

Kernprinzipien und Eckpunkte eines dualen Berufsbildungssystems in der internationalen Berufsbildung

Core principles and corner points of dual vocational training system in international vocational training

Core principles

1. Cooperation of the state, economy and social partners
2. Learning during the working process (i. e. on-job learning)
3. Permeability and equivalence
4. Socially accepted national standards
5. Qualified vocational training staff
6. Studying the vocational training and labour market, career counselling and monitoring

Corner points

1. National and sectoral qualification frameworks
2. Education management and education controlling (*training evaluation*)
3. In-company vocational education
4. Vocational decision-making and responsibility and competence findings
5. Places, forms and concepts of learning
6. Validation of informal and non-formal learning
7. Resource efficiency and sustainability
8. Quality assurance and quality development
9. Joint financing of vocational education

Introduction

Qualification concepts and training systems are worldwide subject to high dynamics - in order to meet the increasing need for innovations and competences, to give young people a perspective, and to comply with the lifelong learning. The systematic vocational education has first to be built at all in many states, whereas the existing and proven individual measures have to be developed to a comprehensive vocational education system in others.

States with primary full-time school-based vocational education are experiencing serious reform pressure. In particular, the practical orientation and acquisition of comprehensive professional acting capacities are not sufficiently expressed in purely academic qualifications. There is a lack of vocationally competent training staff and costs of the fulltime school-based vocational education are so high that many young people get denied and remain outside the scope of the vocational education. In contrast to it, the solely privately operated vocational training and skill-building measures existing in some states do not offer any alternative, since they are limited and shrunk to an individual enterprise basis. There are no adequate extra-enterprise uniform standards and national agreements on the structure and quality of education and advanced training. In any event, the youth unemployment issue cannot be addressed by measures on the individual enterprise basis.

A dual system of vocational education, such as it is established in Germany, offers a different way. In particular, the dual system of vocational education, existing since the early 20th Century, has served as a basis for the consistent building of professional potential, and a good transition from training to the labour market was made possible through it. High-quality vocational training fulfilling social and operational requirements is a decisive factor for growth, prosperity, social participation and social peace. The vocational education has to be embedded in a permeable educational system and interlock with the advanced training and the tertiary higher education. This is currently undertaken through the validated recognition of equivalencies and through dual and extra-occupational courses. While becoming increasingly important against the background of the lifelong learning, the advanced vocational training takes major orientations of the duality and, along with the vocational education and parts of the higher education, represents a unified education system.

What are the defining characteristics of the dual vocational training system? German federal government summarizes the strengths of German vocational education system in five "core principles" (see „Strategiepapier der Bundesregierung zur internationalen Berufsbildungszusammenarbeit aus einer Hand“ (Strategy Document of Federal Government on International Cooperation in Vocational Education from One Source), German Bundestag, printed matter 17/14352 , 05/07/2013). The six principles are named and explained below, based on the strategy document. The subsequently mentioned nine additional corner points of the dual vocational education system emphasize current challenges of the vocational education and important reform-related developments. They are built on the principles and strengthen and expand them. For the international vocational education, the transfer of specific principles and key points is directed in accordance with particular circumstances in other states. As indicated by multiple experiences from the field of cooperation in the international vocational education, the national structures, conditions and traditions are always the starting point and basis for successful acceptance and transfer of the proven concepts and principles.

Six core principles

1. Cooperation of State, Economy and Social Partners

Shared responsibility for the coordinated plural control of the dual vocational education ensures that the most important actors get bindingly engaged in the planning, implementation and evaluation of the vocational education measures on local, regional and national levels. The state, social partners and business organizations safeguard jointly the framework building of the vocational education: from the partial funding, development

and curricula update and their implementation to examination, recognition and certification of the acquired skills.

A vocational training system should constantly evolve. Its ability to innovate is ensured by the state and economy cooperation. In Germany the state organizes the establishment of forums for dialogue, in which the government, business and civil society communicate, among others, in the field of development of training occupations. Employers, trade unions and government representatives develop jointly the minimum standards for the training occupations; the operational part of the training is matched with the curricula of vocational schools. On this basis, the state may confine itself to ensuring the quality standards. In some areas the state plays an additional important role. The support of young people, jobseekers and disadvantaged people on their way to a training or employment is considered an important public task. At the same time, the advanced vocational training has to be taken increasingly into view, as, according to the number of participants and financial expenses, it has meanwhile become the largest field of education. Also, it is a tool of the labour market policy, economic policy and specific enterprise-related qualification. Public-legal standards are necessary across enterprises, corresponding with the principle of professionalism.

