vocational education and training. In the case of a *fragmented input control*, the management processes follow the paradigm of the implementation of norms as expressed in the principle of the rule of law. The responsibilities are dispersed among different institutions or subsystems of the political system. The distinctive feature of fragmentation is that competences are allocated according to policy areas and that a vertical integration takes place at best within these areas. The result is that the institutions operate relatively independently of each other and have few incentives to coordinate their actions. A *coordinated input control*, on the contrary, is also characterised by a primacy of rules, but intuitional arrangements such as the concentration of legislative powers and a consistent responsibility of government departments allow for a coordination of the bodies involved. Coordinated input control therefore features a more systematic structure of the legal framework and a consistent and coordinated implementation of the rules. The third model is *fragmented output control*, which combines a highly decentralised set of administrative bodies with a management by objectives. As this type of management automatically entails a relatively high autonomy on the part of institutions, the integration of the system as a whole can be secured only by means of a coordinated or centralised definition of the objectives in question. Accordingly the fourth model, which can be termed *coordinated output control*, aims to secure the integration of the system by coherent objectives, which are formulated by a central body or developed jointly by the bodies involved. The following table summarises this conceptual framework (Table 17.1).

Table 17.1 Types of governance in vocational education and training

Rationale of agency	Integration of the system	
	Low	High
Output	Fragmented output control	Coordinated output control
Input	Fragmented input control	Coordinated input control

The classification of existing VET systems according to the taxonomy described above allows for the development of policy recommendations if a type of governance can be identified that can reasonably be considered the optimum for dual or alternating vocational education and training. This model is operationalised by an evaluation tool with several indicators that are listed below. In addition to desk research carried out on the basis of the theoretical framework, the set of criteria opens the opportunity to carry out expert interviews with a view to situating the different VET systems within the coordinate system described above. There are seven main criteria, of which five relate to the integration of the system (i.e. coordination and fragmentation) and two to the dimension of input and output orientation. These main criteria are the following:

- Dimension 1: Integration of the system
 - Category 1: Consistent legal framework
 - Category 2: Cooperation of the various bodies
 - Category 3: Innovation strategies
 - Category 4: Balance of relevant policy areas
 - Category 5: Allocation of strategic and operational functions
- Dimension 2: Input and output orientation
 - Category 6: Outcome orientation
 - Category 7: Input orientation

These criteria are operationalised by approximately 30 subcriteria or items that are evaluated and discussed by experts in the course of evaluation workshops. Respondents are asked to judge the items on a scale from 1 (= not realised) to 10 (= fully realised). The aggregated answers determine the position of the VET system within the matrix described above. The position on the horizontal axis 'integration of the system' is defined by the mean of the values for the main criteria 1–5 with increasing numerical values indicating a higher degree of coordination. As regards the second dimension, the value is calculated on the basis of the mean of the two remaining main criteria 6 and 7. Given that the two main criteria have a reciprocal relationship so that a system is situated halfway between the poles of input and output control if the two criteria are equally realised, the values are standardised before the mean is calculated. Therefore, the value for the position on the vertical axis is calculated according to the following formula:

$$\frac{n_{\text{Outcome}} + 11 - n_{\text{Input}}}{2}$$

The value expresses which of the two modes of governance has a stronger influence on the VET system in question. The evaluation tool was applied in four expert workshops in Berlin, Copenhagen, Vienna and Zurich in November 2007.

Research Findings

Four key results of the study that are relevant for the quality of the dual organisation of vocational education and training will be presented in this contribution.

Differences in the Plural Governance of Dual VET Systems

When a distinction between input and output-oriented governance as well as between coordinated and fragmented governance is applied in the evaluation of VET management, what becomes clear is that Germany is the only among the four countries to have a fragmented input-oriented governance system in VET. The fragmentation of the governance and support system is relatively strong. The prerequisites for the coordination of the relevant actors and institutions are absent. In the first place, this is a structural weakness of the German VET system. The problem is intensified by an input-oriented mode of governance that lays emphasis on formal rules and their implementation, which considerably limits the opportunities for the autonomous design and organisation of VET at the local level (Fig. 17.1).

