



Training cultures, training policies and professional development of trainers' in Germany

- The German country report for the TTplus project

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Introduction

This document is the German country report produced for the Leonardo da Vinci pilot project “TTplus”. The aim of the TTplus country reports is to provide a contextual background for analysing the training culture(s) in the said country. The background analyses provide a starting point for presenting the country-specific case studies that have been prepared for the TTplus project. On the basis of background analyses and empirical findings the TTplus project draws conclusions for developing a European framework for continuing professional development of trainers.

At this point it is worthwhile to emphasise the project TTplus has consequently avoided the wording ‘national report’. Thus, the project didn’t assume that the country reports would present pictures of *national* training cultures steered by coherent *national* training policies. Instead, it was left to the partners to interpret in what ways the training provisions can be seen as parts of wider frameworks. Equally, it was left to the partners to consider, to what extent the development of training provisions and the related policies can be seen from the perspective of a national training culture and to what extent from the perspective of internationalisation in education, training and working life.

In the light of the above it is obvious that the background analyses for the German report will put the main emphasis on analysing the workplace training (and the position of trainers) in the German dual system of *vocational education and training* (VET). However, in order to understand recent developments in the training landscape it is necessary to consider the limits of the dual system. In this context it is worthwhile to consider the role of newer training models that are developed independently of or alongside the dual system.

In a similar way the discussion on the professional development of trainer starts with an analysis on the debate on regulation on trainer’s aptitude (*Ausbildereignungsverordnung - AEVO*) and on related policy developments. Yet, from the perspective of *cooperation* within the **dual system** (and from the perspective of **continuing professional development**) it is necessary to give a picture on the development in **vocational teacher education**. This provides a possibility to consider the recent initiatives to reposition the ‘training of trainers’.

Taking into account the limits of the dual system – and the emergence of new training structures – it is apparent that the professional development of is not entirely catered for by introducing new regulations. Instead, it is necessary to take into account the interaction and mutual complementarity between regulative measures (‘hard interventions’) and innovation programmes or support measures (‘soft interventions’) that provide a basis for new initiatives and for their dissemination. Explorations on recent innovation programmes help to link the cases that have been studied for TTplus project to a wider context.

Part I: The background analyses

1. Training cultures and the ‘occupational system’ in Germany

1.1. Starting point: Training in the ‘occupational system’ in German

The emergence of German patterns of training, work and occupations – here referred to as ‘occupational system’ (*Beschäftigungssystem*) – is deeply rooted in the German industrial history. Germany is known for its industrialisation with the support public interventions and for the influence of social partners in matters related to work, occupations and employment. The social conventions of the post-war period have provided the basis for the strong industrial development due to which Germany has become one of the leading export countries in the world. However, when considering Germany as an industrial country, it is essential to consider the major role of **small and medium size enterprises** (*Mittelstand*) as well as the role of crafts and trades (*Handwerk*) as employers.

The initial *vocational education and training* (VET) system in Germany is widely known due to its organisational as the German dual system. The dual system is based on combination of apprentice training and school-based vocational education (under mutually complementing Federal and State legislations). In the German occupational system the initial VET provides the main framework for insertion of new labour force to working life. From the conceptual point of view the initial VET follows the logic of occupational qualifications. As a contrast, the realm of Continuing Vocational Training (CVT) is not subject to similar overarching regulations and social conventions. In practice the CVT provisions are diversified on the basis of different service concepts and target groups. From the conceptual point the CVT providers have adopted different approaches to promoting competences.

1.2. Initial VET – access to formal qualifications and to career tracks

For the **German interpretation of ‘qualifications’** the guiding principle is that of **vocational professionalism** (*Beruflichkeit*) that is based on integrated **occupational/ professional profiles** (*Berufsbild*). Concerning the role of training it is essential to take into account the German understanding on the interdependence between

- the mode of obtaining qualifications or competences for working life (*Qualifizierungsform*),
- the expectation on job opportunities and tasks in the organisation (*Arbeitsplatzstruktur*) and
- the expectation on career progression prospects and incentives (*Reproduktionsstruktur*).

Consequently, the idea of **vocational qualifications** is related to public and regulated framework and to social conventions between the social partners. These provide the basis for career models that are based on vocational career progression. **Box 1a** (see below) provides insights into the traditional career models. **Box 1b** provides insights into the development of organisational structures and into the use vocational qualifications.

The classical models for vocational career progression based on traditional vocational qualifications have been the following ones:

1. In **crafts and trades** (*Handwerk*) apprentice training has served as the mechanism for recruiting new workforce and for passing the competences to new generations. The career model was based on the phases of **apprentice** (*Lehrling*), **journeyman** (*Geselle*) and **master of crafts** (Meister). In the German context, only persons who have reached the Meister qualification are permitted to set up craft and trade enterprises. Equally, the regulated trainer’s competences are part of the Meister training.
2. In **industry and commerce** (*Industrie und Handel*) apprentice training has been embedded in the organisational structures and to the progression models. Thus, career steps based on apprenticeship were **trainee** (*Auszubildende*), **skilled worker** (Facharbeiter) and higher **technician** (Techniker). Moreover, formerly the vocational progression route was opened up to engineer’s qualification (*graduierte Ingenieur*).

Box 1a: Traditional career models based on vocational qualifications

Regarding apprentice training as a part of the reproduction of workforce of industrial organisations it is possible to note the following developments:

- a) For some enterprises in handicraft trades it has been typical to take **apprentices as cheap labour force**. Yet, at the end of the training the enterprises have provided employment opportunities. In such cases the training of skilled workforce (for handicraft trades) has been used as means to produce semi-skilled workforce for other branches).
- b) In industrial organisations based on mass production it has been typical that apprentice training has not been offered for the average production workers. Instead, there has been a tendency to recruit workforce that have gone through **training in other occupational areas** (e.g. in the above mentioned handicraft trades) and to recognise them as **semi-skilled workers** (*Angelernte*).
- c) Due to the transition to **'new production concepts'** in the leading German industries in the 1980s and -90s there was a tendency to upgrade the position of production workers. Such tendencies were related to the introduction of patterns like 'autonomous working groups', 'learning islands' (or 'learning bays) and 'lean organisations' (or 'learning organisations'). In many contexts such organisational changes were linked to increased use of **apprentice training** as means **to upgrade the competences** of workforce **across the organisation**.

Box 1b: Changes in organisational structures and use of vocational qualifications

1.2. Continuing vocational training – promoting the competences of target groups

As a contrast, the **German interpretation of 'competences'** has been related to situated learning contexts and capabilities that may be common to different levels of qualifications. Thus, in some cases the term 'competences' has been used by innovative approaches that have been promoting internal (cultural) renewal throughout the education and training system. This has been characteristic of the concept of **"Integrated action-oriented competences"** (*Integrierte Handlungskompetenzen*). The concept refers to curricular and pedagogic innovations that promote the **integration** of

- **domain-specific competences** (*Fachkompetenzen*),
- **methodological competences** (*Methodenkompetenzen*),
- **social competences** (*Sozialkompetenzen*) and
- **competences to deal with one's own development** (*Selbstkompetenzen*).

In the light of the above it is apparent that the concept 'competences' has been often used without any direct relation to formal qualifications or career progression. Therefore, the concept 'integrated action-oriented competences' has also been used in the context *employment promotion schemes* or as measures to support the *social integration of migrant workforce*. These measures are part of the continuing vocational training (*Weiterbildung*) and thus institutionally separated from the dual system of VET. Below, Box 2a provides a general overview on different CVT provisions. Box 2b provides insights into the development of training needs related to the use of migrant workforce, support for underdeveloped regions and to overcoming problems that are related to international developments.

In general, the provisions for continuing vocational training (CVT; in German: *Weiterbildung*) serve as complementary structures that cater for different target groups:

- employment promotion and integration schemes (*Maßnahmenqualifizierung*) for unskilled or migrant workforce to deliver entry competences to German labour market (see above);
- further training and professional development schemes (*Fortbildungsqualifizierung*) that enhance and update skilled workers competence-bases;
- training for upgrading and career progression schemes (*Aufstiegsqualifizierung*) that lead to higher qualification levels and to higher organisational positions.

