



**Leonardo da Vinci**

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# **Occupational Standards in Germany**

**presented  
by**

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## 1. A brief outline of Occupational Standards in Germany

The **German Vocational Education and Training (VET) System**, also referred to as the Dual System, is rooted in the medieval crafts apprenticeship training model which was purely outcome based as far as occupational skills were concerned. But since the apprentice lived in the master's family he/she was also introduced into the role that a craftsman had to play in society.

In the late decades of the 19<sup>th</sup> century **the model was adopted by industry** as far as practical learning at the workplace was concerned. But industrial work processes needed a theoretical underpinning and a better command of reading, writing, arithmetic and, for example, technical drawing. Public schools were established where apprentices were taught in occupational theory. This development gave birth to the name Dual System, education and training in company and school. In the early days apprentices attended school in the evenings after work and on the weekend, but in the first decades of the 20<sup>th</sup> century a day-release occupational school ("Berufsschule") was founded. For almost half a century apprenticeship divided a week into four to five days learning at the workplace/workshops and one day at school, before – during the sixties and seventies of the last century – a second school day was introduced.

**From the very beginning the occupational outcomes** needed at the workplace **set the occupational standards**. Standards in the Dual System, therefore, have always been outcome based. School curricula, as far as the occupation is concerned, were developed according to in-company-training-standards. In the early days the leading industries of electrical and metal engineering set the occupational standards by structuring training into a basic training year and two specialising training years. Basic training was rather systematic and usually took place in workshops. First courses were developed and published by engineers and later on for other occupations by professionals of these sectors. These courses, which found international attention, were the first standards. In 1905 the employer led German Engineering Association founded a **Committee for Technical Schooling** ("Deutscher Ausschuss für Technisches Schulwesen", DATSCH) which began to develop and renew **occupational standards systematically**. Later, in the Weimar Republic of the twenties, government accepted the DATSCH as standard development institution, after the employers accepted the trade



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unions as partners in this process. Occupational standards became a public matter. Since 1919 they were issued as national occupational standards by government.

The Nazis did away with the DATSCH and social partnership and set up their own institute. After the war the employers established a small institute for standard development which renewed the old standards for almost two decades.

The **Vocational Training Act** (“Berufsbildungsgesetz”) of 1969, which established the Federal Institute for Vocational Training (“Bundesinstitut fuer Berufsbildung”, BIBB), set the stage for the modern Dual System, which became part of the public education system. The BIBB provides **research findings, professional personnel and a platform** for social partners, federal and state governments to meet and develop and renew occupational standards, which were named “occupational training regulations” and issued by the federal government for in-company-training and for schools by state education ministers.

**Numbers, structure, outcomes and names of these standards have changed** within the last fifty years significantly, although the legal basis and the framework remained the same. In the fifties there were some 900 different training occupations. When the BIBB started its work in 1970 the number was down to 600 already. The introduction of a broad basic training through the Vocational Training Act of 1969 reduced this figure further down to some 360 by 1990. In the course of the last twenty years the number remained almost the same (345), although some sixty traditional occupations vanished. But some fifty new ones joined the classification, among them those in the media sector, information and communication technology, in services and the health sector. The metal engineering standards were restructured from forty-two traditional occupations down to six with seventeen profiles. If one compares the number of training standards (345) with those in other countries it seems to be rather high, but one has to consider that almost 90 % of all trainees are trained in less than one hundred training occupations.

## 2. Definition of key terms

**2.1 Occupation** - the meaning of this term in the German language (“Facharbeiter-, Fachangestelltenberuf”) reaches far **beyond** the field of education and training and a highly respected **qualification** into the employer-union relationship concerning wages and **collective bargaining agreements, social security and status in society**. There



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is a clear distinction between “occupations” and “professions”. Skilled workers or employees are occupational graduates, professionals are graduates from higher education.

**2.2 National Occupational Standards (NOS)** - according to the Vocational Training Act companies are not allowed to train youth under eighteen unless they conclude a training contract based on a NOS. This training is outcome based, delivers **full occupational competence comprising skills, knowledge and abilities**. Trainees who strive to meet the NOS must show evidence that they are able to plan, execute and control the major duties of their occupation autonomously. School standards and curricula are designed according to the NOS. Since education is a state matter general education standards and curricula for trainees are set by the states. **NOS are named “training regulations”** (“Ausbildungsordnungen” for initial VET and “Fortbildungsordnungen” for further education and training). They are issued jointly by the responsible **sector minister** (mainly Minister of Economy) and the **Minister of Education** and Science. The main input to NOS development is made by the social partners, employers and trade unions at the BIBB.

**2.3 Regional Standards** - are issued by the chambers (commerce and industry, crafts etc) on the legal basis of the Vocational Training Act **on request of the regional labour market** and after a decision of the chamber`s tripartite training committee, but only for further training occupations (e.g. upgrading: “Meister”).