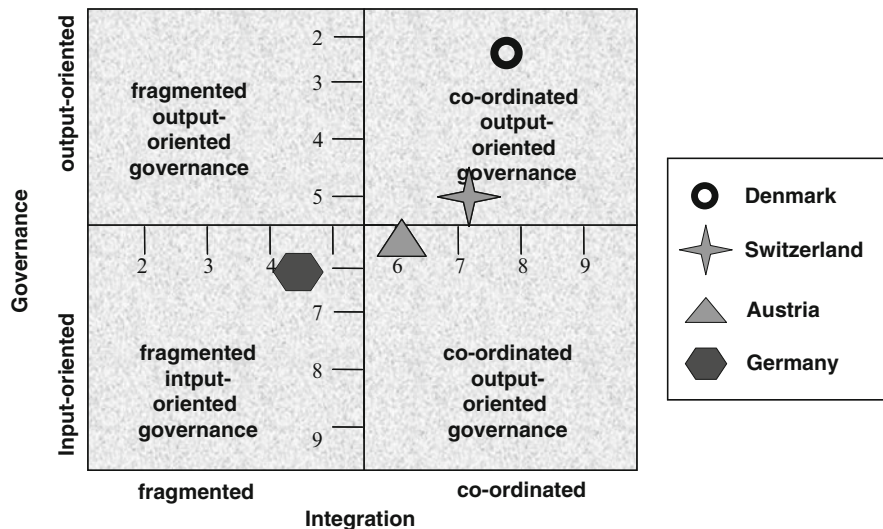


Fig. 17.1 Governance of dual VET systems in Austria, Denmark, Germany and Switzerland (cumulative results)

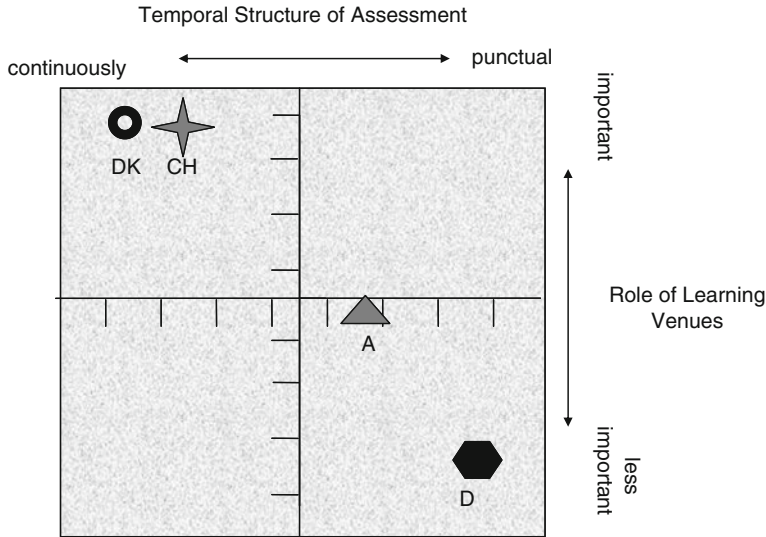


Fig. 17.3 Assessment systems (temporal structure and role of learning venues) in comparison

Different Assessment Systems and Their Effects

The system of single, isolated examinations in the shape of an intermediate and a final examination leads to a persistent weakening of the trainees' competence development.

In Denmark and Switzerland, the continuous evaluation of dual training programmes is highly developed. The vocational schools in Denmark even assume a managerial and coordinating function. Above all, the Danish and Swiss examination systems avoid a reduction of the assessment to one or two single examination dates.

This reduction of the performance assessment or the evaluation of professional competence development is a considerable structural problem for the organisation and design of vocational learning processes. Especially in the interval between the intermediate and the final examination, systematic feedback on the development of professional competence is missing. A crucial element of competence development is thus absent (Fig. 17.3).

Differences in the Dual Organisation of Vocational Training

The underdeveloped cooperation between the learning venues is one of the Achilles' heels in the German dual VET system. Due to the fact that the learning venues 'company' and 'school' belong to different legal spheres, the vocational school has become the junior partner in vocational education (Fig. 17.4).

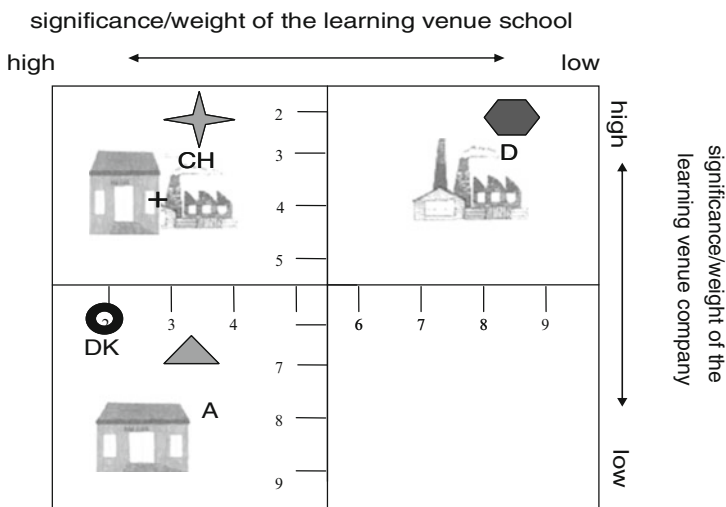


Fig. 17.4 Structure and organisation of VET in Austria, Denmark, Germany and Switzerland

In Denmark and Switzerland, the cooperation of learning venues is based on a single legal framework and an advanced coordination and support structure at the national, regional and local levels.