Box 2a: General overview on the continuing vocational training (CVT) provisions in Germany

The use of training in the context of employment policies, social integration and structural support measures can be related to different periods in the German industrial development:

- In the 1960s up to the oil crisis of 1973 the industrial development in Germany was characterised by the expansion of mass production and demand of unskilled and semi-skilled workforce. The first wave of 'guest workers' came mostly from Southern or South-East European countries and from Turkey. The assumption was that the guest workers would stay only for a limited period and then return to their home countries. Therefore, only limited training measures were offered.
- In the 1980s and in the early 1990s migrant workforce was coming increasingly from East Germany and East-European countries (partly as politically motivated migrants, partly making use of the promises for migrants with German ancestry). This created need for training that familiarises the migrants with market economy and with capability to integrate into working life.
- Since the German unification 1990 there has been a shift of emphasis to provide training schemes for structurally weak regions. Instead of attracting new labour force to the stronger West-German regions these schemes have tried to support the creation of new employment opportunities in the new Federal States (and other declining regions).
- Before and after the newest enlargement of the EU the admission policy of Germany has become more restrictive. Therefore, Germany has not been a major receiving country for migrant labour force from the new Member States. Yet, due to earlier migration waves there is a considerable demand for training that supports the integration of the second and third generation migrants and their access to labour market. Moreover, there is increasing demand for training that compensates the negative consequences of globalisation ("cost-migration" of industrial work opportunities from Germany to countries that provide cheaper labour force).

Box 2b: Role of CVT related to migration, structural changes and international developments

2. Frameworks for the education of trainers and training specialists

2.1. The basic frameworks for the education of trainers and teachers

Regarding the formal qualifications and the prospects for professional development there is a clear difference between the two basic models:

- a) **training of trainers** on the basis of **regulation concerning the aptitude for training** (*Ausbildereignungsverordnung – AEVO*) and
- b) **vocational teacher education** as a university degree linked to a career model of civil servants (first state examination, internship (*Referendariat*), second state examination).

2.1.1. Training of trainers on the basis of the AEVO regulation

According to the German tradition, training at the workplace is under the responsibility of the training enterprises. Therefore, contribution to training activities is considered as a corollary task of skilled worker. Consequently, the formal requirements on 'training aptitude' refer primarily to *training managers* or to *supervisors of trainers*. Thus, companies that provide training under the auspices of the dual system of VET have been required to have a minimum number of training managers or supervisors that have gone through a 'training of trainers' course and/or obtained the related aptitude certificate (*Ausbildereignungsprüfung*).

The **framework curriculum for the training of trainers** (*Rahmenstoffplan für die Ausbildung der Ausbilder*) indicates 7 learning areas (*Basic knowledge, Planning of training, Selection of trainees, Training arrangements, Promotion of learning processes, Training in groups, Completion of training process*). Altogether the training has been envisaged as a 120 hour course to be completed as part-time arrangement alongside the work. Yet, the completion of the curriculum has not mandatory for those who have had a further training (e.g. the *Meister*) that can be considered of equivalent level regarding the occupational and pedagogic content.

The AEVO training was introduced with the basic Vocational Training Act 1969 and renewed latterly at 1999. However, in the year 2003 the German government decided to suspend the implementation of the AEVO regulation for the period 2003-2008. During this period enterprises were allowed to offer training opportunities even if they didn't have staff members who had acquired the AEVO certificate. With this relaxation of the formal requirements the government wanted to increase the amount of training opportunities.

2.1.2. Vocational teacher education at the university level

As a contrast to the in-company trainers' position the teachers of vocational schools are in a similar position as teachers of other public schools at upper secondary education. They are required to complete a **Master-level** education in **pedagogics of vocational education** (*Berufspädagogik*) or in **pedagogics of commercial education** (*Wirtschaftspädagogik*). This includes the first state examination. Then the graduates are required to complete a mandatory internship period (*Referendariat*) at a vocational school. The internship is completed with the second state examination that provides the status of civil servant.

In this context it is worthwhile to note that the teacher education follows the same career model of civil service as the lawyers. In a similar way, since 1969 the vocational teacher education has been organised in the basis of the same model. Recently, the Bologna process has brought the Bachelor/Master -structure into all higher education programmes. However, in the light of the above the role of the Bachelor degree in vocational teacher education (as in all areas of civil service) is problematic because it doesn't provide access to the first state examination and to the internship).

2.2. Alternative frameworks for delivering intermediate qualifications

So far the two above mentioned basic models have so far covered the whole discussion on 'training of trainers' or on vocational teacher education. Yet, in the recent years some alternative frameworks have come into picture. The common feature of these frameworks is that they try to establish new intermediate qualifications on the basis of learning processes that combine workplace learning, domain-specific subject studies and domain-specific applied learning. From the organisational point of view it is interesting that the new frameworks are developed by partnerships that consist of regional or sectoral stakeholder organisations, higher education institutions, advanced training providers and interested partner enterprises. In this context two different models need to be mentioned:

2.2.1. 'Dual studies' as workplace-related mode for delivering engineer qualifications

The concept of 'dual studies' has been pioneered in the Federal state of Baden-Württemberg as an alternative mode of implementing the Polytechnic (*Fachhochschule*) studies. The alternative arrangement has been based either on a company-specific arrangement ('*Betriebsakademie*') or sectoral partnership arrangement ('*Berufsakademie*'). In the 1970s and 1980s this model has been established in the higher education legislation of Baden-Württemberg, the dissemination of the model to other parts of Germany has been limited and

In this context the model of 'dual studies' is of importance because it exemplifies one of the educational strategies in which workplace learning (with vocational contents) are being incorporated into study programmes that lead to higher qualifications. Because of this cross-over the model has been of interest to enterprises in some handicraft trades. The interest of such enterprises is to develop education and training models in which the future managers and specialists get properly acquainted with the working and learning tasks alongside their own managerial of engineering-oriented studies.

Finally, it is essential to emphasise that the model of 'dual studies' has not been initiated as a vocational progression route for skilled workers or for workplace trainers. Instead, it has been introduced as an alternative way of organising studies for those who have opted for degree at the level of higher education.

2.2.2. The chamber certificates in VET pedagogy for the enterprises

The other model – the chamber certificates in VET pedagogy (*IHK-Berufspädagoge*) is a newer model that has been developed to support professionalisation of training specialists in enterprises. This certificate has been established (on the basis of regional regulations) as a profession profile for continuing training (*Fortbildungsberuf*) within the dual system. The pilot implementation was started in 2005 with several parallel initiatives involving different stakeholders and different pilot regions), including

- the initiative of IG Metall (the metal workers' union) and BMBF (the federal ministry of Education) with pilot activities in Hamburg,
- the initiative of BLBS (The national federation of VET school teachers), IHK München und Oberbayern (the regional chamber of industry and commerce) and BiBB (the federal institute for vocational training),
- the initiative of the IHKs (chambers of industry and commerce) of the federal state Mecklenburg-Vorpommern, supported by the University of Rostock.

These initiatives are based on curricula with modular structure and organised on the basis of part-time studies that accompany the practical work as trainer (or as training manager). The aim is to provide conceptual support for training professional in enterprises. The model has also been thought as a career progression perspective for trainers (with a skilled worker's background). As such, the model doesn't open an entry to vocational teacher's position.

3. New policies, critical issues and related measures

Below, current policy debates on qualification frameworks (and their further development) are summarised. Then, as a corollary level of policies, some insights are provided into recent innovation programmes with a focus on learning at workplaces, learning in continuing vocational training and learning supported by multimedia and web. The main thrust of these explorations is to find out what kind of developmental prospects and learning resources the programme have outlined for professional development of trainers (and training specialists).

