

Ute Hippach-Schneider; Bernadette Toth (Eds.)



ReferNet-Research Report

Germany

# VET Research Report 2009

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- ▶ Zukunft gestalten



## Research Report 2009

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**Authors:**

Susanne Berger (Chapter 1)  
Prof. Dr. Sandra Bohlinger (Chapter 3)  
Prof. Dr. Dietmar Frommberger (Chapter 4)  
Prof. Dr. Matthias Pilz (Chapter 1)  
Dr. Ingrid Wilkens (Chapter 2)

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**Herausgeber:**

Bundesinstitut für Berufsbildung  
Robert-Schuman-Platz 3  
53175 Bonn  
<http://www.bibb.de>

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### Research Report 2009

What is occupying the “vocational education and training researchers” of a country? Is there any research of note? Which topics are being investigated and processed? Which relevant issues and material results are emerging?

The answers to these questions enable a distinct insight to be obtained into a state’s VET system by revealing focal points where “construction works” are ongoing. Furthermore research is an indicator for the relevance of VET in a country.

In 2009, an attempt was undertaken in all countries represented in ReferNet to respond to these questions via four main areas of content focus. “Benefits of VET” and “Mobility and migration” are common topics for all. Due to the fact that there are a large number of current issues of completely differing degrees of relevance within the member states, the national coordinators were given the freedom to decide on two further topics.

Germany opted for the topics “Effectiveness and quality assurance” and “Transitions”. Interestingly, seven further states selected the topic “Effectiveness and quality assurance”, making it the most frequently selected area of focus. “Transitions” was chosen by four other countries and came 3rd in a list containing 15 proposals in total. This shows the remarkable relevance of these topics in Europe.

In overall terms, we may state that only an extremely small number of common guidelines were in place for the ReferNet Research report compared to the other two reports, the ReferNet Policy report 2008 and the ReferNet Country Report 2009. The targeted aim was to ensure the greatest possible leeway in terms of the main areas of focus for the description of national VET research.

This ReferNet Research Report forms part of the Cedefop ReferNet 2009 work programme.

Ute Hippach-Schneider  
Coordinator of the German  
ReferNet team ReferNet team

Federal Institute for Vocational  
Education and Training (BIBB)

Bernadette Toth  
Member of staff in the German

Federal Institute for Vocational  
Education and Training (BIBB)

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# Benefits of VET

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Susanne Berger and Matthias Pilz

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## **1. Current research activities on VET in Germany over the last five years**

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Structural changes in the economic and employment system, increasing globalisation and demographic change all influence the requirements of the workplace. Particularly in recent years, this has underlined the significance and value of a thorough programme of vocational education and training (VET) (cf. Kremer, 2008(a), p. 2).

The present analysis, compiled as part of the ReferNet research report for 2009, will present and briefly discuss the most important current research activities in Germany on the theme of “Benefits of VET”.

Any reference to “German” vocational education and training is often equated with the *dual system of initial vocational training* but this is an oversimplification. The dual system, where initial vocational education and training (IVET) takes place in the company and the part-time vocational school in parallel, is just one specific component among the many other measures which make up Germany’s overall system of initial and further vocational education and training.

In contrast to the systems in Switzerland or Austria, for example, in Germany the two strands of IVET (in-company IVET under the dual system, on the one hand, and wholly school-based IVET, on the other) have developed largely independently from one another (Kremer, 2006, p. 28).

Because the dual system of IVET represents the most important subsystem of Germany's VET system in both quantitative and qualitative terms, it will be given special emphasis in the course of this discussion. This will not preclude consideration of other vocational pathways, however, particularly full-time school-based options.

## **2. Synthesis of key research findings by target group**

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The section below sets out to present the main research activities and findings on the benefits and returns from VET in Germany for the period 2004 to 2009. For the sake of overall clarity and to reflect the distinctions between different studies, the research results will be listed separately according to their target groups, emphasising the main positions of research relevance in each case. Additional discussion of interdependencies is included at suitable junctures. From a review of current research efforts looking at the positive effects and the benefits of VET, the most striking features are not only the near-exclusive preoccupation with the returns from the German dual system, but also the notably high proportion of research activities focusing on *corporate benefits*. These are therefore dealt with first in the section below. Next, the discussion will move on to current research efforts and findings relating to the benefits of German VET for the whole of society, for the national economy and, finally, for the individual. It goes without saying that certain overlaps between the individual target groups in the presentation of research findings are inevitable and should not be omitted, because these in turn draw attention to the wide-ranging interactions and interrelationships between all stakeholders in the VET sector.

### *2.1 Benefits to companies*

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Current research efforts on the corporate benefit of VET in Germany deal primarily with the business returns from initial vocational education and training (IVET) in the *dual system*. The main explanation for this is that in many fields of employment, in-company IVET has become just about *the* most important entry route into the labour market (cf. Deißinger, 2005, p. 143).

In the wake of globalisation, companies' decisions on where to invest and where to locate operations are influenced to a great extent by the level of qualification that a country's workforce can offer. Alongside national wage levels, for example, this makes the design of VET a location factor of critical importance in competitive situations involving industrial and exporting countries. As mentioned above, VET in Germany is delivered primarily through the *dual system*, i.e. the combination of a school-based and a company-based learning venue. Every year, around two-thirds of a cohort of school-leavers start a dual system apprenticeship as their means of entry into the world of work and employment (cf. BIBB, 2009(a), p. 77 and Döring and Sailmann, 2005).

Young people who have completed a dual system apprenticeship are certified to have attained "vocational competence" (German Vocational Training Act (BBiG) Section 1(3)), which

means that they are equipped to work independently, largely taking responsibility for their own work (cf. Frank, 2009, p. 5). Nevertheless, in order to keep pace with developments in companies, e.g. technological progress, or with changing structures of work, VET is also subject to constant change. Evidence of the dual system's openness and its adaptability to the requirements of companies is seen in the number of recognised occupations requiring formal training (training occupations) which are either newly created or modernised each year. The innovations introduced in the course of reforming the Vocational Training Act in the year 2005 stand as a further example (cf. Sections 2.3).

Company surveys show that companies regard the dual system mode of IVET as a "high value product" (Kremer, 2006), and benefit from its quality and adaptability, particularly in terms of meeting their own needs for a skilled workforce, which will be the subject of the next section.

The willingness of companies to invest in IVET and to absorb the initial costs is motivated mainly by their *future* staffing needs. This so-called *investment motive* along with the *reputation and cost-saving motive* are discussed in the relevant literature as theoretical approaches to the description and classification of corporate motives for participation in IVET (cf. e.g. Beicht et al., 2004).

#### *In-company IVET to meet future needs for skilled workers*

Regardless of company sector or size, the *investment motive* is generally a very important factor in IVET participation, a finding confirmed by the conclusions of Ebbinghaus and Ulmer (2009) from a survey of 15,000 companies. In this survey, six out of ten business owners stated that meeting their future staffing needs was a very important reason for participating in IVET.<sup>1</sup> Companies participating in IVET not only appreciated the flexible options for deploying skilled workers they had trained themselves, whose skill-set was thus specialised for that particular company, but also felt less exposed to the risk of making errors of judgement when recruiting staff externally (cf. Ebbinghaus and Ulmer, 2009, p. 21 and Walden et al., 2003, p.45). This thesis is likewise supported by the statement of the head of Siemens AG Professional Education, Günther Hohlweg, in an interview with the Research Institute for Vocational Education and Training (f-bb): "[...] Siemens AG regards the dual system as the appropriate contemporary form of initial vocational training, with potential to be developed for the future as well. [...] Companies train their own future skilled workers in the company, and can prepare them to meet the demands of the business. [...] The time that would have to be spent later on familiarising them with the work is integrated into the initial vocational training period."

Another motive for companies to invest in their own IVET is the demographic trend in Germany. On the one hand, population size is in persistent decline. On the other hand, the increasing imbalance towards an ageing society (by 2030, it is estimated, there will be almost ten percent more people than today over the age of 65) goes hand in hand with a shortage of skilled

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<sup>1</sup> Similar results were previously obtained by Beicht et al. in 2004.

workers (cf. Statistisches Bundesamt, 2006). From this it could be concluded that companies have to resort to dual system IVET to train up skilled workers in order to be sure of meeting their own company's needs for a skilled workforce. Taking this thesis as a departure point and using the 2007 BIBB Training Monitor as a data basis, Troltsch (2008) investigated the extent to which companies' willingness to engage in IVET is oriented towards future skilled workforce needs.<sup>2</sup> The first findings from the survey<sup>3</sup> showed that those companies which had employed staff with middle-level qualifications in the past tended to be prepared to offer apprenticeship positions in order to be in a position to meet their ongoing needs for skilled staff. Furthermore, the findings of the survey provided evidence that companies did not become less willing to offer apprenticeships as a result of employing or planning to employ university or university of applied sciences graduates.