To this date, the negative effects of the underdeveloped cooperation of learning venues in Germany for the trainees’ achievements have been underestimated. This is shown by a survey of 1,600 trainees. Two-thirds of the apprentices rated the cooperation and coordination between company-based training and school instruction as ‘little effective’ or ‘not effective’.

Impeded Transition from School to Vocational Education (First Threshold) in Germany

The average age of VET trainees in Germany is considerably higher than in the other countries with a dual VET system. The reason is that for some decades, the transition from school to vocational education has been rendered difficult by various obstacles. The neighbouring countries give examples of how a well-functioning transition from school to vocational education can be organised (Fig. 17.5).

The positioning of the four countries shows that in Germany, the fragmentations of governance are particularly strong while in Denmark and in Switzerland, there is a remarkable degree of coordination. With a score of 7.8 on the axis ‘integration’ and 2.8 on the ‘input/output’ axis, Denmark exemplifies the type of coordinated output control. For Germany (4.4; 6.3), the analysis shows a weak coordination and a clear dominance of input orientation. Austria (6.0; 5.4) shows a stronger but still relatively weak coordination and a balanced ratio of input and output control. In

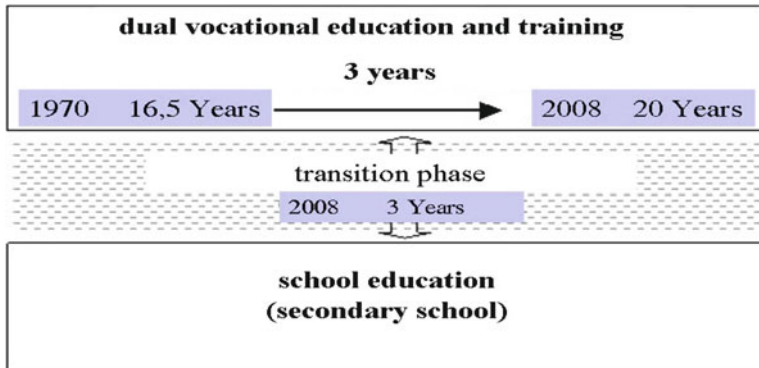


Fig. 17.5 The impeded transition from school to vocational education in Germany

Switzerland (7.0; 5.1), the coordination is already very strong and almost reaches the Danish figure. In addition, there is an almost equal distribution of input and output control, which suggests that the Swiss VET system comes closest to the ideal model of governance as discussed in the previous section.

It has to be emphasised also in the light of the previous desk research that Switzerland with its pronounced federalism and language pluralism has a well-developed and coordinated system of dual vocational education and training. The competences are allocated to the national, regional and local levels so as to ensure a good equilibrium of strategic and operational functions according to the principle of subsidiarity. The new Vocational Training Act that came into force in 2005 enacted a fundamental reform of the VET system, following a constitutional amendment in 1999 that concentrated the legislative power for the entire system of vocational education and training (except higher education) at the federal level (cf. Article 63 of the Swiss Constitution). The Swiss Federal Institute for Vocational Education and Technology (BBT) became the central institution for the coordination of the VET system. At the same time, all stakeholders in vocational education contribute to the development in VET in accordance with the principle of subsidiarity.

After the reforms of the past decade, Denmark can be regarded as an example of coordinated output-oriented governance. This is illustrated by the fact that the political responsibility is concentrated in one body. It is exclusively with the Ministry of Education, which also ensures the coordination of general and vocational education (see Cort 2005, 13–16). The ministry guarantees that VET programmes comply with the guidelines of education policy. The ministry also supervises the vocational colleges that offer basic and mainstream courses in vocational education and training. All strategic functions like the development of occupational profiles or the recognition of qualifications are located at the national level as an institutionalised cooperation of all stakeholders. This dialogue includes the Council on Initial Vocational Training as the main advisory body as well as 12 trade committees that collaborate in the preparation of framework curricula. At the

local level, on the contrary, all operational functions are located, which include also the development of concrete school and training curricula as well as the outline of individual training plans. The main actors at this level are the vocational colleges, the training enterprises and the local VET committees (cf. Cort 2005, 16–18).

The colleges are independent public institutions with their own budgets and a performance-based funding scheme, which have the power to develop their own curricula and training plans within the national framework.

To some extent, the German system can be regarded as the opposite model to the Danish system. A long tradition of decentralisation has led to a strongly fragmented governance system, as is already shown by the separation of the legislative powers for the two branches of vocational education and training. While the school part of dual apprenticeship training and the school-based VET programmes are under the responsibility of the states (*Länder*), the federal government is responsible for in-company training within dual VET. Finally, the domain of continuing vocational education and training is characterised by an uncoordinated variety of both federal and state regulations.