**2.4 State Vocational School Standards** - while the Dual System of training is catering for some 1,5 million trainees, some **500.000 young people are attending full time vocational schools**. These schools provide a wide variety of qualifications, from pre-vocational education and training to full occupational qualifications. Standards for these schools are set by the state education ministers who coordinate 16 state standards through their Standing Conference of State Education Ministers (“Kultusministerkonferenz”).

**2.5 Major Components of NOS** - see chapter 4

**2.6 Assessment - Qualification** - training in the Dual System usually lasts three years. Occupational competences are assessed by **tripartite (employer-union-teacher) examination boards** at the chambers which also issue – on behalf of government - to the



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successful trainee a **National Occupational Qualification** ("Facharbeiterbrief"). Main Instruments of assessment are:

1. **the observation of duties, planned, carried out and controlled by the trainee**, during the training period and at the end of it, often in form of a project;
2. **interviews**, in which the trainee shows his/her understanding of planning, work and control processes;
3. written and verbal **examinations**;
4. practical and theoretical **achievements at school**.

In addition to the official chamber qualification the trainee receives **certificates**, one **from the company** concerning personal, social and team work competences, one **from the vocational school** concerning the subjects that have been taught.

### 3. Institutions responsible for the development and issuing of NOS and for National and European Qualifications Network

**3.1 Federal Government**, represented by its sector ministries (e.g. Ministry of the Economy takes responsibility for some 90 % of NOS, Ministry of Agriculture, Health, Interior, Labour), which are responsible for training goals and contents of standards, and by the Ministry of Education and Science – [www.bmbf.de](http://www.bmbf.de) - being responsible for the guidelines of vocational education and training (VET) policy, takes decisions on NOS and gives them legal power by issuing them as well as dealing politically with the National (NQF) and European Qualifications Framework (EQF).

**3.2 Social Partners** - employers and trade unions, are the main stakeholders of the Dual System and the drivers concerning NOS. Without their agreement Federal Government hardly initiates, develops and issues a NOS. Both sides have organised their VET policy bottom up (from company management and shop floor to their associations on federal level) which allows them to draw on an enormous source of expertise from practice. Employers and trade unions have a couple of hundred experts from the field at hand, at least one or two for each occupational standard who they can delegate to the BIBB for standard development, evaluation and modernisation of standards. The cost of this invaluable source of expertise are borne by the companies. The BIBB only caters for boarding and traveling cost.



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In order to ease and accelerate the process of standard development the social partners have mandated VET speakers for each sector and established their own organisational unit to cooperate with the BIBB:

- the employers` VET-Agency (“Kuratorium der Deutschen Wirtschaft fuer Berufsbildung” – [www.kwb-berufsbildung.de](http://www.kwb-berufsbildung.de) - , Bonn)
- a VET-department at the trade unions` umbrella organisation “Deutscher Gewerkschaftsbund” – [www.dgb.de](http://www.dgb.de) -.

### 3.3 Federal Institute for Vocational Training (BIBB)

The Institute was founded in 1970 according to the Vocational Training Act, recently amended in 2005, which enumerates the major tasks of the BIBB – [www.bibb.de](http://www.bibb.de) - :

(1) **VET research**

(2) the following tasks on order of the Federal Government:

- **develop National Occupational Standards** for initial and further vocational training and other legal regulations concerning VET;
- prepare the yearly **VET Status Report**;
- contribute to **VET statistics**;
- promote **VET pilot projects** in companies;
- take part in **international VET cooperation**;
- prepare and publish yearly **the list of VET standards**;
- promote planning and establishment of **interfirm workshops** to support small and medium enterprises;
- promote **distant learning**.

The BIBB is directed by a president and governed by a fourpartite board (employers, trade unions, federal government, state governments) which decides on the president`s research program and advises federal government on VET policy matters. The board meets frequently to decide on the development of new standards or their modernisation.

The BIBB prepares and launches a National Qualifications Framework on request of the federal government and it keeps contact with the EU-Commission in preparing the European Qualifications Framework. All this has to be done in close cooperation with the Board and its stakeholders.



#### 4. Structure and major Components of NOS

The traditional structure of training regulations (NOS) in the Dual System up to the mid-nineties offered three different types:

- the **mono-structured NOS**, a three year training without specialisation, typical for business administration;
- the **profile-structured NOS**, e.g. mechanic with different occupational profiles like car mechanic, industrial mechanic etc.;
- the **two-level-structured NOS**, first level and qualification after two, second level and qualification after three years, e.g. construction industry.

Since 1995 a broad variety of structuring opportunities have been introduced in the standardisation process: compulsory and optional competence modules, additional competence modules, e.g. foreign language or further training modules, for high achievers, and other opportunities. Most of these new structures are part of the last third of the training period in the context of improving occupational outcomes and hence employability.

**Major components of the initial training regulations** (“Ausbildungsordnungen”) are

1. **the name** of the „training occupation“ (i.e. mechatronic);
2. **the duration** of training (2 to 3,5 years);
3. **the characteristics** of the „training occupation“ or its main functions („Berufsbild“);
4. **the in-company-training specification** („Ausbildungsrahmenplan“), an outcome oriented training curriculum;
5. **the assessment requirements** and assessment procedure.