(2) Learning in the working process

The vocational education in Germany is based on the development of comprehensive occupational skills by learning in occupational structures and in the working process. As an essential base of the vocational education, the work experience reflected the in schools and educational institutions comes hand in hand with an extensive operational work experience. Learning in the real work situation, combined with the formal learning in educational institutions, is the best form for the development of professional, social and human or personal skills. The organizational and institutional basis for this is provided by a learning-place-linked plan of the vocational education, with inter-coordinated training and advanced education and framework curricula. Additionally, there is an adaptation training that incorporates professional, technical and work-related organizational innovations and is organized on workplace in priority.

Active learning in the work process is considered the most effective and efficient form of the vocational education. Instead of doing "dry runs" away from the work reality, trainees learn their professions in authentic work situations, while being supported by colleagues and other Professionals. In this way they learn gradually to take over more demanding and complex tasks. The internationally widespread heeled learning with the subject of action and everyday work among practically acting people, i.e. in a Community of Practice, stands for this qualification approach to the same extent, as the concepts of experiential- and self-directed learning. These concepts relate also to the advanced vocational-operational training. A workplace as a place of learning meets the essential preconditions for the development of comprehensive operational expertise and reflexive action capacities in the profession. The informal and non-formal learning that becomes increasingly important is now gaining its growing status. In many areas, the skills acquired through it are also now stronger, than those acquired through formal training approaches.

(3) Permeability and equivalence

Permeability in the education- and vocational training system should provide access to the education and enable transitions between different educational sections, educational courses and educational branches, and thereby facilitate the chance equality, equivalence of vocational and general educations, as well as allow for development and career paths. Between and within the conventional educational areas of the general school education, vocational education, higher education and advanced training there are to some extent strictly separated partial sections that need to be interlinked. In particular, the dual system of the vocational education is to be classified as a permeable system, opposite to the universities' open system, if it wishes not to lose its attractiveness. Important milestones for increasing the permeability include: access to universities without A-levels, equation of a master craftsman certificate and university entrance qualification, and recognition (secured by the state regulations) of the occupationally acquired skills to the higher education. A regulated access from the education and advance training, including informally and non-formally acquired competencies, should be safeguarded by the state, business and social partners.

(4) Socially accepted national standards

The uniform professional, training and auditing cross-workplace standards guarantee the quality of competences and professionalism. The comparable Vocational Education and Training (VET) achievements and certificates form the basis for employability, mobility and social acceptance, and promote the lifelong learning. The Vocational Training Act, Crafts Code and other professional licensing laws determine all major issues related to the vocational education.

Qualifications should be comparable. This provides high mobility to the labour force and efficient staff recruitment and development to enterprises. The standards create transparency in the educational and labour market, enable the further development of qualifications and provide transparency and equal opportunities in the education and vocational education system. Established negotiation arrangements between the state, business and civil society ensure the broad social acceptance of the standards. Initial training profiles get developed jointly. Education and advanced training systems are the basis and prerequisites providing that the quality of training in all enterprises, regions and schools is equally good. The economy monitors their compliance and, along with representatives of employees and schools, is involved in taking exams. The connectivity of the standards to the European Qualifications Framework (EQF) is ensured through the German Qualifications Framework (Deutsche Qualifikationsrahmen - DQR). The validation system is established in such a manner that it undertakes the identification and review of the skills, acquired by the informal and non-formal learning, and classifies them within the qualification framework.

(5) Qualified training staff

The qualifying of teaching, educational and advanced training staffs make a key building block of the quality. Workplace trainers and educators, managers and teachers at schools, education and advance training consultants and education managers are characterized by the fact that they possess extensive theoretical and practical professional knowledge and at the same time are professionally and socio-pedagogically qualified to shape and accompany

the teaching and learning processes. It is important that they are equipped with a rich pedagogical and instructive toolkit, have a profound insight into the real professional and working world and in the operational education work, and improve their skills continuously. This is the only way they can stimulate the learning processes, promote the development of individual learning strategies and enable the skills development. The professionally and pedagogically qualified educational staff ensures the continuous adaptation and development of professional skills and the quality of teaching and learning processes.