In line with Troltsch's findings, Ebbinghaus (2009) drew similar conclusions in the course of the Federal Institute for Vocational Education and Training (BIBB) research project on "Quality assurance in in-company initial vocational education and training."<sup>4</sup> It emerged from this survey that providing IVET was one of the most important instruments used by companies to meet their skilled workforce needs, particularly when high demand for qualified workers is anticipated. If, on the other hand, the company's anticipated recruitment needs are relatively low, both micro-businesses and large companies opt for advanced training and continuing vocational education and training (CVET) of the existing staff pool. In contrast, fewer firms envisage meeting their future skilled workforce needs by recruiting higher education graduates or by employing temporary workers (cf. Ebbinghaus, 2009, p. 28).<sup>5</sup>

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<sup>2</sup> Sample: 13,000 companies contacted by telephone, of which 5,000 took part in the study. Three survey cycles were carried out by TNS Infratest Sozialforschung in 2007 (cf. Troltsch, 2008)

<sup>3</sup> The overall findings of the BIBB survey of costs and benefits 2007 are expected by the end of 2009 (cf. Information from Reinhold Weiß, Deputy President and Head of Research at the Federal Institute for Vocational Education and Training (BIBB), Bonn at the opening of the BIBB conference on "Enterprises' Decision to Provide In-company Vocational Training - Economic Research and Analyses" from 23 to 24.09.2009 in Bonn.)

<sup>4</sup> Sample: the survey was addressed to approx. 2,600 companies which had provided IVET in accordance with the German Vocational Training Act or the Crafts Code in one or several of the years 2005, 2006 or 2007. It was a written survey conducted by postal mail using a standardised questionnaire. For further information, please refer to: Ebbinghaus, 2009, p. 9-18.

<sup>5</sup> Similar results were previously obtained by Walden et al. (2003) from a survey of businesses providing or not providing IVET in the year 2001. Accordingly, 70% of companies providing IVET ranked their own industrial-technical apprenticeships and 52% their own commercial apprenticeships as "very important" or "important" to the future coverage of their own needs for qualified skilled workers (cf. *ibid.*, p. 45).

According to the initial findings of the company survey on the costs and benefits of in-company IVET carried out by BIBB in 2007,<sup>6</sup> 84% of companies explained their willingness to provide training in terms of regarding it as a means to train up junior employees who met the company's requirements. Furthermore, 70% of training companies rated the option of selecting "the best" of their own apprentices for future employment as "very important" or "important". Other important reasons for a company to provide its own training were cited as avoiding the risk of errors of judgement when selecting new staff, and preventing unduly high fluctuations in staffing (cf. BIBB 2009(a), p. 240). These survey results were also confirmed by the head of initial vocational training at Knorr-Bremse AG, Josef Stanglmaier, in an interview with the Research Institute for Vocational Education and Training (f-bb): "Conclusion: within the dual system of initial vocational training and making full use of all its options, a company providing dual system apprenticeships will, after the training period, have precisely the employee that it needs. [...]" (Loebe and Severing, 2008, p. 182).

In a comparative study of Germany and Great Britain on training practices, Pilz (2009(a)) also arrived at the conclusion that in Germany, costs were not the sole consideration in companies' willingness to provide IVET, but that other key parameters are the stable and long-term retention of well-qualified employees, combined with an aspiration to fulfil a responsibility to society and thus generate reputational benefits.

#### *Companies' cost-benefit considerations for providing their own IVET*

It is clear that the cost-benefit analysis for in-company IVET takes into account certain elements which can only be quantified to a limited extent. For a more coherent understanding of the considerations weighed up by business owners and the interplay of the *investment*, *reputation* and *cost-saving* motives, the following schematic juxtaposition of the costs and benefits of IVET is adapted from Beicht et al. (2004).

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<sup>6</sup> The survey of costs and benefits by the Federal Institute for Vocational Education and Training (BIBB) adopts the conceptual basis set out by the Expert Commission on Costs and Financing of Vocational Education and Training in 1974. BIBB conducted a total of four surveys in the years 1980, 1991, 2000 and 2007. In the year 2007, human resources and initial vocational training managers in 2,986 training companies were questioned in person. The study covered the 51 training occupations accounting for the highest numbers of apprentices in the sectors of industry and commerce, crafts, the civil service, agriculture and the liberal professions.

For further information on the current survey, please refer to: Bundesinstitut für Berufsbildung (BIBB), 2009(a).

Figure 1: Chart showing the costs of in-company IVET for companies<sup>7</sup>

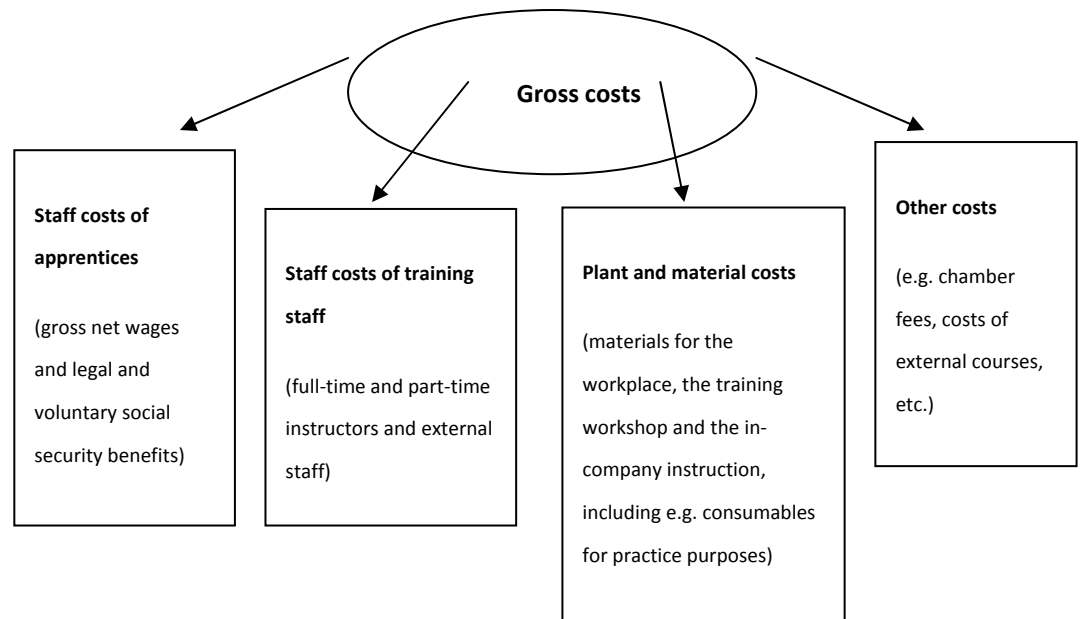
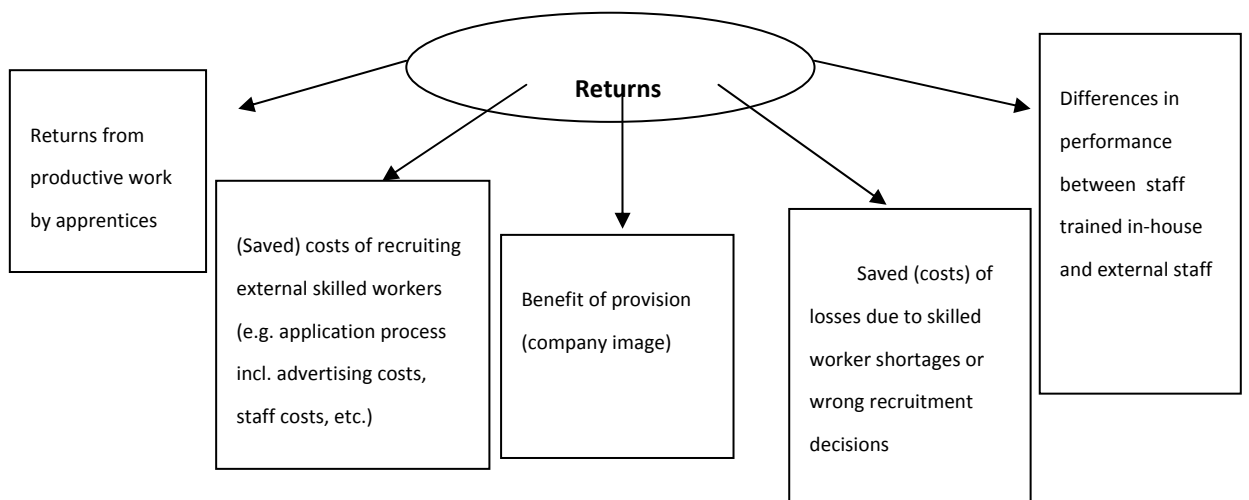


Figure 2: Chart showing the benefit of in-company IVET for companies



In the QEK (*Qualität – Erträge – Kosten*; quality – benefits – costs) self-evaluation instrument developed by Felix Rauner et al. (2007) at the University of Bremen's Institute of Technology and Education (ITB), companies are now equipped with a tool with which they can directly evaluate