3.1. Main policy issues (trainers, teachers and intermediate qualifications)

On the basis of the analyses of the basic and alternative qualification frameworks it is possible to identify three major policy issues:

- a) evaluation of consequences of the temporary suspension of the AEVO regulation and drawing conclusions for future policies regarding the training of trainers,
- b) development of the frameworks for the intermediate qualifications (*IHK-Berufspädagoge*) and negotiating the prospects for further career progression *and*
- c) implementation of the Bachelor/Master structures and developing the related policies for permeability and recognition prior learning.

3.1.1. Evaluation of the impact of the temporary suspension of the AEVO regulation

As has been indicated, the temporary suspension of the AEVO regulation for the period 2003-2008 was motivated as a measure that enables more training opportunities. The expectations were twofold:

- Firstly, it was expected that this concession would encourage new enterprises (without staff members with AEVO certificates) to start offering training opportunities.
- Secondly, it was assumed that enterprises that had ceased to offer training opportunities (or reduced the number of trainees) would reconsider their possibilities.

So far the first results of the evaluation studies are available. In the light of the current empirical information it very difficult to specify the real impact of the suspension. It appears that a considerable number of enterprises has not taken note of the decision or has not considered it as important for their own decisions. Furthermore, it appears to be very difficult to provide empirical evidence, how the suspension has really changed the situation for the enterprises that have continued their practice of for the ones that have started after the suspension. When asking the enterprises and the chambers of commerce on the positive or negative consequences of the AEVO regulation, it appears that the answers tend to bring into picture clear benefits although there are also clear expressions of discontent.

At the moment the policy decision of the year 2003 has pre-programmed a discussion on the impact of the suspension and on the issue, whether to re-establish the AEVO -certificate anew. However, some contributors draw attention to the fact that this debate puts the AEVO regulation itself into the centre – not the question, what would be effective ways to support the professional development of trainers or staff members with responsibilities on training.

3.1.2. Establishing the new intermediate qualifications (*IHK-Berufspädagoge*)

The initiatives to develop an intermediate qualification are clearly a reaction to the qualification gap between the traditional *trainers' aptitude certificate* and the academic qualifications that are provided for vocational teachers or HRD specialists. For the moment the new intermediate qualifications have been justified with the needs to provide a more advanced training model for training managers or training coordinators in the enterprises. In addition, the professional trainers of CVT centres have been indicated as a target group.

Yet, there is also a parallel discussion on the possibility to provide a 'vocational progression route' to the career track of vocational teachers. From this perspective the initiatives to develop the new intermediate qualifications are examining the comparability with vocational teacher education. The aim is to clarify the possibilities to use the intermediate qualification as an entrance qualification to vocational teacher education and to get parts of intermediate qualification recognised as relevant prior learning.

One of the specific features of the new training models is that they try to combine different learning venues and training provisions. Instead of 'dual studies' some of the initiatives have launched the term 'trial studies' with the aim to bring together the pedagogic expertise that is accumulating in enterprises, separate training centres and at the universities (that are responsible for vocational teacher education and for VET-related research).

3.1.3. Implementation of the Bologna process and developing policies for permeability

So far the implementation of the Bologna process and of the Bachelor/Master-structure has been considered as an internal matter for the universities and higher education institutes. Thus, the traditional career model of teachers has remained unchanged and the Master-level graduates are expected to complete the internship and to pass the two state examinations.

However, inasmuch as the implementation of the Bologna process has progressed through the phase of the accreditation of the new Bachelor- and Master-level curricula, there are a number of issues that are related to students' mobility across the structures and on the permeability of the structures:

- The labour markets for vocational teachers have shifted between the initial expansion, the relatively saturated years and the renewal of a whole teacher generation. Thus, the demand for vocational teacher education has shifted accordingly.
- The Bologna process has made it easier to open a direct access to Master-level programmes for students with relevant professional or subject-related background (*Quereinsteiger*). This has led to specific patterns for recognising the students' domain-specific or subject-specific learning achievements (to be complemented with relevant pedagogic studies).
- At the same time the role of the Bachelor-level programmes in pedagogics of VET as polyvalent study provisions (and no merely as the foundation of the Master degree are yet to be specified).
- In the light of the above the possibility to recognise (to some extent) studies and learning achievements that are related to the intermediate qualifications can be considered as a possible entry route to vocational teacher education.

For the moment the universities are still going through the process of implementing the basic structures that are required by the Bologna process. Furthermore, the demand for vocational teacher education as well as the transition of the graduates to labour market does not give rise to special measures. Yet, in the coming years the demand for vocational teachers and for study opportunities may change considerably.

3.2. Programme-based measures and new learning resources

The two sub-sections above have provided insights into policy debates that focus on the regulation of qualification frameworks for trainers and training specialists. As has been indicated, the suspension of the AEVO certificate caused a standstill with such measures. However, at the same time the Federal ministry of education has funded innovation programmes that have provided tools, learning resources and working concepts for the professional development of trainers and training specialists. Below, firstly a brief summary is given on two strands of the innovation programme "*Lernkultur Kompetenzentwicklung*" (2001-2007, coordinated by the association ABWF and its project coordination unit QUEM).

Then, some insights will be given on the development of web resources and web-based learning forums (to promote trainers' competences) within and alongside the programme.

3.2.1. The role of ABWF-QUEM programmes in the promoting trainers' competences

The Federal programme on **promoting learning cultures and competences** (*Lernkultur Kompetenzentwicklung*) was essentially based on four main strands:

- Learning in the process of work (*Lernen im Arbeitsprozess – LIPA*),
- Learning in continuing training institutions (*Lernen in Weiterbildungsinstitutionen – LIWE*),
- Learning in the social environment (*Lernen im sozialen Umfeld – LISU*) and
- Learning with the help of multimedia and web (*Lernen in multimedia und Netz – LINE*).

In this context it is essential consider how the two first mentioned programmes were linked to different groups of *workplace trainers* or *training specialists* and what kind of support they provided for the professional development of their target groups.

a) The programme LIPA: Hard instruments for finding hard facts

From this perspective the sub-programme LIPA was clearly a research-driven and expert-oriented strand that used the projects as an opportunity to test 'hard instruments' for analysing the needs for competences and for identifying the learning potentials. The cross-programme review provides insights into the characteristics of the methods and into their usability for different research purposes. From this perspective the LIPA programme provided methodological tools for very specific uses.

b) The programme LIWE: 'Accompanying studies on the changing training cultures

As a contrast to the LIPA programme the LIWE programme focused on different project families that highlighted and accompanied cultural changes in training centres. In this respect a high priority was given on documenting innovation processes that led to the change of the roles of trainers for instructors to coaches and mentors of self-organised learning. The accompanying research reports highlighted developments in the service concepts, external cooperation models and in the internal change management processes.

3.2.2. Development of web-based learning forums to promote trainers' competences

The programme LINE was introduced as research & development programme for supporting the use of multimedia and web in continuing vocational training and in workplace learning. From this perspective the programme started with background analyses. However, during the work of the programme the commercial e-learning services and the community-based learning forums took over the developmental landscape. In this respect it is understandable that the leading web-based forum for promoting trainers' professional competences ([BiBB-Forum für Ausbilder - Foraus](#)) was created independently of the LINE programme.

4. Comprehensive approach on promoting professionalisation in training-related services

4.1. Starting point: The change of perspective

So far each of the issues has been discussed separately, in its own realm and related to specific target group:

- The issue on suspension or re-establishment of the AEVO has been debated as a measure that focuses on initial vocational training in enterprises and to trainers that are contributing to the dual system.
- The new model for intermediate qualifications (under the auspices of the chambers) has been debated as measure that promotes professionalisation of training specialists in enterprises (taking into account a broader range of training activities).
- The debate on implementing the Bologna process in vocational teacher education programmes has been discussed as a university-internal matter with a focus on maintaining the university standards and ensuring the academic recognition of graduates.

Given the fragmentation of the starting points there is a risk that the issues drift apart into separate agendas that can provide a basis for conflicts of interest. Therefore, in the recent time some initiatives have been taken by the BiBB (Federal institute for vocational training) to launch a comprehensive debate on the **combined effects** of **parallel measures** to promote professionalisation of trainers and training specialists. In this debate the starting point is not the role of particular training activities or of particular training-related actors. Instead, the debate should be based on the question, how to promote in a systemic way the quality training-related services and the professionalisation of all key actors that are involved.