Staff on workplace and those in the school vocational training differ quite clearly in their roles, functions and legal frameworks, even if a certain degree of similitude of different professions and occupations among the vocational education staff can be observed. The vocational education staff can be roughly divided into workplace and school-based education and training staff; the training staff in education and competence centres is to be assigned to the workplace staff group. In addition, the line staff with special expertise in the education management is included hereto. Teachers of professional theoretical and general education courses in vocational schools, as well as teachers of professional practical education, so-called professional practice teachers, are classified as school personnel. The legal basis for the teachers is set; for vocational school teachers of the professional theoretical and general education the training takes place in two phases: the first phase involves learning with practical school studies, and the second phase represents the workshop-accompanied practical school training in teaching practice, the traineeship. To the workplace training staff belong: educators, masters, certified teachers in education and advanced training, certified vocational educators, skilled workers providing training, learning facilitators, trainers and coaches. While there are binding rules of vocational courses for the first four mentioned categories, this does not apply to the rest of the educational personnel in enterprises.

(6) Vocational education and labour market research, career counselling and monitoring

Vocational training and labour market research build an indispensable basis for the permanent adaptation of the vocational training to the technical, economic and social development. Career information, advice and support provide the essential support during the transition into the employment system and in the further professional development. Sound guidance (*monitoring*) and counselling, specified by occupational and professional areas, is required within and outside of work in order to maintain and extend the professional competence. While the counselling in the VET is a time-limited and, mostly, short process of information and data provision, the monitoring in the vocational training is aimed at longer-term care and development of learning and skills development processes of individuals or groups. Businesses and social partners play an important role in the counselling and guidance. However, small as well as the most of medium-sized enterprises can hardly afford providing the sound guidance and counselling work on their own. And this is where on-job and extra-operational qualification centres and educational institutions play an important role as training providers.

The labour market research observes and analyzes the labour market development with a focus on occupations, industry branches and regions, and elaborates short- and long-term projections. It examines effects of the labour market and socio-political tools, and analyzes

also the experience that other countries have made in this area. The VET research has a task of initiating, shaping and evaluating innovations in the field of vocational training. It undertakes, among others, the early detection of needs for skills in the economy, contributes to the quality assurance of the vocational education, clarifies economic issues of the education regarding costs and benefits, examines educational pathways and explores new approaches to the learning. It creates educational planning decisions and takes part in their preparation. The research results are incorporated in the dialogue between the state, economy and social partners. Thus, the VET research makes a positive contribution to the further development of the vocational education.

Six core principles

1. Cooperation of State, Economy and Social Partners

A milestone in Europeanization of the education policy is the introduction of the Euro-Qualifications Framework for lifelong learning (EQF) that was adopted by the European Parliament and the Council in spring 2008. The EQF is in the context of certain measures and concepts of Europeanization of the education, with which it should be in compliance. Thus, after several years of development, the Qualifications Framework for the European Higher Education Area (QF- EHEA) was adopted in 2005 by educational ministers of 45 states. The three-level qualifications framework for the European Higher Education Area was mainly a result of so-called "Joint Quality Initiative", recommendations of which for a joint qualification framework became known as "Dublin descriptors". Additionally, a credit transfer system was created in 1989 for universities by means of the "European Credit Transfer and Accumulation System" (ECTS), which is now anchored in the higher education legislations of almost all Member States of the Bologna Process. It covers interdisciplinary academic achievements in form of credits, enabling both their transfer and accumulation. Additionally, the ECTS provides information on the curriculum design and quality assurance. Introduction of the "European Credit System for Vocational Education and Training" (ECVET), an achievement credit system for the vocational training that potentially is compatible therewith, is also on the agenda. Also this system should enable the transmission and accumulation of academic achievements and should be connected to the ECTS to an extent possible.