<sup>7</sup> In their study, Beicht et al., (2004) included two different methods for calculating personnel costs for training staff: one which excluded the costs of part-time training staff, and one which took them into account. [Author's note]

the quality, benefits and costs of apprenticeships. It aims to help them answer the critical cost-benefit question and to analyse the quality of their company-based IVET. In juxtaposing the gross costs and benefits of IVET, the QEK tool is aligned with the method cited above, taken from Beicht et al. (2004). By using the self-evaluation tool, the companies “recognise what potential for improvement exists with regard to the organisation and design of their IVET. The tool also makes average values available so that the companies can see how they rank [...] in terms of the costs/benefits and quality of their IVET.” (Heinemann and Rauner, 2008, p. 90).<sup>8</sup>

With recourse to the methodology of the QEK tool, Haasler (2008) surveyed and calculated the costs and benefits of in-company IVET at “Feintechnik GmbH”, a small company in North-Rhine/Westphalia with seven apprentices. The survey showed that even small and medium-sized enterprises are quite capable of providing high-quality IVET, and of doing so cost-effectively. Accordingly, the above-named company was able to generate a profit that amounted to €2,000 per year over the entire duration of the apprenticeship (cf. Haasler, 2008, pp. 168f.).

According to the overall evaluation by Wenzelmann et al. (2009) of the first findings of BIBB’s 2007 costs and benefits survey, it is safe to say that “training companies usually benefit from providing IVET for young people. Although the provision of apprenticeships means that companies incur numerous costs, these are compensated when the apprentices are taken on as employees, by the savings made in recruitment and induction costs and by other less readily measurable factors such as reputational gain.” (Wenzelmann et al., 2009, p.10).

### Participation in IVET for reputational gain

Based on the statement cited above, it comes as no surprise that for many companies, the idea of training future skilled workers is not their sole reason for participating in IVET. They are guided equally strongly by the *reputation motive* (cf. Ebbinghaus and Ulmer, 2009, p. 22).

The larger a company is, the more it banks on providing apprenticeships as a way of polishing its corporate image in the eyes of the public, customers and suppliers and on making the company more attractive to high-achieving employees (cf. *ibid.*). This was also confirmed by Richard Hartmann, training manager at BASF SE, who sees in-house apprenticeships as boosting the company’s image in both the labour market and in public perceptions.<sup>9</sup>

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<sup>8</sup> For further information on the QEK research tool, please refer to: Rauner, 2007.

First selected findings from the use of the tool in research practice can be found in Piening and Rauner 2008.

<sup>9</sup> Presentation by Dr. Richard Hartmann, BASF SE; at the BIBB conference on “Enterprises’ Decision to Provide In-company Vocational Training - Economic Research and Analyses” from 23 to 24.09.2009 in Bonn.

In direct comparison, *pure cost considerations* of the kind associated with the *cost-saving motive* tend to play a secondary role. In general, it tends to be small companies of one to nine employees for whom apprentices represent a low-cost equivalent to regular employees, and are used accordingly as a substitute for ancillary and unqualified workers or, to a smaller extent, for skilled workers (Bellmann et al., 2007, p. 5 and Ebbinghaus, 2009, p. 25). This, according to Bellmann, can be justified on various grounds, especially the frequent fluctuations in orders experienced by small businesses, so that in peak order periods, for example, the apprentices can be deployed more productively.

### *Overview of the net costs of in-company IVET*

“Initial vocational training has become cheaper for the companies, and a more than worthwhile investment for many businesses” states Reinhold Weiß, Vice President of BIBB at the BIBB conference on “Enterprises' Decision to Provide In-company Vocational Training - Economic Research and Analyses” (cf. Wiedemann, 2009). Weiß makes reference here to the first data from the current BIBB survey of costs and benefits, according to which, the annual net costs of in-company vocational training for the individual company amount to €3,596 per apprentice. In comparison with the previous BIBB costs and benefits analysis, dating from 2000, the net costs of IVET for German companies have dropped by 40%, accounted for mainly by increasing the productive deployment of apprentices. In this respect, however, a high variance can be observed between individual companies: “On projected figures for the whole of Germany, around one-third of apprentices are already generating net returns for their companies during their training period, whereas for 10% of apprentices the net costs are over €15,000 per year.” (Wenzelmann et al., 2009, p. 3). The first explanation offered by Wenzelmann et al. for the size of this variance is the divergence in salary levels in eastern and western Germany. Secondly, according to the authors, net costs per apprentice rise with company size (due e.g. to employing full-time training staff). - It may come as a surprise, then, that growing company size also correlates with rising satisfaction with the cost-benefit ratio of in-company IVET: According to BIBB's 2007 costs and benefits survey, 77% of large companies with over 500 employees are ‘very satisfied’ or ‘satisfied’ (cf. *ibid.*). Differences between individual sectors are a third explanation for the high variance in net IVET costs between the individual companies. Whereas the net IVET costs incurred particularly in the civil service and in industry and commerce are relatively high, they tend to be lower in other sectors, such as agriculture and the hotel and hospitality industry. Furthermore, where part of an apprenticeship takes place in training workshops, the costs per apprentice are relatively high: “In this case, the gross costs amount to €20,063 on average, set against relatively low returns of €6 890.” (Wenzelmann et al., 2009, p. 4).

Wenzelmann et al. conclude that even if providing IVET and subsequently employing the company's apprentices after they qualify “[...] is not a necessary condition for a positive cost-benefit analysis [...]”, the training firms do, in the main, benefit from providing IVET to young people (*ibid.*, p. 10).

From the research findings presented, it can therefore be inferred that an investment in VET can be a lucrative investment for German companies, especially if this is combined with meeting

the company's own needs for young skilled workers. The costs initially expended could be amortised further still for the training company if employees who remain in the company's employment after initial vocational training gain additional qualifications in the course of CVET and become specialised for the company's requirements.

The subjective view of businesses is that in-company IVET pays economic dividends: 60% of companies are "very satisfied" or "satisfied" with the cost-benefit ratio of IVET whereas only 11% are dissatisfied (cf. *ibid.*).

A recent comparative study by Dionisius et al. which focused on net costs of in-company training in Germany and Switzerland included a comparative chart of the current figures for both countries.<sup>10</sup> (Cf. Dionisius et al., 2008). Dionisius et al. took as their starting point the considerable discrepancy in the net costs of in-company IVET – unlike German companies which incur annual net costs of approx. €7,528 per apprentice they train, Swiss companies achieve a return of approx. €913. The question they pursued was what parameters influence this discrepancy and to what extent modifying the influencing factors has any impact on the net costs of in-company IVET. The study's findings showed that the large discrepancy between the net costs of in-company IVET in Germany and Switzerland cannot be traced back solely to structural differences between the two countries: the returns generated from the initial vocational training of young people derive largely from the far greater proportion of productive work carried out by apprentices in the company. Whereas German in-company apprentices are doing productive tasks for about 57% of the time, apprentices in neighbouring Switzerland are spending 83% of their working time on productive tasks in the company (cf. *ibid.*, p. 7).

In their study, Dionisius et al. went on to simulate the degree to which boosting the productive workload of in-company apprentices, e.g. on the Swiss model, might reduce the net costs of IVET for German companies. Although the results of the simulation showed that this could certainly be expected to save on costs, at the same time, Dionisius et al. qualified this finding with the remark that it would be very difficult to implement in practice, given the context of the German labour market and German society (cf. *ibid.*, pp. 16f.). Dionisius et al. reach a provisional conclusion on why German companies favour dual system apprenticeships despite the costs they incur. They seek to explain this in terms of a more future-oriented investment strategy on the part of German businesses, because companies train young people in order to ensure that they can meet their own needs for qualified skilled workers. The figures for the mobility of young people after completing their apprenticeships confirm this assumption. In Switzerland only about 36% of young people remain with the company that trained them after completing their apprenticeship, whereas half of German apprentices are given a job by their

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<sup>10</sup> For the comparison of datasets from Germany and Switzerland, the calculation of the gross costs of IVET took account of the personnel costs for training staff and apprentices as well as the costs of materials (cf. Compilation of the gross costs of IVET in Fig. 1). The compilation of data for the net costs side only took into account the returns from the apprentices' productive work (cf. Dionisius et al. 2008, p. 4) [Author's note]

former training company (cf. *ibid.*, p. 16). Conclusion: the benefit of IVET for companies in Switzerland is already so good that it is not necessary to employ apprentices after they qualify.

### *Excursus: Company expenditure on CVET*

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Although the primary focus of this section is on the corporate costs and benefits of *initial vocational training*, it will not completely omit to take a look at the trends and costs of continuing education from the viewpoint of companies.