A distinctive feature of the German system is therefore the distribution of virtually identical functions across different levels of government. In addition, there is a heterogeneous involvement of government departments as the ministries of education are responsible for vocational education while the supervision of in-company training is in most cases a task of the ministries of economics or labour.

Like Germany and Switzerland, Austria is characterised by strongly developed federal structures. However, contrary to Germany, the responsibility for educational policy is concentrated at the federal level, and this applies also to vocational education. This allows for a better coordination of the system than in Germany. The implementation of VET is regulated at the state level, and the Federal Ministry of Education is the supervisory body for the entire education system. In recent years, a number of reforms were implemented that followed the modern principles of deregulation and decentralisation, but the dominant paradigm is still juridical and bureaucratic.

The following chart summarises the means of the experts' assessments given in the evaluation workshops of the main criteria described above. As explained before, the participants evaluated the status quo in their countries for each item on a scale from 1 (not realised) to 10 (fully realised) (Fig. 17.6).

Conclusions

This chapter has provided an overview of a theoretical framework by means of which several types of plural governance in dual or alternating vocational education and training can be identified. In addition to this classification scheme, the public value approach was discussed as a yardstick for evaluating the performance of existing VET systems on the basis of their position within the coordinate system. It was argued that the theoretical optimum for governance in dual systems of

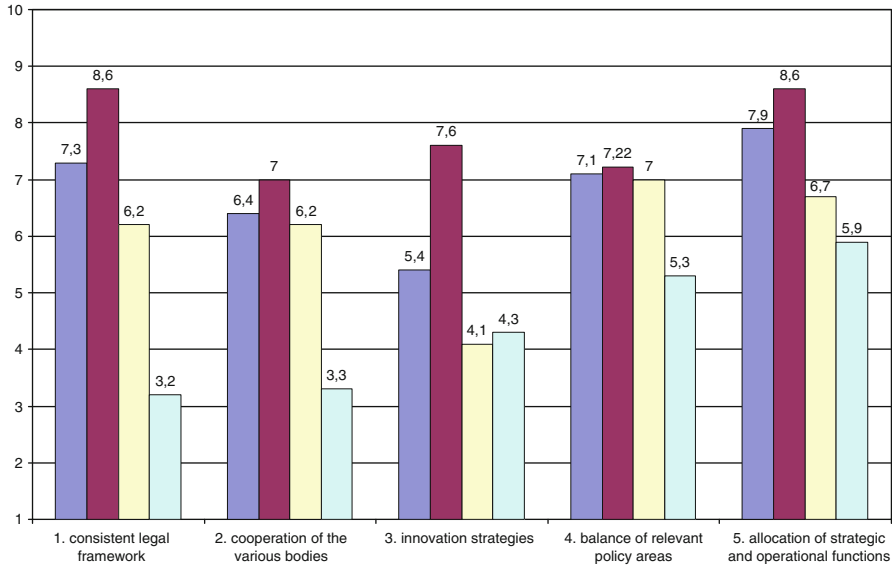


Fig. 17.6 Summary of results (means) of the expert evaluation on governance in dual vocational education in Austria, Denmark, Germany and Switzerland (integration of the system)

vocational education and training was a type that combined a high degree of coordination between the bodies involved with a balanced ratio of input and output control, i.e. of management by rules and management by objectives.

The case studies and evaluation workshops in which this methodology was applied for the study of the dual training systems of Austria, Denmark, Germany and Switzerland came to the conclusion that the Swiss model most closely approached to the ideal model. One of the strengths of the Swiss system that were identified is the consistent legal framework for vocational education and training at the national level, which lays the foundations for an integrated governance system. This is complemented by the concentration of the supervisory functions in one national authority. The Federal Institute for Vocational Education and Technology serves as a link between the national government and the actors at the regional level. This centralisation of strategic functions also allows for a balance between the relevant policy areas, as is expressed by the high score of Switzerland for this item in the evaluation workshops. As regards the allocation of strategic and operative functions, the results suggest that the high autonomy of local bodies concerning the implementation of vocational training represents an advantage of the Danish and Swiss systems.

The following recommendations can be derived from this study:

1. Modernisation of occupational profiles: open European core occupations and the relocation of the specification of occupational profiles by means of syllabi to the local level.

2. This requires a new division of tasks in the management of vocational education according to the principle of subsidiarity: a strengthening and concentration of strategic competences at the national level and of the operative management tasks at the regional and local levels.
3. The dual organisation of vocational education, more specifically the cooperation of learning venues, needs a consistent legal framework. The vocational school must play a responsible part in vocational education.
4. This requires the establishment of an evaluation and feedback scheme in the shape of an assessment along the training process (extended examination) throughout the entire training period.
5. Establishment of a 'VET innovation system' in which VET practice, VET policy and VET research mutually support each other.

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