(2) Education Management and Education Controlling (*Training Evaluation*)

The educational management in the VET system analyzes, plans, directs, designs and evaluates forms and content of the training, qualification and competence development. Just as the concept of management - related to the business cooperation - aims at the business governance, the educational management concept refers to the analysis, planning, direction, control and evaluation of education on learning places of the vocational education. This involves the vocational education – from the vocational preparation and training through the adjustment of qualification and advance training to the management staff development. Distinction is made by operational, strategic and normative education management. Due to the VET system duality, it is also necessary to distinguish the occupational education management from the school-based education management. The education controlling, as part of

the educational management in the vocational education system, has the goal of increasing the efficiency and effectiveness of education and advanced training under consideration of economic and social objectives, as well as the goal of improving the adaptability to changes in enterprises and educational institutions. It is about controlling and evaluating the education and advanced training, about an "ex ante" (*anticipated*) orientation of the qualification- and competence development processes, and about overcoming the conventional "ex post" (*after the event*) orientation of the education controlling by use of the post control and improvement.

(3) Educational work in enterprises

Subjects of the on-job (*in-company*) education work are, in principle, all training, qualification and vocational education activities that take place directly on workplace in an enterprise, or are financed, caused, performed by this, or for which it is responsible. In the centre of the on-job education traditionally stands the vocational training within the dual system framework.

Its legal fundamentals, fixed in the Vocational Training Act (V TA) and in the Crafts Code (CC), imply a connection of the vocational training to the public-legal education system. In particular, the duality of learning locations - school and enterprise - exemplifies the integration of education and employment systems and finds its continuation in dual degree programs and part-time master's degree programs. A focal point for the on-job-training work development is the renaissance of learning on workplace and its underlying general transformation of work and qualification requirements. The on-job training work will be restructured with this transformation, and learning and working will be systematically connected, the work will be designed to be conducive to learning and competence, new forms of learning in the midst of work will be introduced. The informal, thus, unplanned, incidental learning plays a crucial role for skills development.

(4) Vocational competence and identification of competence

The key objective of the vocational education and training is the development or expansion of comprehensive occupational competence. This is considered to be the readiness and ability of an individual to behave appropriately and thoughtfully, as well as individually and socially responsible in professional situations. The competences here are abilities, skills, knowledge, methods, attitudes and values, the acquisition, development and use of which relate to the entire life of a person. They are bounded to the subject and his/her ability to act responsibly. In the further development of the vocational acting competence refers the concept of competence to the reflexive ability to act. It indicates the ability to capture, interpret and evaluate in action-oriented intention those through the reflection predefined situations, requirements and problems from a certain distance to the immediate work process. This is very much reserved for the vocational training. The competence identification, equilibration and assessment of competences in the vocational and advanced training will essentially gain on significance in the future, against the background of innovative concepts of work and lifelong learning. During their work activities employees acquire additional skills that are of importance for both their employability and the given enterprise, and are not covered by traditional methods. Many systems have been developed for summarizing and evaluating

competencies (both nationally and internationally) that need to be unified.

5) Places, forms and concepts of learning

Both places of learning - an enterprise and a vocational school - are constitutive for the dual vocational training system. However, since several years the differentiation, pluralisation and delimitation of places of learning are being detected. As a learning place, an enterprise includes individual places of learning, such as training workshops, learning islands and communities of practice, and is supplemented by extra-enterprise occupational education and competence centres. Also, learning places in the vocational schools differentiate and become complemented by high school dual degree programs. This differentiation of learning goes hand in hand with its reorganization: education and advance training communities and networks represent examples of this. Places of learning are to be regarded as forms of learning, if they systematically combine work and learning, as, among others, it is the case in learning islands and communities of practice. They link the learning-form-typical connection of formal and informal learning to the learning-place-typical area-spatial definition of learning. Other learning forms, such as work- and learning tasks, as well as the coaching, however, are not to be regarded as places of learning, as they are not area-spatially fixed.

Along with the differentiation of learning places and emergence of new learning forms, such learning concepts have increasingly prevailed that theoretically and didactically focus on the action orientation, holism of acts and a learner's self-control. The situated learning, self-controlled learning and experiential learning are examples.