As indicated in Section 2.1. above, it is assumed that due to the rapid pace of technological and structural development and demographic change, it will become a challenge for many companies to cover their future needs for skilled workers. Accordingly, in future not only IVET but also lifelong learning will take on more and more importance. In corroboration, according to a representative survey of German companies (the IW survey of further training activities 2005) conducted by the Cologne Institute for Business Research (IW), 56% of the companies surveyed expect continuing education and training needs to rise. "The most important driver of in-company CVET in future will continue to be an immediate, concrete need to upgrade the qualifications of employees. Three-quarters of businesses surveyed want to align their CVET strategy with this approach. More than half the businesses intend to take greater account of their employees' wishes and suggestions." (Werner, 2006, p. 14).

Based on the IW survey of further training activities 2005, which was the fifth successive IW study on trends and costs in continuing vocational education and training (CVET) in German companies, as a projected figure for all companies in Germany for the 2004 business year, 84.4% were actively involved in the CVET of their employees.<sup>11</sup> What is striking here is how participation in continuing education rises along with company size: in the year 2004, 93.2% of businesses with 500 or more employees were providing CVET (cf. *ibid.*, pp. 2f).

Companies' expenditure per employee amounted to €1,072 on average, of which one-third was accounted for by direct costs, i.e. direct expenditure e.g. on participant fees, learning and work resources, and two-thirds by indirect costs (opportunity costs) (cf. *ibid.*, pp. 9f). "This figure is notably higher than the 2001 figure of €869 from the fourth IW survey of further training activities, but still below the corresponding figure from the 1998 survey, which was €1,128." (*ibid.*). In contrast to the survey findings in 2001, three years later German businesses were

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<sup>11</sup> On the IW definition of continuing education and training: "The IW survey of continuing education and training activities is traditionally based on a broad concept of continuing education and training. Accordingly, apart from conventional, organised continuing education and training in the form of external and internal seminar-type courses, the category of in-company CVET also includes information events, retraining courses and work-based and self-directed forms of learning. The work-related element is the relevant factor which distinguishes them from general continuing education. Alongside formalised continuing education and training, consideration is given to the growing area of non-formal and intended informal learning processes." (*Ibid.*, p. 2)

investing mainly in external courses and seminars, which also led to an increase in indirect costs as a result of releasing employees to attend. At the same time, increasingly intensive (and hence expensive) use was being made of self-directed media-based learning in comparison to 2001 (cf. *ibid.*, p. 11).

Looking to the future, the companies questioned for the study emphasised their employees' own initiative as a vital factor in CVET, not least to safeguard their own employability. 70% of businesses agreed with this point (cf. *ibid.*, p. 17).

### *Outlook*

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In summary, participation in both initial and continuing vocational education and training is an opportunity for companies, especially looking to the future, to benefit from the distinctively modern, flexible and adaptable structure of German VET.

In-depth analyses will now be needed, not only to investigate the cost-benefit question and the quality of IVET as separate issues, but also to relate the process and output quality as well as the planning, organisation and implementation of IVET to actual participation in IVET. In this framework it could be interesting to inquire into whether or to what extent there is a relationship between the percentage of qualified apprentices offered jobs and the company-specific characteristics of the apprenticeship in German training companies.<sup>12</sup>

### *2.2 Social and public benefit*

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Despite the immense changes in Germany's economy and society since the end of the Second World War, the German dual system of IVET has proven its enduring value throughout this period and has continuously developed in quality and scale (cf. Kremer, 2006).

Accordingly the benefits of its efficiency extend not just to individual companies but to the whole of society.

### *The dual system amid changes in society and the world of work*

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It is self-evident that VET is not impervious to global economic change, technological change and changing structures of employment, and tries to meet the new challenges by means of innovation.

One of many examples that can be cited is how the dual system contributed to German reconstruction after the Second World War. The high quality of its initial vocational training, and the foundation this laid for further specialised learning, meant that it could largely satisfy the growing demand for qualified skilled workers in the first two decades of the post-war period. Thereafter, particularly in the 1960s, wide-ranging innovations were introduced within the dual system, one being the "training by stages" approach which enabled progressive specialisation

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<sup>12</sup> On the "breadth" of IVET in the dual system or, conversely, its "company-specificity" cf. also Section 2.2.2

within occupational fields which, in preparation, had been broadened in scope (cf. Burkart, 2004, pp. 208f.).

At present, according to Fulst-Blei (2003), it is clear that the structural change described above will increasingly obviate the need for jobs requiring low-qualified or unqualified employees. Moreover, a uniform rise in the level of qualifications required of employees is anticipated. They are not only expected to have an ideal combination of specialist and social skills, flexibility and adaptability, but also the willingness to exercise personal initiative and take responsibility. More extensive information on this aspect can be found in the study on qualification needs up to 2020 commissioned by the Bund-Länder Commission for Educational Planning and Research Promotion (cf. Bund-Länder-Kommission, Bonn 2007).

To what extent the dual system of IVET is rising to the challenges of the current transformation of society and the world of work, and thereby contributing to social peace, will be discussed with reference to current research activities in the following subsections.

### *Germany's occupation-based approach to IVET and CVET*

The construct of the occupation-based approach to initial and continuing training (*Berufskonzept*) is traditionally the cornerstone of Germany's dual system. Kloas (1997) lists the standards of the German occupation-based approach as, 1. the skilled nature of the work, requiring the acquisition of specialist, social and methodological competence; 2. the elasticity created by the broad scope of the occupational basis; 3. the resulting transferability of vocational competence to new situations; 4. the initial qualification and competence for lifelong learning; 5. mobility guaranteed by transparency and nationwide recognition of acquired competencies; and finally, 6. protection for apprentices under collective agreements and social legislation. Quality assurance takes place from two directions: one is checking the output of IVET, which is the function of the chamber examination; the other is the regulation of the input side by means of the trainer aptitude examination, the legal standards that govern companies participating in IVET, and the training regulation for each occupation incorporating its general training plan (cf. Kloas, 1997, pp. 22f. and Pilz 2009(a) and Deißinger, 2001, pp. 17f.).

The occupation-based approach to training relies upon recognised and institutionally regulated occupational qualifications which "impart the vocational skills, knowledge and qualifications (vocational competence) necessary to engage in a form of skilled occupational activity in a changing working world. [...]" (Section 1(3) BBiG). This breadth of vocational competence enables dual system apprentices to find jobs in a number of occupational fields on completion of their initial vocational training. Their high level of mobility, once qualified, is also evident from the comparatively short duration of any period of unemployment after completing a dual system apprenticeship (cf. Pilz, 2004, p. 184). Whereas 22.9% of young people are unemployed about one month after completing an apprenticeship, eight months later this figure has fallen to 11% (cf. BIBB, 2009(a), p. 189).

However, the unemployment rate for recently qualified apprentices varies considerably between Germany's western and eastern states. In 2003, the unemployment rate one month after successful completion of an apprenticeship was 37.7% in the eastern states as opposed to 19.4% in the western states. This is largely attributable to structural factors affecting the eastern German economy (cf. *ibid.*).

### *Measures for flexibility and modernisation in the course of Vocational Training Act reforms*

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With initiatives such as the reform of the Vocational Training Act (*Berufsbildungsgesetz, BBiG*) in 2003/2005, or the annual updating of existing occupational profiles and creation of new training occupations, the German VET system is endeavouring to respond to the increasingly complex demands of the world of work in the context of change and internationalisation.

For example, the new provisions of the Vocational Training Act offer greater opportunities for cooperation between individual companies, on the one hand, and between businesses and (full-time) vocational schools, on the other (cf. Kremer, 2006, pp. 30f.). Some smaller and medium-sized companies were previously unable to comply with all the criteria for providing in-company IVET. The new provisions of the Act now give more of them the opportunity to embark on participation in IVET – which means the chance to train their own future skilled workers – by joining forces with other natural and legal persons, including vocational schools, to form what is known as a training network (*Ausbildungsverbund*) (cf. *ibid.*).

Beyond this, young people who have completed a full-time vocational school programme of IVET equivalent to an apprenticeship can now be admitted to the chamber examination (*Kammerprüfung*).

The introduction of qualification modules into vocational training preparation is also expected to produce a range of benefits, which Kloas enumerates as follows: “increased system flexibility (optional modules in the training programmes for recognised occupations and further vocational training courses, usability of individual modules for multiple different occupations and target groups), simplification of the task of drafting and updating training regulations, and the opportunity for achieving more equivalence and recognition at modular level than is possible for complete occupational profiles.” (Kloas, 2006, p. 41). It is also hoped that giving low-achieving and socially disadvantaged young people, in particular, a means of obtaining formal certification for modules towards full qualifications will open up better labour market opportunities for them.

As yet, there are no long-term studies looking at how stakeholders are utilising these new options provided by the Vocational Training Act or the efficiency of the measures discussed. To what extent approximate equivalence can be established, in this way, between company-based and school-based IVET is another issue that will require future discussion.