4.2. The new approach: The common branch -identity for training services

The critical turning point in the discussion is to consider the enterprise-related training services (altogether) as a branch of services, whose success is dependent on cooperation, interfaces and mutual support. The Figure 1 presents an overview of the key players in the branch and a rough estimate on the number of actors involved in the branch.

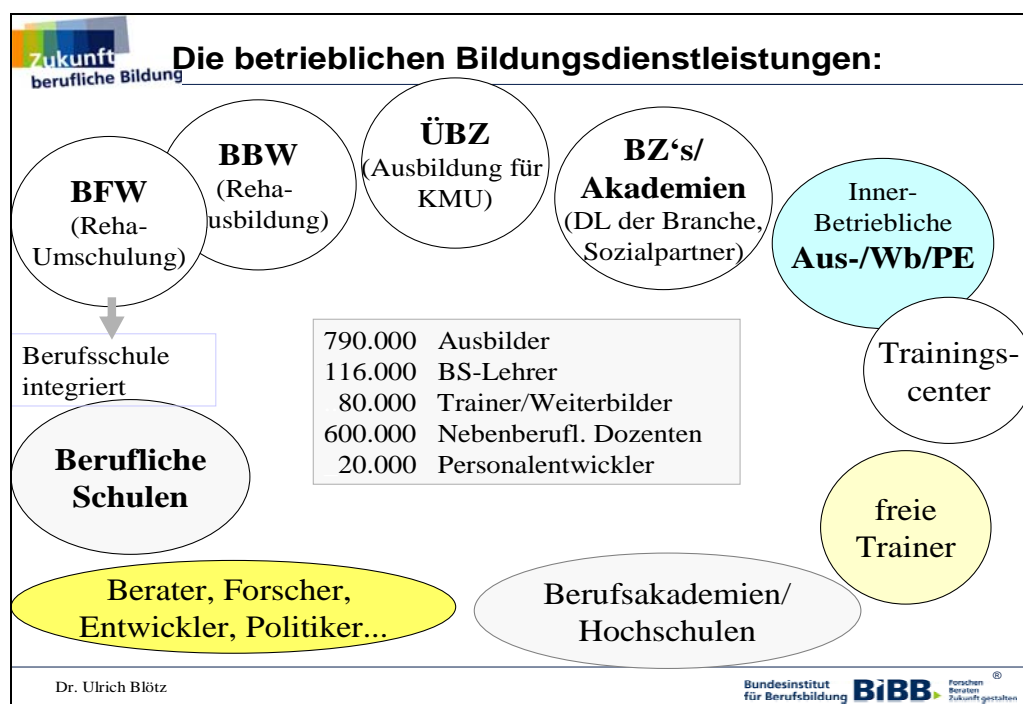


Figure 1: Overview on enterprise-related training services (Blötz 2007)

Following this approach, it is possible to specify the positioning of diverse actors in the landscape of training-related services and to consider the complementary roles of full-time trainers/ training specialists and of part-time trainers. Below the Figure 2 presents such a landscape for in-company training services.

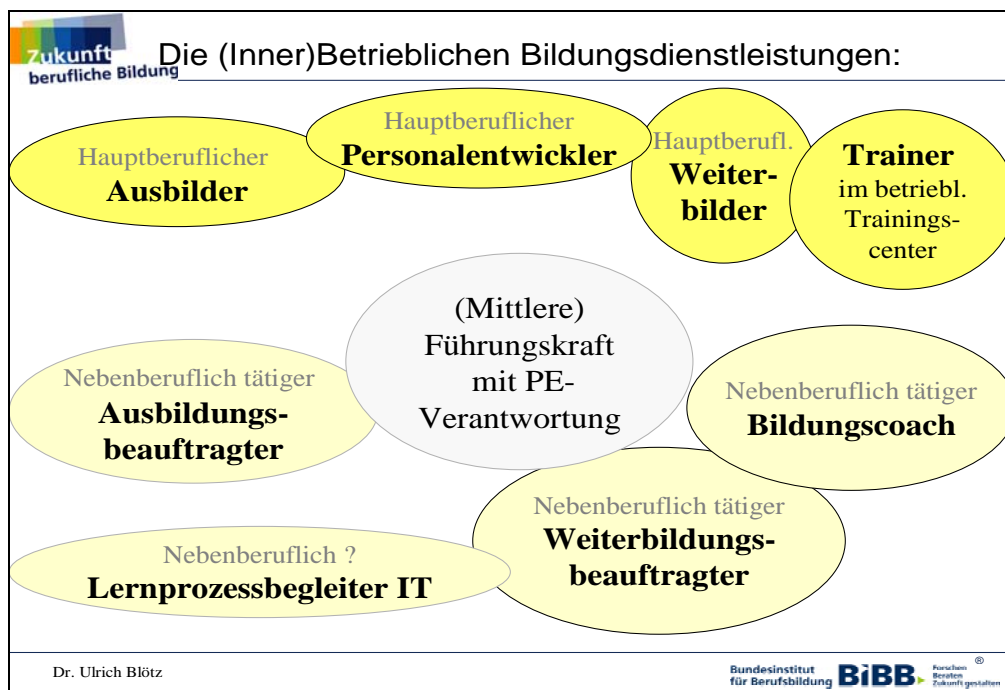


Figure 2: Diversity of training-related services within a company (Blötz 2007)

4.3. Broadening of tasks and professional development prospects

Taking into account the diversity of training functions (on the one hand) and cooperation between key actors it is possible to construct a map on *areas of cooperation* and *complementary tasks* of in-company trainers or of training specialists. Below the Figure 3 presents a map of areas of cooperation and of additional tasks of an in-company trainer.



Figure 3: Trainer's areas of cooperation and complementary tasks (Blötz 2007)

In a similar way (based on the cooperation areas and additional tasks) it is possible to identify prospects for professional development and career progression. Below the Figure 4 presents a list of possible career progression paths for in-company trainer.

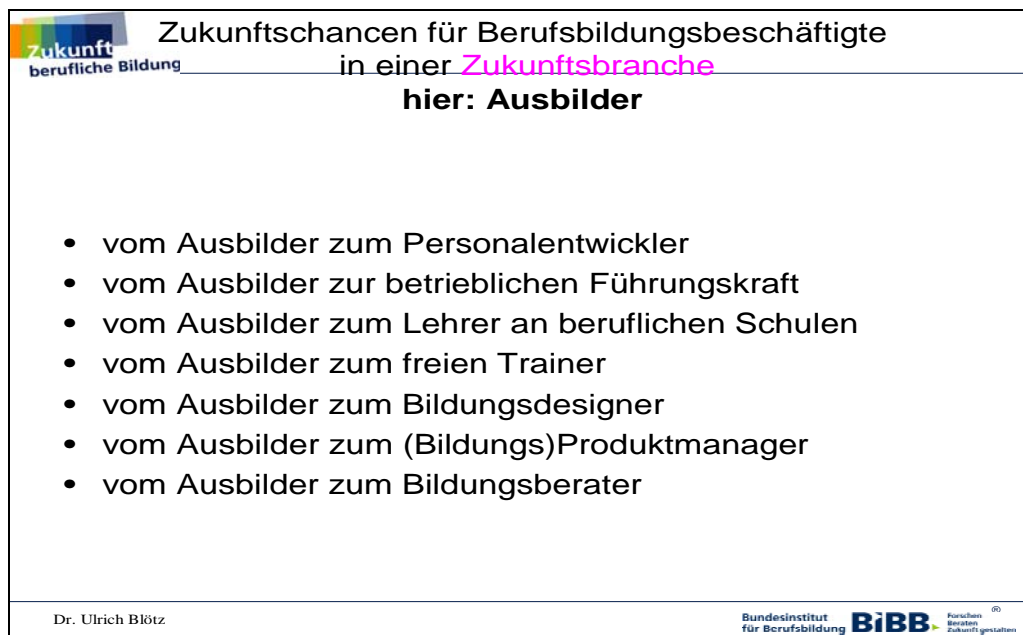


Figure 4: Possible career progression paths for in-company trainer (Blötz 2007)

4.4. Systemic overview on progression prospects through qualification frameworks

However, as has been indicated above, the change of perspective has only been put to debate. Moreover, the existing or emerging qualification frameworks have been constructed on the basis of different systemic assumptions and institutional regulations. Therefore, in order to reach a satisfactory level of branch coherence there is a need to specify what kind of cross-over transitions are required between different qualification frameworks and how they can be monitored and recognised. Below the Figure 5 presents a roadmap for such reforms.