**Further Training Standards (national and regional)** have only two components:

1. the name of the „further training occupation“ (e.g. “Industrie-meister”);
2. assessment requirements and procedure.

#### 5. Are German VET Standards suitable for the EQF?

The idea to **standardise all occupational and professional competences** and structure them with the help of descriptors on different levels within a National Qualifications Framework was born in the United Kingdom in the mid eighties of the last century. Within this concept the input of learning and teaching, the educational institution and the duration of training don't play a role. Outcome based standards



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alone are looked upon to the quality of VET. The concept was adopted by the EU commission when it introduced the idea of a European Qualification Framework (EQF) in 2004.

This concept is significantly different from the German **Dual Training System** which is **institution** (company, school, chamber) **and input** (training venue, qualification of teachers and trainers etc) **and outcome** (VETstandards) **based** to ensure quality. Therefore, the German initial training regulations do not separate standard from curriculum. The outcomes, training goals and contents of training are laid down in the curriculum ("Ausbildungsrahmenplan"), a kind of timed road map for in-company-training. Since the school curriculum is a theoretical underpinning of this road map, as far as occupational subjects are concerned, learning outcomes and contents are also mixed.

**Further training regulations** (e.g. "Meister" in crafts or industry) are different. They are neither institution nor input but **only standard based**.

Because of these characteristics, **Germany will not change its basis of VET quality assurance** in initial VET when joining the EQF process. The Dual System will remain institution-, input-, and outcome based. But in preparation of a NQF on its way to become part of an EQF, the structure of the German training regulations have to be changed. In the future there will be a clear distinction between standard, contents and duration, assessment elements and procedure. But this will rather easily be done by separating standard elements from curriculum elements and assessing the curriculum strictly to the standard.

Another component of the qualification framework concept is more challenging and will require a new VET structure: the **introduction of four VET levels** which will rate initial training qualifications on four levels using competence descriptors. **The existing VET system in Germany** only knows two levels:

- **Level 3** for holders of National Occupational Qualifications, no matter which skills, knowledge and abilities are necessary to meet the assessment requirements;
- **Level 4** for graduates from further education and training courses like "Meister".

Mainly the trade unions are suspicious of the introduction of two lower **levels** because of the expected **impact on collective bargaining agreements** and salary policy of the employers. Since the German Parliament passed the Vocational Training Act in 1969 training of semi-skilled workers ("Anlernling") was no more allowed. The differences in salaries remained, but they were only due to collective bargaining agreements and not related to different qualifications. Of course, this caused drawbacks, too. Those who failed to reach a qualification in the



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Dual System have no qualification at all. In the meantime, the BIBB Board has resolved unanimously to actively support the development of a National Qualification Framework on the way to an EQF. But the Board has also stated that the components of the Framework, especially standards and curricula, the number of levels, the descriptors of competence will be thoroughly discussed and planned, monitored and evaluated before final decisions will be taken.

### 6. Databases for Occupational Standards

There are three national sources for detailed information about National and regional Occupational Standards:

1. **The Federal Gazette** which publishes all National Occupational Standards for initial and further VET after they have been issued by federal government. According to an agreement between federal and state governments the federal gazette also publishes standards and curricula for part-time vocational schools in the Dual system to make sure that companies and schools get the same information at the same time. The address of the federal gazette is:  
Bundesanzeiger Verlag GmbH  
Vertriebsabteilung  
Amsterdamer Strasse 192  
D-50735 Köln  
e-mail: [vertrieb@bundesanzeiger.de](mailto:vertrieb@bundesanzeiger.de)  
[www.bundesanzeiger.de](http://www.bundesanzeiger.de)
2. **The Federal Institute for Vocational Training (BIBB)** publishes yearly all national and regional occupational standards according to the Vocational Training Act. BIBB`s address is:  
Bundesinstitut fuer Berufsbildung  
Robert-Schuman-Platz 3  
D-53175 Bonn  
e-mail: [info@bibb.de](mailto:info@bibb.de)  
[www.bibb.de](http://www.bibb.de)
3. **The Federal Employment Agency (BA)** which provides guidance and counseling through its regional and local branches offers all kinds of occupational standards to school leavers,



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unemployed people, companies, public and private training institutions. The Agency`s address is:

Bundesagentur für Arbeit  
Regensburger Strasse 104

D-90478 Nuernberg

e-mail: [Zentrale@arbeitsagentur.de](mailto:Zentrale@arbeitsagentur.de)

[www.arbeitsagentur.de](http://www.arbeitsagentur.de)

## 7. Professional Standards for VET specialists

VET specialists educating and training in the German VET system are teachers and trainers.

**Teachers** at full or part-time vocational schools have to finish a four to five year course of studies and **graduate from university** (first teacher`s exam) before they do their two year probationary period as junior teacher ending with the second teacher`s exam and probation.

**Trainers** in companies who are responsible for dual system training according to standards **have to be qualified** according to the Vocational Training Act. They finish courses in psychology and pedagogy, planning, carrying out and monitoring training at the workplace and in workshops before they stand an **examination at the chamber**.