While Feller (2006) notes that many full-time vocational schools are already benefiting from the new options opened up by the Vocational Training Act and are cooperating with industry in

exemplary fashion – exchanging technical equipment and courses of instruction with companies, for example – it is scarcely possible to say that these practices have become widespread (cf. Feller, 2006, p. 51).

### *Qualification modules in company-based and school-based vocational training preparation*

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This section will deal with illustrative examples of research activities on the use of qualification modules in company-based and school-based vocational training preparation.

A study carried out in 2004 by the German Confederation of Skilled Crafts (*Zentralverband des Deutschen Handwerks*, ZDH) supplies initial findings on the use of qualification modules, according to which over 80% of the companies surveyed were already making successful use of qualification modules (cf. Kloas and Kramer, 2005, p. 15).

Unlike other sectors, where parallel but separate use of different qualification modules was the predominant practice, in 2003 the skilled crafts sector developed around 100 qualification modules for the 17 most popular skilled craft occupations. These have since been in use throughout Germany for company-based introductory training for young people (*Einstiegsqualifizierung*, EQJ). On successful completion, young people receive a report from the company and a certificate from the chamber of skilled crafts (cf. *ibid.*).

The 2006 evaluation of the “Qualification Modules in Vocational Training Preparation” (QUAV) project, which was carried out in the school-based context in the Land of Rhineland-Palatinate, reported positive ratings from both pupils and teachers. In Rhineland-Palatinate, the QUAV scheme is embedded into the prevocational training year and is intended mainly to help pupils requiring special support to obtain an apprenticeship placement (cf. Hörmann, 2006, p. 37). An initial survey showed that more than half of these pupils drawn from secondary general schools (*Hauptschulen*) and special schools (*Förderschulen*) succeeded in passing the qualification module examination. Around 90% of pupils agreed with the two statements that they had enjoyed working on the qualification module and that they had learned something new. The teachers commented on their pupils’ higher motivation and enhanced social skills, among other things (cf. *ibid.*, p. 39).

The final point that remains to be noted is the current lack of any evaluation findings of a comprehensive nature – i.e. covering multiple sectors of industry or regions of Germany – on the use and long-term benefits of qualification modules. A question of particular interest would be to what extent the qualification modules actually make it easier for young people to take up an apprenticeship in the dual system, and to what extent the time spent completing modules is credited towards the apprenticeship period.

### *The “JOBSTARTER CONNECT” programme*

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The “qualification modules” (*Qualifizierungsbausteine*) in vocational training preparation and the “training modules” (*Ausbildungsbausteine*, ABBS) used within the JOBSTARTER

CONNECT programme differ in the following ways: whereas the aim of qualification modules is to facilitate placement in initial vocational training in a recognised occupation by imparting basic skills (cf. Section 1(2) BBiG), the JOBSTARTER CONNECT programme focuses its use of training modules on facilitating the placement of young people who are capable of initial vocational training but at a disadvantage in the apprenticeship-place market (cf. BMBF, 2009(a)).

As defined by the Federal Ministry of Education and Research (BMBF), training modules are “[...] delimited and nationally standardised units within the overall structure of the occupational profile of a recognised training occupation. [...] Training modules combine to cover all the relevant work and business processes that are typical of the occupation and standard practice in the field of work, which, in synthesis, essentially define the occupational performance of fully trained skilled workers, and which can be documented didactically (i.e. as meaningful elements of a learning process). Training modules are derived by reformulating and amalgamating the contents of the regulatory instruments in force: the general training plan and the framework curriculum. The individual training modules are derived from the composite occupational profile of the recognised training occupation and, by the same token, as a synthesis they represent the unified nature of the occupational profile and cover all occupational profile items in full.” (BMBF, 2009(a)).

To date, training modules for IVET in 14 training occupations are available for pilot testing. These were put into practice within 27 selected projects under the first round of funding as from 1 April 2009. As yet, no research findings are available on the acceptance of training modules in the labour market, in society and by young people themselves (cf. Pilz 2009(b), p. 163).

### *VET as a means of upward social mobility*

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Company-based IVET “opens up to people from all social groups the opportunity for employment as a qualified skilled worker and thus lays an important foundation for social integration and participation.” (Kremer, 2008(a), p. 2). However, due to the much higher number of school-leavers from the general education system in recent years, the more difficult economic climate and the resulting short supply of in-company apprenticeships, the numbers of young people able to benefit from this opportunity have steadily declined (cf. Weber, 2008, p. 190).

The purpose of establishing a vocational *Transition System* is to accommodate those young people who do not obtain an apprenticeship placement upon leaving general education. The main target groups for measures of this kind are young people classified as *disadvantaged*, with a lower secondary school leaving certificate or without any qualification, as well as lower-achieving holders of an intermediate secondary school-leaving certificate.

### *Social integration of disadvantaged young people*

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Although there are no formal entry requirements for embarking on a dual system apprenticeship, there are dwindling opportunities for disadvantaged young people to undertake that particular form of IVET. This target group consists principally of young people with a lower secondary school-leaving certificate or without any qualification, school-leavers from special

schools or schools for people with learning difficulties (regardless of the school-leaving certificate obtained), and a growing number of lower-achieving school-leavers with an intermediate secondary school-leaving certificate. Additional groups of young people who fall into the *socially* disadvantaged subcategory include those assessed by the Psychological Service as having behavioural difficulties, young people with dyslexia, those with a history of drug dependency, with a prison record or currently serving a prison sentence, as well as the very different group of young people with migrant backgrounds (cf. German Social Code, Book III, § 211).

As in previous years, data from Germany's National Education Report for the year 2008 (cf. Autorengruppe Bildungsberichterstattung, 2008) show that almost two-thirds of apprenticeships in the dual system went to school-leavers with an intermediate or upper secondary school-leaving certificate, and only about one-third went to school-leavers with a lower secondary school-leaving certificate or without any qualification (cf. *ibid.*, p. 158). According to the educational reporting Authoring Group, these placement rates show that "the dual system is tending to lose one of its great traditional strengths, that of integrating groups with lower educational attainment into employment through initial vocational education and training." (*ibid.*).

However, Beicht et al. (2008(b)) comment that research into this issue should also examine the integrative capacity of other systems, especially the school-based vocational system, which they characterise as markedly less dependent on fluctuations in the economic cycle, but largely unsuccessful at helping to integrate the less able into the job market (Beicht et al., 2008(b), p. 308). Entry to school-based courses leading to a full vocational qualification is often formally dependent on a lower or intermediate secondary school-leaving certificate. Also, because these courses are more often located in the tertiary sector, their expectations of applicants tend to be higher (cf. *ibid.*, p. 308f.). Consequently, Beicht et al. (2008(b)) point out that a key question to be addressed is why the school-based vocational system has never been made more accountable for participating in IVET for disadvantaged young people (cf. *ibid.*).<sup>13</sup>

The introduction of occupations requiring only two years of formal training is under discussion as one possible approach for improving *Hauptschule* leavers' opportunities of entry to the *dual system*. A study carried out by Weber (2008) in the metalworking and electrical sectors sought to establish the extent to which a two-year IVET qualification would open up new opportunities for hard-to-place young people. The study included expert interviews with training managers from 25 companies in Bavaria which, in 2004, had provided IVET that enabled young people to gain a qualification, within two years, as machine and plant operators for the metal and plastics industries (cf. Weber, 2008, p. 194). The results of the study showed that "in comparison with the training occupations requiring three-and-a-half year apprenticeships in the metal industry, a higher-than-average number of young people with a lower secondary school-leaving certificate [obtained training places]." (*ibid.*, p. 195.). Furthermore, the results were very

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<sup>13</sup> On the full-time vocational schools cf. also Section 2.2.4.2.

positive as regards the integration of qualified trainees at the second threshold: 78% of the qualified machine and plant operators had either been employed directly by the companies or were converting their qualification by continuing with an apprenticeship in a related occupation. Even so, the fact remains that a few (less able) trainees had enormous difficulties in following the programme of instruction in the mixed-ability classes of the part-time vocational school. Hence Weber (2008) also appeals, in his conclusion, for the school-based component of IVET provision to include more target-group-specific teaching and learning strategies in order to support young people in the disadvantaged category (cf. *ibid.*, p. 197).

Apart from the necessity for differentiated pedagogic support concepts, Molzberger (2009) calls for institutional reform approaches addressing the integration of disadvantaged young people, which could also be implemented as part of the initiatives towards the Europeanisation of VET (Cf. Section 2.3.3). According to Molzberger, any system for recognising competencies – be it the European Qualifications Framework (EQF) or the European Credit System in Vocational Education and Training (ECVET) – that is geared primarily towards the interests of the labour market rather than towards learners' individual preferences and development potential, is going to be "counterproductive, especially for socially disadvantaged young people" (Molzberger, 2009, p. 159).