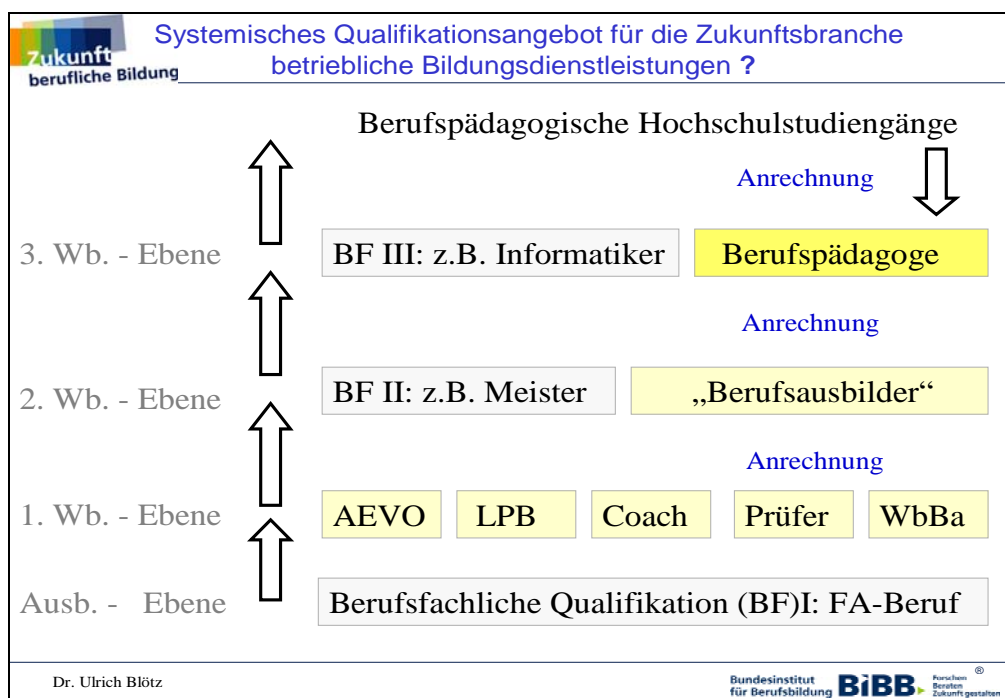


Figure 5: Roadmap for career progression of trainers and training specialists across different qualification frameworks (Blötz 2007)

The roadmap brings together two complementary reform agendas:

- a) construction of a career progression model for trainers by specifying successive steps in career development and by relating them to existing levels of qualifications and
- b) introduction of arrangements for recognition of prior learning (across the currently separate qualification frameworks).

The system logic of the career model is presented below in the Box 3.

The integration of the **career progression model** in the German qualification frameworks:

1. **The starting point** is the initial vocational training (*Ausbildungsebene*) and related basic qualification (*Berufsfachliche Qualifikation I*), i.e. the skilled worker's qualification in the respective domain (*Facharbeiterberuf*) provided by the dual system.
2. **The first step in the career progression** is to complete the basic level of continuing training (*1. Weiterbildungsebene*) and to obtain a certificate on trainer's competences. For this level the roadmap envisages a variety of certificates that are related to different training functions or areas of specialisation (e.g. *trainer, coach, supervisor, assessor or adviser*).
3. **The second step in the career progression** is to complete the second level of continuing training (*2. Weiterbildungsebene*) with the further qualification of "vocational trainer" (*Berufsausbilder*). This qualification is based on the diverse certificates but it requires learning that leads to an integrated professional profile. In this respect it is related to the traditional qualification of 'Meister' in the crafts and trades.
4. **The third step in the career progression** is to complete the third level of continuing training (*3. Weiterbildungsebene*) with an advanced qualification of VET pedagogist (*Berufspädagoge*) certified by the chambers. This qualification can also be based on prior certificates but it required integrative studies. In this respect it is related to the intermediate qualifications of ICT-specialists (*Informatiker*).
5. **The fourth step in the career progression** is to enter the university-level study programmes for vocational teacher education via recognition of prior learning and to complete the Bachelor and Master degrees.

Box 3: Interpretation of the roadmap as a career progression path

In the light of the above it appears that it is relatively easy to link the discussion on the future of the AEVO certificate to a broader range complementary certificates that support semi-professionalisation of part-time trainers. Furthermore, in the light of the diversification of training functions it seems possible to construct an integrative profile for a full-time trainer (by analogy to the traditional *Meister* qualification). Equally, it seems possible to relate the new intermediated qualifications for training specialists (promoted by the chambers) to the recently developed intermediate qualifications for ICT specialists. Thus, inasmuch as the roadmap is focusing on mere career steps or to analogous levels of qualification (outside the Higher Education) the picture is seemingly unproblematic.

However, the main thrust of the roadmap is not merely to outline a career progression model through the three levels of continuing training and to impose the continuation prospect to higher education. Instead, the second aspect of the roadmap – the **recognition of prior learning** – is related to the idea that the university institutes in pedagogics of VET (and other VET-related expert organisations) should engage themselves as partners in promoting the quality of training services across different levels of professionalisation.

Part II: The empirical studies

5. Relating the German case studies to the methodological approach

5.1. The methodological starting points

The methodological discussions at the initial stage the TTplus project led to the conclusion, not to make strategic decisions on the nature of the common framework before undertaking empirical analyses on trainers' professional situation. Thus, the TTplus project emphasises the need to identify possible scenarios for the professional development of trainers on the basis of empirical materials. Thus, the TTplus project has reserved itself the possibility to analyse to what extent the empirical materials bring into picture culturally specific contextual factors and to what extent they bring into picture common starting points and cross-cultural developments that can be taken into account in a common framework.

The decisions regarding the selection of cases for the TTplus project had to be taken at a relatively early date and these decisions could not be supported by common methodological guidelines. Yet, some working agreements could be reached at an early stage (regarding the degrees of freedom in selecting the cases):

- 1) There was no reason to set such requirements that would make the samples representative regarding *national* training cultures or the evaluation of *national* training policies. Instead, it was essential to have a sufficient diversity of cases that could give rich information on the ways that training cultures are linked to (or disconnected of) training-related policies.
- 2) There was no reason to standardise the samples from the perspective of economic sectors or regarding the size of organisations involved. Instead, it was essential to have a sufficiently rich gallery of cases from different economic sectors and related to different organisational settings.
- 3) There was no reason to standardise the samples regarding the training activities to be covered. Instead, it was essential to have a sufficiently rich gallery of cases that highlight different uses of training capacities and training staff (and bring into picture different curricular and pedagogic orientations).

Originally the work programme of the TTplus project envisaged the production of separate 'use cases' that link the cases to the emerging framework for professional development. Already at an early stage the project revised its approach and decided to use the concept 'instances of change' when analysing the empirical results.

5.2. Criteria for selecting the German cases

A special look was placed at emerging trends and constraints resulting from the dilemma between two potentially conflicting agendas:

- the increasing re-integration of learning into work-process and
- the ambition of promoting stronger professionalisation across the training functions.

Another overarching distinction that has to be made in the German VET context is the difference between the organisation of learning processes in large industrial plant settings (on the one hand) and in the context of small and medium enterprises (on the other hand).