(6) Validation of informal and non-formal learning

Validation as the registration and measurement of informally and non-formally acquired competences in- and at work is an equally innovative and necessary extension of the VET system. In the VET and employment system the rating of informally and non-formally acquired competences is measured against standards of respective professional fields and industry sectors. In the education system it can lead to the recognition and crediting. While the crediting aims at shortening the learning time, is the formal recognition related to achievement. It allows either a direct access to an educational program or, often associated with an exam, leads to the public education achievement or vocational qualification. The related methods of validation are to be regulated in collaboration of the state, business and social partners; it is required to establish a national validation system with a competent authority for validation. The advanced vocational training claims to recognition of informally and non-formally acquired competencies - a special opportunity, as here is the largest educational field in the context of lifelong learning. It is about the possibilities of expanding the paths for vocational development, from the standpoints of permeability in the education- and employment systems, and under conditions of equivalence for vocational, public and high school education. As for young people, recognition of their skills acquired in the informal and non-formal learning makes them easier to enter occupational training, possibly along with the learning period shortening.

(7) Resource efficiency and sustainability

Resource efficiency specifies the ratio between the value of a product or service and the need for the use of resources. Innovative products and processes, as well as a well-thought-out strategy may allow achieving mostly the same or, often, even greater benefit with less means. This brings financial relief and protects the environment in terms of sustainability. From the viewpoint of sustainability, the resource concept is primarily used in an ecological context and refers to the natural resources, such as soil, water, air, biosphere, etc. The term is expanded through the inclusion of so-called intangible resources. This comprises, inter alia, human skills, knowledge, social relations and also cultural practices. In any case, the resource efficiency is the basic theme of a future-oriented vocational training system. The reflection of work experience is essential for implementing the resource efficiency in terms of ergonomics, material consumption and product development. At the same time, the resource efficiency in the vocational education and advanced vocational training has to be introduced as a qualifying formative factor. Its implementation presupposes the anchoring in the vocational education and advanced training, the transformation that should primarily occur through the work and skills development of employees.

(8) Quality assurance and development

Criteria and concepts of the quality assurance and development in the vocational education and advanced training are implemented for years and have been performed with success. The Vocational Training Act (VTA) represents a binding Legal basis and, at the same time, quality standard within the dual vocational training framework. Such a quality standard by the VTA is, for example, the training orientation at the key objective of the professional acting ability (§1 VAT). Quality assurance in the dual system relates primarily to the following four areas: curriculum, learning places, personnel and evaluation or exam. Measures and activities of the quality assurance in the advanced vocational training experience an increasing extension, and there are various quality assurance systems, such as the ISO standard series, the system of the European Foundation for Quality Management (EFQM), the learner oriented quality (LQ) and the recognition and admission regulation training (*Anerkennungs- und Zulassungsverordnung Weiterbildung - AZWV*). They should be intensely unified, as well as be safeguarded by the state, economic and social partners. The operational quality discussion to be involved into the VET system has led to the development of quality management. The quality management summarizes the quality assurance and development and goes a step further beyond their single functions, inasmuch as not only the internal processes, but also the external ones in the form of customer orientation should be optimised, in order to increase the efficiency and adaptability to changing conditions. In the Total Quality Management, all the processes and actors of an organization will be eventually integrated in an ongoing process of reflection and optimization. Quality makes here a part of the organizational culture.

(9) Joint financing of vocational education and training

Data on costs and benefits of the education and training are of considerable importance for the performance assessment of a vocational training system. In particular, determination of costs for the on-job vocational training has a long tradition in Germany. The costs caused by

the vocational education and training are applied by the respective beneficiaries with different proportions. The state, enterprises and individuals, as well as the Federal Employment Agency as a solidarity community of unemployment insurance, provide services in a mixed financing system. This creates basically no congruence between the benefits of the individual cost carriers and the extent of financial contributions made by them, though the core principle is a jointly supported financing of the VET. In the field of the on-job vocational education one cannot speak just about costs or expenses, as, according to an increasing trend, the trainees execute actionable and profitable work for the enterprise even during the training. Therefore, there is a distinction between gross and net costs. To about one third of the training companies in Germany applies the fact that they see a net positive amount during the training, as they use their trainees efficiently. The importance of productive work grows and strengthens, as the learning in work process increases in the dual training and also in the formal advanced training.