Consequently, whether and to what extent the new European instruments really improve options for the recognition of formal qualifications for young people who were previously disadvantaged by the education system are questions that Molzberger leaves open to be answered by future studies (cf. *ibid.*, p. 160).

### *Public reputation of German VET*

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German VET, and especially the dual system of IVET, is highly regarded all over Europe. In Great Britain, close attention has been paid to the structures and workings of the German IVET system for some long time and not without good reason. It also comes as little surprise, according to Deißinger (2001), that "in the recent past, the German system of VET (the 'modèle allemande') has been looked at time after time as a model for refining the French IVET system." (Deißinger, 2001, pp. 22f.). A common factor in both Britain and France is that IVET, in the form of an actual "apprenticeship" undertaken in school *and* the workplace, only accounts for a marginal proportion of VET. In France, for example, the vocational education system is organised for the most part as an exclusively school-based form of learning. That aside, embarking on the vocational education pathway cannot be called a "choice" on the part of French school-leavers, for whom it tends to be a second-best option because they have failed to find a place in the more highly regarded general educational system (schools or universities). Furthermore, those who have successfully completed VET courses tend to be viewed in a negative light by companies, who prefer the "more general" certificates to the "more specialised" (cf. *ibid.*, pp. 28f. and Lauer, 2003, pp. 5f.).

However, the German dual system of IVET is not only highly regarded abroad, but also appreciated and in demand within Germany, by more and more school-leavers with a higher

education entrance qualification, as a rewarding alternative or a prelude to a higher education degree.

### *“High potentials” in the 'dual system' of IVET*

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In the context of transition research, relatively few studies have been done so far on why school-leavers who have gained a higher education entrance qualification (the *high potentials*, in other words), opt *against* going straight from school onto a university degree course *in favour of* completing initial vocational training in the dual system (first). To address this question, Pilz (2008) carried out a questionnaire survey in the period 2002/2003, in which 517 apprentices from the banking and insurance sector who held a higher education entrance qualification were asked about their motives for choosing an apprenticeship (cf. Pilz, 2008, pp. 224f.). Among the key findings of the study, it was shown that those who chose not to go into higher education embarked on the apprenticeship in the hope of earning as much money as quickly as possible (85.9%) and were banking on good opportunities for advancement by means of relevant further training (68.8%). The other factor praised by almost 80% of the high potentials who chose not to go to university was the apprenticeship's strong relevance to practice (cf. *ibid.*, pp. 228f.). The hoped-for rewards of a dual system apprenticeship were confirmed by a majority of the respondents upon retrospective assessment of their apprenticeship: according to their responses, 96% of the young people who had gone on to study after their apprenticeship agree that the apprenticeship enabled them to “gain experience of practice in the world of work, which is beneficial for a degree programme” (*ibid.*, p. 240). Furthermore, as many as 95% of the so-called *double qualification holders* deny that the apprenticeship period was wasted time, with the majority feeling that the apprenticeship helped to mature their personalities and career choices (cf. *ibid.*).

School-leavers with a higher education entrance qualification do not confine their appreciation to in-company IVET. In addition, 22% of *Abitur* holders go on to choose a course leading to a full occupational qualification at a full-time vocational school (cf. Hall and Schade, 2005, p. 25).

The existing research desiderata, for example concerning the long-term career success of people gaining cumulative double qualifications (IVET plus higher education degree), arise particularly in the context of the German debate, where the risk of crowding out *Hauptschule* and *Realschule* leavers is discussed, on the one hand, whilst also acknowledging that *Abitur* holders in the IVET system help to underpin its quality, boost its reputation and open up the IVET system in newly emerging occupational fields requiring high-level qualifications.

### *The status of full-time vocational schools*

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Current research publications draw a variety of conclusions about the status of full-time vocational schools in the German VET system.

For example, Hall and Schade (2005) use data from the 2003 Microcensus to show that the unemployment rate among former dual system apprentices is 2.5% higher than that among

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former full-time vocational school pupils. According to the authors, the main explanation for this is the high proportion of full-time vocational school courses leading to qualifications in physical and personal service occupations (78.1%). Whereas employment prospects in the industrial-technical occupations which are characteristic of in-company IVET tend to be diminishing as a result of macroeconomic change, unemployment is lower among people who trained for service sector occupations (cf. *ibid.*, p. 25).

On the other hand, according to Feller (2005), in contrast to the dual system, school-based VET courses have always been “run somewhat half-heartedly and without ongoing elaboration, on the whole, downgraded almost to a taboo subject out of respect for the dual system and for fear of jeopardising its existence. [...] There has been a persistent preconception about commercial apprenticeships in particular, in spite of the fact that they lead to final qualifying examinations and recognised occupational titles, that school-based IVET is somehow an inferior route into a proper occupation.” (Feller, 2005, p. 18).

As indicated in Section above, at this point the extent to which innovations in the Vocational Training Act can be expected to bring about any convergence and equivalence between the different segments of VET (the dual system, full-time vocational schools, health sector and social care sector vocational schools, and IVET in the civil service), and how this might also foster public and industry recognition and acceptance of school-based IVET, remain unanswered questions to be addressed in future research activities.

### *2.3 Economic benefit*

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The stability and competitiveness of the German economy is based to a significant extent on the efficiency of occupationally-qualified skilled workers, and hence also on the potential of VET (cf. Kremer, 2008(b)). The well-developed VET structures are acknowledged to be one of the strengths of the German education system. Particularly in the 1960s and 1970s, VET was regarded as one of the keys to the successful economic development of the Federal Republic of Germany (cf. Pechar, 2006, p. 111).

Now just as much as then, the system of VET in Germany not only supports adaptation to sectoral changes in industry but also enables training to respond to structural changes on the demand side of the initial vocational training market.

### *Friction avoidance through VET*

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In-company IVET in the dual system enables young people to acquire practical skills and abilities in a work-based setting whilst providing a parallel school-based curriculum to ensure that learning content not specific to the individual company or sector is also covered. By the time they are fully qualified, apprentices are therefore equipped with a broad training which does not exclusively relate to one specific company, and which is therefore “marketable” (cf. *ibid.*, pp. 112f. and Section 2.2).

In some respects this may contradict human capital theory, which presupposes that the willingness of companies to engage in IVET must theoretically be geared purely to company-specific training rather than a marketable initial vocational qualification. Nevertheless, German companies participate in the initial vocational training of young people, making use of internal career ladders, for example, to prevent their own apprentices from drifting away and hence to reap longer-term benefits from the training provided (cf. Section 2.1).

Gangl (2003) demonstrated with reference to comparative empirical analyses on the basis of data from twelve European countries that “a higher level of education and occupational specialisation help to avoid unemployment and low-qualified employment.” (Gangl, 2003, p. 72). The results of his study proved that as a general rule, dual system IVET with its combination of an occupational qualification and concrete work experience minimises the risks of unemployment (cf. *ibid.*, p. 73) and as a result, it is valued accordingly on the labour market.

This positive effect of dual system IVET is also a contributory factor to Germany’s relatively low rate of youth unemployment, which was 11.2% in mid-2009. This compared favourably with the EU average of 19.5% and the figures for Spain (36.9%) and France (23.9%) (cf. Eurostat, 2009).

Moving on to consider the interactions between the dual system and the labour market, one question that arises is to what extent young people’s career prospects are blighted as a consequence of having their apprenticeship contract terminated, which is quite a common occurrence in the German dual system, and whether it presents them with an insuperable barrier to finding employment thereafter.

To obtain information on the whereabouts of apprentices after the termination of their apprenticeship contracts, among other questions, in autumn 2002 BIBB carried out a questionnaire-based survey of over 2,000 young people who had terminated an apprenticeship contract in the training year 2001/2002. As a preliminary comment and the departure point for the study, it should be mentioned that in the period from 1997 to 2000 there was a continuous rise in the number of contract terminations in company-based IVET. Mid-study in the survey year 2001, this stagnated at the previous year’s level, which was still 24.7% of the total number of newly concluded apprenticeship contracts. In other words, about one in four of all contracts were affected (cf. Schöngen, 2003, p. 35). The vast majority of contract terminations occurred during the first year of IVET, and half of those took place very early, i.e. during the trial period. The reasons given by both apprentices and companies for terminating contracts are complex. 46% of the young people surveyed mentioned personal reasons (changes in health or family status). A further one in three cited reasons relating to career choice and vocational orientation (cf. *ibid.*, p. 36). “Company-related reasons for contract terminations were clearly dominated by conflicts with instructors or business owners (around 60% of respondents). A comparatively high proportion (43%) cited poor teaching of the training subject matter.” (*ibid.*).

The findings of the BIBB study provided evidence, however, that the termination of an apprenticeship contract did not prompt the majority of young people to give up on training

altogether, and did not therefore entail “definitive exclusion” from the labour market. Even if the premature termination of an apprenticeship contract usually results in a (short-term) setback in a young person’s occupational biography, half of the young people questioned still re-entered the dual system and started another company-based apprenticeship in a recognised occupation. Furthermore, almost 9% switched to an IVET programme at a full-time vocational school or reoriented themselves towards a higher education degree. This meant that almost two-thirds of the respondents (62%) remained in the education system after termination of their apprenticeship contract. 9% of those surveyed found a job. 17% became unemployed after their training contract was terminated (ibid., p. 36).