For a number of reasons it was appropriate to focus on enterprises that were mainly active in metal and electric industries and in particular on the training for the electric occupations:

- all of the companies have participated in earlier investigations, development projects with researchers from the German project team, which provided easy access and helped the studies by providing background information from earlier projects;

- as a form of “ceteris paribus“ approach the concentration on one occupational field allows for the contrastive comparison between two of the selected cases as regards to the influence of an industrial context vs. a tradition of crafts and trades (taking into account the respectively different business models and client relations);
- In the second company, which exemplifies an SME context the focus is mainly on learning with IT-occupational profiles, as an example for an occupational cluster that has only recently been regulated in contrast to the other examples.

6. Presentation of the cases

6.1. The company A: Service provider in installation techniques

a. Company profile

The company A was founded in 1954 as a local family enterprise in a rural municipality of V. (Lower Saxony) in a largely agricultural context. Initially the company was developed as a traditional handicraft enterprise with a focus on electric installations. Gradually, the company A has expanded into an internationally operating enterprise group with branches in the new Federal States as well as in Central and South East Europe. Presently the company A has clients in about thirty countries on all continents. The number of staff at the main production site and in four other branch sites (in Eastern Germany or at the Polish border) is altogether ca. 450 employees. The main production site (cases study site) employs around 250 employees. In 1996 the company A was certified for ISO 9001 standards.

Currently the company A is structured into seven branches or business areas: *Agricultural technologies, Automation and process technologies, Construction of electric engines and generators, Electronic (explosion-safe) appliances for oil industries, Appliances for building infrastructure, Information technologies, Control systems for automatic steering.* The business area ‘agricultural technologies’ includes the development of appliances for bio-energy. Due to cooperation between the ‘construction of engines’ and the agricultural areas the company A is in the position to provide complete turn-key solutions including the local adjustment and support for financing arrangements.

b. Training practices

The dual system of apprenticeship is being used as the basic model for staff recruitment and for the induction of new staff members to diverse departments or business units. In this respect it is essential to monitor the performance of trainees with reference to the changing assignments in the respective business areas. Therefore, no overarching schemes are used. The trainees are integrated into the process of work and they are given real working tasks (or support tasks) as their learning assignments. This may cause problems for the trainers to adjust the tasks to the appropriate level of competences (to be promoted in the training period). Also, it has been difficult to integrate training activities to the customer service. The trainers would prefer to allocate more time for giving explanations for the trainees. However, due to time pressures, they have to focus on the interaction with client (and give the trainees the role of an observer).

c. Competences of trainers

In general, the company A doesn't distinguish between ‘ordinary’ skilled workers and ‘trainers’. All skilled workers are expected to take over some training functions as mentors (“*Gesellen*”) supporting the trainees (“*Auszubildende*”). For these training functions they do not get a specific pedagogic training. Instead they are assigned to support the learning of a trainee and to provide appropriate work packages. One person is responsible for the overall administration and management of VET provision alongside his other duties in the company.

d. Professional development of trainers

In the above described setting the mentors (*'Gesellen'*) are not perceived as trainers (*'Ausbilder'*) of whom the legislation requires a formal training. Instead, the mentors are expected to focus on promoting domain-specific and organisational learning. Therefore, the measures to promote the continuing professional development of skilled workers have been geared to domain-specific further training and to informal peer tutoring between colleagues.

6.2. The Company B: Service provider in ICT systems

a. Company profile

The company B was initially founded as a family enterprise in 1908. In 2006 it was bought by a nation-wide holding company with longstanding business connections the company. The company itself started as a supplier of office equipments but has gradually transformed into a service provider in the field of ICT-systems and ICT-based customer services (e.g. the maintenance of cash machines and other ICT-based systems related to banking). This includes service packages that contribute to continuing development of business processes and related ICT-based infrastructures.

The main business areas of the company B are the following:

- Business Solutions
- Infrastructure solutions
- Professional Services.

The company B provides training for the following occupational fields:

- IT-Systems/Electric specialisation,
- IT-Systems/Commercial specialisation,
- IT-Systems/Specialisation in system administration,
- Economic and administrative occupations (the basic commercial training).

b. Training practices

The company B uses the dual model of apprentice training as a means to induct new staff and to familiarise them with different production or service teams. Therefore, the company has developed a rotation system that requires the trainees to changes from one team to another after a half year's period. This is also the model of the holding group and it has been extended across the network of the holding group. After going through a working and learning period in each team the trainees can express their own request in which team they want to complete their training.

c. Competences of trainers

Training schemes for trainers that lead to AEVO-certificate are not currently prioritised. In general, the company B wants the trainers (i.e. the team leaders) to get this qualification.

d. Professional development of trainers

Working in teams plays a major role in the professional development of trainers. The company B has a tradition of project leaders' meetings und team leaders' meetings. (As has been indicated, the trainees are also allocated to teams.).

The holding group has appointed training coordinators who serve as contact persons for training managers in particular enterprises. In addition, there is a joint working community („Computerkompass“) to support the training of German ICT-enterprises.

6.3. The Company C: Major steel producer (part of an international company)

a. Company profile

The company C is a major steel-producing enterprise since 1957. In the 1990s and in 2002 the company was part of successive mergers that led to the creation of one of the largest European steel-producing companies. The latest merger between this European company and an international company led to the creation of one of the largest steel-producing concern in the World. The company C has ca. 3100 employees. Its production site is a fully integrated and highly automated plant. The integrated production chain covers the all stations from blast furnace (*Hochofen*) to 'Tailored Blank' coated steel.

The company C has trainees for technical and commercial occupations. For the technical occupations the company has a local training department with its own training workshops and with training managers for metal occupations and for electric occupations.

b. Training practices

The company C uses the dual system for inducting the trainees to the company and to the work in different production units. Training is organised by the *training department* and carried out by *trainers & mentors* in the production units. The first year takes place primarily in the training workshop. The proportion of real work-related tasks has been rather limited and this has been considered a deficit. Therefore, the training managers have tried to develop working and learning tasks that lead to real production-relevant contributions to production units. There are a number of modular courses (*Lehrgänge*) that are provided alongside the training in the workshop. These are normally delivered by in-company trainers. However, if the themes cannot be sufficiently covered by internal trainers, external specialists are invited.

c. Competences of trainers

The training department has a training manager for the metal occupations and another for the electric occupations. They have completed degree programmes in engineering and pedagogic studies for vocational teacher education. Each of them is in charge of a team of full-time trainers. The full-time trainers are skilled workers that have completed the formal training for trainers (the AEVO certificate) or training for the industrial *Meister*. When the trainees move to production units they are assigned to worksite tutors (*"Ausbildungsbeauftragte"*). The worksite tutors are skilled workers who have been given the task to serve as supervisors of training and/or part-time trainers in their production unit. During this phase of training they are also the immediate contact persons for the trainees.

d. Professional development of trainers

A full-time trainer from the company C indicated several learning opportunities and support activities that promote their professional development. Firstly, participation in continuing training (*"Weiterbildung"*) has been encouraged both from the perspective of updating of domain-specific expertise and regarding the upgrading of pedagogic competences. Secondly, participation in national pilot projects (*"Modellversuche"*) has provided specific possibilities to link *conceptual knowledge development* to *cutting-edge pilot activities*. Thirdly, focused cooperation between vocational teachers and the in-company trainers in teaching activities has helped to bridge the gaps between the learning venues. Finally, the most important support facility has been the regular knowledge sharing in the local/regional working circles of trainers.

Part III: Concluding remarks

7. Conclusions from the background analyses

7.1. Key points arising from the background analyses

The background analyses that have been presented in Part I have provided a picture on the *conceptual starting positions, qualification frameworks* and *policy debates* that altogether characterise the professional development of trainers in Germany. In this context it is appropriate to emphasise the following key points that arise from the background analyses:

1. In general, the discussion on training cultures and of professional development of trainers is mainly focusing on the workplace trainers within the dual system of VET. Thus, the natural starting point for discussing professional development of trainers is the formal aptitude certificate and its relation to different career progression models. The discussion on trainers' competences in continuing vocational training is more fragmented (depending on the organisations and branches involved).
2. The existing qualification structure is polarised. At the one end there is the aptitude certificate of in-company trainers (AEVO). At the other end there is the academic qualification of vocational teacher (Master-level degree plus completion of the state examinations and the obligatory internship). The emerging models for developing intermediate qualifications for training specialists in enterprises (*IHK-Berufspädagoge*) are at an early stage of piloting and initial implementation. Their position in the qualification structure and their usability needs further clarification.
3. The current discussion is strongly overshadowed by the temporary suspension of the AEVO certificate (2003-2008). The decisions concerning this basic 'qualification' will have implications for other levels. However, until recently the discussion on the trainers' aptitude certificate (AEVO), on the intermediate qualifications (*IHK-Berufspädagoge*) and on the permeability of the university programmes (for vocational teacher education) have been treated as completely separate issues.
4. Parallel to the debates on qualification frameworks it is worthwhile to note the work that has been undertaken in the innovation programmes that support the development of *continuing vocational training* (CVT) and the uses of web and new media. As regards the innovation programme on learning cultures and development of competences (coordinated by ABWF-QUEM) the strand on learning in work process (LIPA) was an expert-driven strand for piloting with instruments for consultancy whilst the strand for learning in CVT provisions (LIWE) supported transition from pure training to accompaniment of learning processes in target organisations and among target groups. Regarding learning supported by multimedia and web, the emphasis has shifted from support projects (the LINE strand) to separate platforms and portals (e.g. the trainers' forum Foraus).
5. Given the above mentioned fragmentation of the policy debates and the polarisation of the underlying frameworks there is a new discussion – promoted by the federal institute BiBB – that outlines a comprehensive approach to the development of training services. The key message in this approach is to consider the training services provided for enterprises and within the enterprises as an emerging branch. From this perspective the well-being of the branch is dependent on the cooperation and mutual complementarity between diverse actors. Consequently, this approach provides a basis for systemic roadmaps regarding the career profession of trainers (or training specialists) and regarding the contribution of different institutions and expert organisations.

These key points give rise to the following questions:

- How can the background analyses (and the key points mentioned above) be linked to the German case studies (see below the sub-section 8.2. and the section 9)?
- How can the German background analyses and empirical findings be used background material for a European framework for professional development of trainers (see section 10)?

7.2. Linking the background analyses and the key points to the case studies

In this context it is worthwhile to note that the case studies and the interview guidelines were drafted at a relatively early stage of the project (to ensure a certain level of coherence across the country-specific samples). Moreover, the first results of the case studies were already available before the background analyses were completed. Therefore, the case studies cannot be linked directly to questions that emerge from the policy analyses (e.g. on the future role of the AEVO or on the relevance of the new intermediate qualifications etc.). Thus, the information from the case studies cannot be used as material for 'evidence-based policy development'. Instead, the use value of the case studies lies in the fact that the information has been collected as 'contextual images' of the respondents on their own position, their relation to their counterparts and on their professional development (or on their progress as learners). Thus, the material provides a basis for considering, how well grounded different ideas in the policy debates may be.

In particular this is related to the 'twofold practice-relation' (*doppelte Praxisbezug*) that characterises trainers' professional development. 'Practice' carries two meanings regarding the professional action contexts and development prospects of trainers. On the one hand the trainers themselves can be regarded as specialists for training at the workplace. On the other hand trainers need to be experts on the "local knowledge" of work processes, tasks and functions. This double practice orientation can also lead to tensions regarding trainers' occupational identity and conflicts of interest regarding their career prospects.

Below, a generic model is introduced to analyse eventual tensions and conflicts at in the different stages of career development. The generic model distinguishes between the personal, the peer group-related and the organisational level of identity formation. Furthermore, it distinguishes the following layers of occupational work experience:

1. Pre-training biography/experiences;
2. Initial take-up of training functions;
3. The everyday practice of learning support;
4. Changes and developments with regard to this role (e.g. expansion in terms of content or time; promotion etc.).

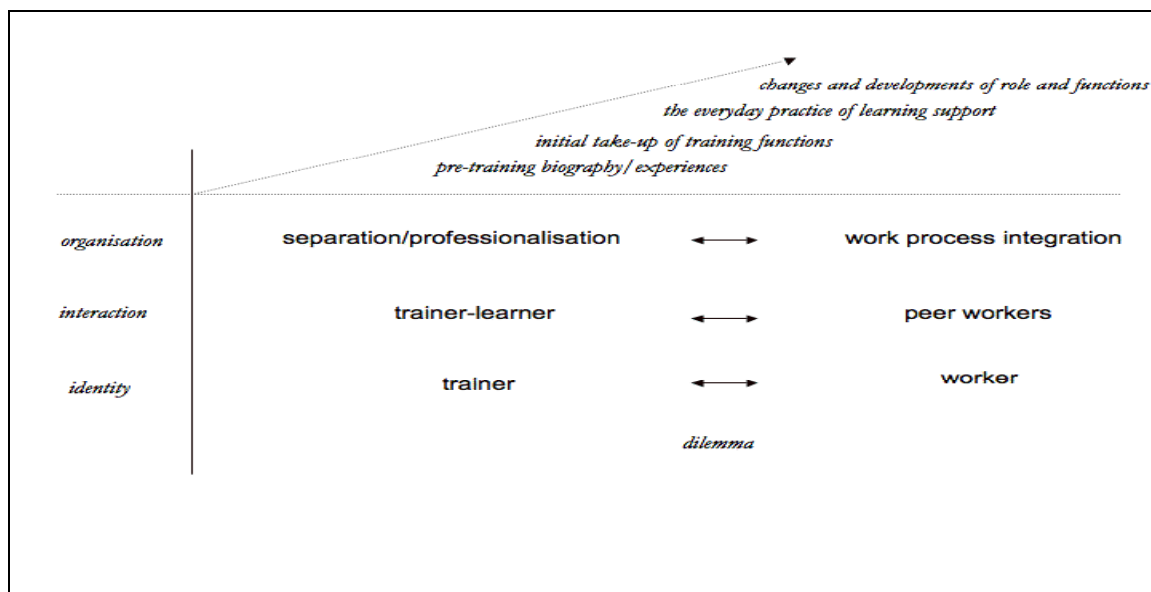


Figure 6: Generic framework for analysing tensions and conflicts related to professional development of trainers

8. Key issues and findings of the empirical studies

Below, some key issues and findings of the empirical studies are discussed more closely. Firstly, it is essential to consider the distribution of training functions in the three companies that have been studied. Secondly, it is worthwhile to consider what kinds of views were presented on the role of formal qualifications for trainers. Thirdly, it is appropriate to present some preliminary findings with the help of the generic framework for analysing different stages in the professional development of trainers.

8.1. Distribution of training functions and profiles of trainers

The first issue is related to the distribution of responsibilities between training managers (or training coordinators), full-time trainers and part-time trainers in the three companies. In this respect the case studies brought into picture the following pattern variance:

- **The Company A** follows the traditional pattern of the crafts and trades. Here, the Meister certificate included the formal qualification of trainer. However, due to the career pattern in the crafts and trades the persons holding the Meister qualification are usually in a managerial position or serves as training coordinators (*Ausbildungsmeister*). Therefore, the responsibility on actual training activities at the worksite is distributed to skilled workers ('*Geselle*', *Ausbildende Fachkräfte*). These do not normally hold the formal trainer's aptitude certificate.
- In **the Company B** the position of training coordinator had been set up as a part of the organisational development (independently of formal qualifications). As a heritage of an earlier phase in the organisational development the company had some employees with a traditional *Meister* qualification allocated to the production units. Yet, according to the current pattern the training coordinator was allocating trainees to team leaders or project leaders (skilled workers with or without the formal certificate).
- **The Company C** – as several other large industrial enterprises – had set up a company-specific training workshop for metal and electro-occupations. Consequently, a major part of 'workplace training' during the first year takes place at the workshop and is delivered by full-time trainers (*Ausbilder*). Based on the company-internal review the training managers (*Leiter der Ausbildung*) have promoted transition to integrative projects (*Leitprojekte*) in which trainers take a coordinating role and training and learning activities are shifted (to some extent) to the production units. In this context at each production unit a skilled worker has been charged as a workplace tutor ("*Ausbildungsbeauftragte*").