The figures support the view that premature termination of an apprenticeship contract need not always be a personal “disaster”. In many cases, it is a sensible reorientation in career terms, particularly if the occupation or company falls short of the apprentice’s expectations or the quality of training is not up to standard. Nevertheless, it must be pointed out that in terms of the economics of education, this is a waste of resources which should be minimised by means of appropriate instruments, such as better vocational guidance and more intensive individual counselling (e.g. case management, provision of support). Proposals could be put forward for further pilot schemes and research projects in this area.

In his conclusion on the BIBB study, Schöngen (2003) states that the situation in the IVET and labour market is more problematic for those young people who, for example, had no better qualification than a lower secondary school leaving certificate from a *Hauptschule* at the time of their contract termination. He contends that adequately developed communication and conflict management skills can be lacking on both sides (i.e. companies and apprentices), and calls for some long-overdue upgrading of professional apprenticeship management, relevant training courses, mediation and apprenticeship coaching.” (ibid., p. 38).

#### *Adaptive work within the dual system to ensure stability and competitiveness*

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In 2009, Germany had a total of 340 state-recognised occupations requiring formal vocational training. Of these training occupations, 82 were newly developed and 219 were modernised in the period from 1996 to 2009 (cf. BIBB, 2009(b)). The social partners are involved in these processes right from the start, and input on qualification requirements, particularly from the business perspective, is an integral aspect. In this way, the dual system helps to ensure that young people in IVET receive appropriate preparation for a world of work that is subject to constant change.

As mentioned in Section 2.2 above, young people who gain a qualification within the dual system qualification are equipped with a certain breadth of skills and abilities within their training occupation. In times of sector-related crises, this gives them the option of seeking work in alternative subsegments of the labour market (cf. Pilz, 2004).

Since the 1980s, the proportion of people employed in the service sector has constantly grown. Whereas 59.5% of working people were employed in the tertiary sector at the beginning of the 1990s, in 2007 this rose to 72.3% (cf. Statistisches Bundesamt, 2008(a), p. 115).

Uhly (2007) looked into the question of how far trends in occupational structures in employment are also reflected in dual system IVET (Uhly, 2007, p. 219). The findings of the study show that although only one-third of state-recognised training occupations can be classified as service occupations, the number of new dual system apprenticeship contracts in this sector has risen consistently since 1996. In the year 2005, almost 57% of all new contracts concluded were for service occupations, as opposed to around 43% for production-related occupations (cf. *ibid.*, p. 221).

The study by Ulrich (2008) arrives at similar findings, and confirms the consistent decline in apprenticeship places in production occupations, and especially the building occupations, in which numbers have approximately halved between 1994 and 2005 (cf. Ulrich, 2008, p. 23f.).

In the skilled crafts, too, recorded numbers of apprenticeship contracts have declined from 38.7% in 1995 to 28.7% in 2007. These figures, according to Ulrich, refute the thesis (which many researchers were still defending as recently as 2004) that the dual system was too rigidly embedded in the production sector and, in the medium to long term, would concentrate on the skilled crafts sector.

On this evidence, it can be said that dual system IVET is clearly keeping pace with developments in the economy as a whole, and has “arrived” in the service and knowledge society (Walden, 2007, p. 45). Another trend in the development of the dual system of IVET is manifested *inter alia* in the fact that young people with a university entrance qualification have most obviously benefited from the newly created training occupations. Measured in terms of the apprentices’ prior educational attainment in the school system, a trend towards higher qualification can be observed (cf. *ibid.*, p. 243 and Section 2.2). One reason for this might be the increasingly demanding level of expectations in the training occupations. 97% of the apprentice-instructors and teachers interviewed for the 2005 BIBB Vocational Training Experts Monitor stated that the complexity of the world of work had increased in the last 15 years. 93% of the experts confirmed that the level of performance that companies expected of applicants had also risen (cf. Ulrich, 2008, p. 27). These shifts on the supply side have repercussions upon young people’s opportunities for transition into company-based IVET. A large number of young people were left without IVET because their entry qualification is not adequate in the competition for apprenticeship places (cf. Section 2.2).

In conclusion, the issue of how best to respond to demographic change and meet the resultant demand for qualified skilled workers with due regard for changing economic conditions remains an unanswered question for further research, but also a basic structural challenge requiring practical solutions. It remains to be clarified, for example, how disadvantaged young people with learning difficulties can play more of a part in the transformation to the knowledge

society, and how much of a difference will be made by such initiatives as the new measures under the Vocational Training Act.

### *Europeanisation trends in VET*

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Current innovations in education policy in the VET sector, which can be seen as a response to the progressive internationalisation of the labour market, are derived primarily from the European Union's Treaty of Lisbon.<sup>14</sup> One of the Treaty's main aims is the creation of more qualified employment in Europe. Accordingly, a range of deficiencies in national (vocational) education systems need to be remedied. Discussions in this area focus on the impermeable divisions between one education system and another, and the resultant lack of transparency of vocational qualifications in Europe, which is considered to be a barrier to growth (cf. Severing, 2006, p. 16).

The EU's common educational policy programme aims to strengthen the competitiveness and dynamism of the European economic area, firstly by means of recognition and transparency of qualifications, secondly through the EU-wide quality assurance of VET, and thirdly by means of standard reference points for the classification of qualifications.

The European Qualifications Framework (EQF) will be used in future to ensure the quality and comparability of vocational as well as general educational qualifications (cf. Frommberger et al., 2008, pp. 5f.). The EQF will open up the following opportunities to people undertaking VET in Germany: on the one hand, it will facilitate educational and labour market mobility throughout Europe by improving the transparency of training content and qualifications; on the other hand, it will also foster greater permeability within national education systems, i.e. between the general, vocational and higher education systems, with better arrangements for recognising modular qualifications; beyond this, lifelong learning will be expanded on the basis of Europe-wide recognition of (modules towards) formal qualifications and certificates (cf. Kuda and Stauß, 2008).

It will be a task for vocational education research in future to examine what impacts the European instruments for recognition and transparency have on national certification systems, that is to say, to what extent they contribute to the mobility of participants and to a unified European labour market, or to what extent any incompatibility between different systems of assessment and certification actually tends to restrict mobility and flexibility.

In 2004, a further step towards opening up the German system to Europe was taken in the Vocational Training Act by incorporating the possibility of completing limited periods of initial vocational training in another country. "Thus the period spent abroad is deemed by law to be a part of initial vocational training, as long as it is relevant to the training objective. [...] Since the phase completed abroad in these cases does not interrupt the training contract, further provisions – on such matters as compulsory payment, recognition of the skills, knowledge and

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<sup>14</sup> For further information, please refer to: Gateway to the European Union web portal, 2009

abilities acquired abroad or the trainee's tax and social security status – become superfluous.” (Sondermann, 2005, p. 6).

In the meantime, the numbers of applications submitted and approved to spend periods abroad within the individual Leonardo da Vinci<sup>15</sup> programme have risen substantially in comparison to previous years. In initial vocational training alone, the number of apprentices and vocational school pupils completing part of their IVET abroad has more than doubled since 2001 (cf. BIBB, 2009(a), p. 307).

To sum up the research position with regard to the measures described above, as yet no long-term studies are in progress to analyse the ways in which all the described measures for opening up VET systems to Europe will interact with national economic development.

### *The dimension of educational economics*

Finally, the analysis of economic benefits can be completed by mentioning the benefit of VET in Germany from the point of view of educational economics. In times when scarce resources must be deployed as efficiently, effectively and fairly as possible (Hummelsheim and Timmermann, 2009, p. 93) for educational purposes, economics gains ever-increasing importance as a reference discipline for educational research. Educational economics assumes that the wealth of a country is dependent on its invested capital, the number of working people and their lifetime and annual working hours, and their work productivity or, by implication, the level of their qualifications (cf. Klemm, 2009, p. 21).

“Work productivity can be increased in three ways – by upgrading the qualifications of employees, by qualitative improvement of the invested capital (e.g. the machinery deployed) and by optimising the interaction of individual production factors, e.g. cooperation among employees [...]. Improvements in all three areas call for preliminary groundwork in terms of education and qualifications.” (ibid.).

In the modern knowledge society, investment in education and training benefits not just the individual but the country's economy as a whole.