8.2. Preliminary findings on problems, tensions and conflicts regarding career development

Below, the generic model for analysing problems, tensions and conflicts in the career development of trainers (see above Figure 6) is used to analyse some empirical findings from the case studies. However, at this point of time the use of the framework is tentative and the findings are very preliminary. Yet, with these reservations it is possible to note some characteristic features in the two cases in which the framework has been used (see below Box 7).

	Pre-training biography/experiences	Initial take-up of training functions	The everyday practice of learning support	Changes and developments with regard to this role
<i>Possible problems, tensions, conflicts etc. (Hypotheses)</i>	<i>Workers that are trained to become specialists and lack the necessary skills to transfer their knowledge and competence to peers and novices.</i>	<i>Formal recruitment policies are not aligned to the actual needs of trainers' practices: they constitute a formalistic "pedagogisation" and do not take into account the specific conditions of learning at work responsibility is only based on the progression of technical expertise and promotion</i>	<i>The identity as a worker dominates the identity of a "learning supporter". Insufficient commitment to learning support. The identity as the trainer dominates the identity as worker. "Instructionist" conception of learning at work</i>	<i>Strong commitment to learning support leads to a "teacher-like" identity Can promotion and spatiotemporal expansion of the trainers' role be organised keeping his expertise in conveying "local" knowledge of the production process and tasks?</i>
Case A (SME)	Training responsibilities are distributed on the basis of the situation assessment of the head of the department.	Expressed wish for knowledge on training rules, curricula etc.	(Supervising) rotation of apprentices (as a predominant role of the training manager); Evaluation of training in the departments through apprentices (supervisor interferes in case of problems); "Bad reputation" of training workshop.	Introduction of the training manager as the supervisor for rotation.
Case C (Industrial Plant)	"Learning support" and communication as a professional task is included as a natural feature of "initial" training in the company, apprentices are prepared to take over functions of knowledge and competence transfer; "Meisterausbildung" as formal requirement for trainers in the training workshop Rotating responsibility for training at the workplace.		Process orientation in the training workshop as well as in the work process ("mechatronics") Co-operation and networking with other companies in order to provide apprentices with the full range of learning experiences led to the establishment profile of a "professional networker".	Taking over training functions can be an important step and criterion for any promotion towards a profile that includes personnel responsibility ("Tagesmeister", process engineering/ planning).

Box 7: A framework on the dynamics of trainers' professional development and some findings

8.3. The role of formal qualification as support for professional development

Regarding the future role of the trainer's aptitude certificate (AEVO) the results of the case studies in the three companies were somewhat contradictory:

- Firstly, the training managers appreciated the fact that they had obtained or were obtaining formal qualifications to support their professional development (Meister, AEVO, academic studies). Some were also engaging themselves in specific initiatives for professional development ('dual studies', 'ICT-competences', e-Portfolios).
- Yet, regarding the distribution of training tasks in day-to-day practice the training managers did not find it so essential that the skilled workers involved in those tasks (Gesellen, Ausbildungsbeauftragte) should obtain formal certificates. However, this question was asked with reference to the current AEVO certificate.

When the in-company trainers (skilled workers without the AEVO certificate) were asked on their priorities for professional development, they did not prioritise training-related competences or the AEVO certificate. Instead, they referred to different domain-specific learning opportunities (which were often provided by external service providers).

9. Conclusions for the development of a European framework

Regarding the task of the TTplus project to develop a common European framework for the professional development of trainers the German background analyses have provided

- a fragmented policy landscape with parallel initiatives and
- an effort to promote integrative discussion with a comprehensive roadmap.

Regarding the empirical studies that the TTplus project has carried out in Germany it is appropriate to note that they were not directly related to the emerging policy debates or to the above mentioned roadmap. However, they give some indications on the self-understanding and professional interests of training managers and trainers in three German companies (and some feedback information from trainees).

Concerning the current phase of discussion on the common framework it seems appropriate to make the following remarks on the possible role of a European framework in the light of the current German debates:

- In the German context the idea of a common branch-identity shared by different training-related actors and service providers seems very radical. In a European context this seems more as a natural starting point to grasp the diversity of training cultures.
- In the German context it has been seemingly easy to construct a career progression model with reference to existing and emerging qualifications. Yet, it appears to be more difficult to introduce the patterns of accreditation/recognition of prior learning (and to apply them across different qualification frameworks). This discussion can be supported by parallel development at the European level.
- In the German context the roadmap requires string cooperation and mutual adjustment between different institutions, expert organisations and service providers. For the moment there is no natural basis for such mutual commitments. From this perspective a European framework based on *common principles*, *mutual commitments* and *agreed procedures* can provide sufficient support for the creation of new infrastructures.

Annex: Educational reforms and innovations in the German training culture(s)

Below, some educational reforms and innovations in the German training culture(s) have been listed. In this context it is worthwhile to note that some of these tendencies are related to *different training provisions*. Altogether these tendencies have contributed to the fact that the dual system of VET has remained as the backbone of the German training culture. However, at the same time new training structures and learning concepts have come into picture. The following list is not comprehensive. Yet, as a whole it gives an overview of the main developments in the German training landscape:

a) Development of training regulations and new curricula for initial VET

The main features in the development of new training regulations have been the

- a1) introduction of the aggregated occupational fields (*Berufsfeld*) and the development of the structures for successive specialisation (from the mid-1980s on);
- a2) introduction of occupational profiles with common systemic core structures that enable specialisation for different occupational fields (e.g. the ICT-occupations);
- a3) piloting with new curricula with emphasis on integrative **learning arenas** (*Lernfeld*) and **working and learning tasks** (*Arbeits- und Lernaufgaben*).

b) Developments in workplace-based training

The main features in the development of workplace training have been the following:

- b1) reorientation from separate company-specific training workshops towards new links between workshops and actual worksites;
- b2) developing new possibilities for bringing training back to authentic work contexts;
- b3) using 'virtual realities' and 'e-resources' to support the acquisition and conceptualisation of 'work process knowledge'.

c) Spread of training functions within workplace learning

The main tendencies in the distribution of training functions within workplace training have been the following

- c1) wider involvement of part-time trainers (skilled workers with a responsibility on part of the training) and acknowledgement of their training responsibilities;
- c2) closer integration of responsibilities on *training management* with responsibilities on *staff development* in teams or organisational units;
- c3) transformation of *training management* into brokering of learning opportunities and into support for self-organised learning;
- c4) wider involvement of external services, partnerships and network-based cooperation.

d) New demands regarding employment promotion and training for target groups

The main tendencies in the development of training within employment promotion (and social support for target groups) have been the following:

- d1) transition from measures that adjust new workforce to receiving industries towards empowerment of participants for active search and/or self-employment;
- d2) transition from measures that provided minimal 'entry competences' (to labour market) to measures that equip participants with awareness of prior competences and with capability to draft their personal learning plans (or personal development plans);
- d3) transition from measures that were implemented in separate training centres (with eventual workplace placement periods) towards measures that support the integration of participants to work organisations.

e) New training needs related to the use of ICT and new media

The main tendencies regarding wider use of ICT and new media have been the following:

- e1) introduction of new para-public qualification structures and training models (IT-APO Weiterbildung) for intermediate ICT-specialists that are not catered for by the dual system or by higher education (with a special emphasis on validation and certification of workplace-based and work process-oriented learning);
- e2) incorporation of private and para-public ICT-related training provisions into the curricula of public VET provisions and into intermediate training models (e.g. the 'dual studies');
- e3) incorporation of support for non-formal learning via web resources (open educational contents, open learning forums) into public and para-public training models (e.g. the promotion of use of e-portfolios via networks for e-pedagogy and e-learning).