### *State education spending and resource distribution*

In the past few years, the Ministries of Culture of the German Länder have introduced a series of reform measures in the school sector aimed at raising the efficiency of the education system. In the course of these reforms, one intended aim is to adapt the education and training sectors to the requirements of the globalised knowledge society, while another is to respond effectively to demographic change and developments in German society. First and foremost, it is safe to assume that these measures will lead to higher state expenditure (cf. Statistisches Bundesamt, 2008(b), p. 34). In the year 2005, German state expenditure on general and

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<sup>15</sup> For further information on the Leonardo da Vinci programme, please refer to: European Commission, 2009.

vocational schools was €50.2 bn, an increase of around 0.2 % on the previous year and 12.8 % higher than in the year 1995 (cf. *ibid.*). However, enormous differences are found between the individual German Länder: in Mecklenburg-Western Pomerania, Brandenburg and Thuringia, for example, expenditure on education was reduced by 15% or more between 1995 and 2005, whereas both North Rhine-Westphalia and Baden-Württemberg increased their spending by 23.7% and 26.3% respectively within the same 10-year period (cf. *ibid.*, p. 36). These regional differences can be traced back to declining pupil numbers, on the one hand, combined with the cumulative effects of deficits on the public budgets managed by the Länder.

By international comparison, according to the OECD, Germany's total expenditure on publicly and privately-run educational establishments in 2005 amounted to €115.2 bn, equivalent to 5.2% of gross domestic product (GDP). This places Germany below the OECD average of 5.7%. Iceland (8.0%), the USA (7.4%) and Korea (7.2%) are the front-runners in terms of their spending on education (cf. Hummelsheim and Timmermann, 2009, pp. 122f.). These figures cannot be taken entirely at face value, however, because both Germany's expenditure on continuing education (cf. Section 2.3) and Federal Employment Agency grants relevant to IVET and CVET were omitted from the OECD's calculations (cf. Klemm, 2009, p. 18). Furthermore, since Germany's dual system only involves part-time attendance at vocational school, for example, the costs are lower than in countries with a predominantly or wholly school-based vocational training system.

### *Expenditure in the VET sector*

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The vocational schools' share of public expenditure, at €3,500 per pupil in 2005, was below the average expenditure on school-based education at lower and upper secondary levels, which amounted to €4,700.<sup>16</sup> (Cf. Statistisches Bundesamt, 2008(a), p. 57).

The lower expenditure of €2,200 per pupil on part-time teaching within the dual system contrasts with the higher-than-average spending on wholly school-based VET which amounted to €4,250 in 2005. In-company IVET in Germany is predominantly financed directly by the companies providing the training. Beyond this, companies receive some support, including some public funding, in the form of partially or fully subsidised apprenticeship places (cf. Hummelsheim and Timmermann, 2009, p. 121).

In addition to IVET, an important prerequisite for mastering the challenges of technical, economic, demographic and societal change is lifelong learning. With those aims in mind, one of the key components of lifelong learning is CVET (cf. Pütz, 2005, p.2).

Companies, the state, public funding (central, regional and local governments), the Federal Employment Agency, the European Union, trades unions, chambers, companies, umbrella

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<sup>16</sup> These figures refer to the average expenditure per pupil in the course of one year and include staff costs (both teachers and administrative staff), operating expenditure and capital investment.

[Author's note]

organisations, associations, and last but not least, individuals themselves all contribute to the financing of CVET (cf. Expertenkommission "Finanzierung Lebenslanges Lernen", 2004). So far, however, no detailed breakdowns of financing have been prepared: "the current financing mix has developed historically, with increasingly complex segmentation to match the diversity of target groups and providers, and is comparatively lacking in transparency because reliable data on financing volumes, where available, cover only select providers, heterogeneous categories of spending and irregular periods of time." (ibid., p. 82).

According to the calculations by Klemm (2009) on the basis of data from the Federal Statistical Office, public expenditure in 2005 on funding for in-company CVET and on supporting individuals to participate in CVET measures (see below) amounted to around €14 bn or 0.6% of GDP.

Under Book III of the German Social Code, following a consultation process the employment agencies fund individual CVET by means of "education vouchers" if the CVET measure is deemed necessary to advance the individual's continuing occupational career or, most pertinently, if it is conducive to finding employment or averting the threat of unemployment. In 2005, such expenditure on funding individual participation in CVET amounted to €1.3 bn, equivalent to 0.1% of GDP.

Nevertheless, according to the recommendations of the Expert Commission on Financing Lifelong Learning (Expertenkommission "Finanzierung Lebenslanges Lernen" (2004)), in the course of transition to the knowledge society and the attendant growth in demand for learning and qualifications, it is untenable to insist that the state alone must increase spending on education and training; over and above this, it calls for a greater commitment of resources by individuals themselves.

#### *2.4 Benefits for individual participants*

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Since the preceding sections have concentrated largely on VET and its main areas of influence, the final section will examine current research findings which focus on the benefits of VET from the *perspective of participants*.

##### *Findings on aspects of assuring the attractiveness of the VET pathway* *Legally protected certification of qualifications*

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At national level, uniform standards are defined for the VET sector by means of training regulations and (framework) training curricula, and later the legal certification of courses within the framework of regulated further training. Qualification titles within the VET system have legal status which guarantees their holders unconditional rights to take certain subsequent qualifications within the education system itself, as well as conditional rights within the employment system, since they are prerequisites for applying for certain positions (cf. Severing, 2006, p. 22).

As mentioned in Section 2.2 above, the introduction of qualification modules in VET is intended to similarly standardise the recognition of modular qualifications. These are expected to ease the process of transition into IVET and later into employment, partly because the generic usability of qualification modules across a range of occupations allows for easier dovetailing with the continuing education system (cf. Zeller, 2008, p. 145).

### *Continuing vocational education and training*

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Against a background of technological progress, structural change in industry and demographic change, it is anticipated that CVET will take on growing importance (cf. Bellmann and Leber, 2005).

As innovative technologies, new products and production processes “shorten the half-life of knowledge” (ibid.), individuals are faced with a constant need to update their knowledge and adapt their occupational skills (cf. also section 2.3).

“It is now beyond dispute that lifelong learning is taking on enormous significance. One particular goal of continuous learning is considered to be its potential to help break down social inequality.” (ibid., p. 14).

In Germany the most important sources of information on CVET are studies by BIBB and the Cologne Institute for Business Research (Institut der Deutschen Wirtschaft Köln, IW), the Establishment Panel survey by the Institute for Employment Research (Institut für Arbeitsmarkt und Berufsforschung, IAB) and the Continuing Vocational Training Survey (CVTS) of companies in the EU (cf. ibid.).

Since it is not possible to present the full spectrum of surveys within the scope of this report, the following description relates primarily to the studies by BIBB, which extensive researchers have already drawn upon extensively as a data basis for relevant in-depth analyses of CVET in Germany (cf. e.g. Hartmann, 2008).

A central objective of the BIBB study on the costs and benefits of CVET (“*Kosten und Nutzen beruflicher Weiterbildung*”) was to establish the direct and indirect costs of formal and information CVET measures in which people had taken part over the course of a year (2002/2003), and to juxtapose these with the benefit aspects, with a view to subsequently ascertaining the motives for participation in CVET (cf. Beicht et al., 2006).

The findings of the study showed that the individual motives for CVET fall mainly into the category of continuing personal development and broadening of skills (cf. ibid., p. 7). Half of CVET participants surveyed considered it “very important” to adapt themselves to new job demands by undertaking continuing education. Other motives for CVET were rooted in the hope of improving job security by reducing the risk of job loss, and of potentially earning a higher salary. The actual benefit was rated as “very high” by more than half of CVET participants. Furthermore, one-quarter of respondents stated that the benefit was worth significantly more

than the time and effort expended. Only around 9% rate the value of the benefit negatively against the time and money invested (cf. *ibid.*, p. 8).

Currently, there are no definitive research findings to characterise the trend in CVET participation in Germany, because the underlying definition of “continuing education” varies from one research institution to another. “Therefore, analyses on the basis of data from the IAB Establishment Panel, which is based on a rather narrow definition of ‘continuing education’, are more likely to conclude that company-based CVET has risen in the period from 2001.” (Walden, in BIBB, 2009(a), p. 243). CVET as defined by IAB was 43% in 2005, in contrast to the figure of 69% measured by the CVTS in the same year (cf. BIBB, 2009(a), p. 235).

In-depth presentations of participation rates and hours of CVET-attendance are not included in this report as a consequence of the unavailability of transparent data. A brief insight into CVET participation by German businesses was given in Section 2.1.3.4 above.

Concerning individual participation in CVET measures by employees, it is worth remarking, however, that by no means everyone has unlimited access to all options or can meet all the prerequisites. For instance, Hummelsheim and Timmermann (2009) voice concern that sizeable groups in society are unable to expend the extra motivation, time and money because “resources are distributed unequally between the social groups” (Hummelsheim and Timmermann, 2009, p. 129).

In their study of the determinants of individual willingness to invest in education, Arens and Quinke (2003) state that in addition to sociodemographic factors (cf. Schiersmann, 2007, p. 153), a critical factor is the willingness of private households to invest in participation in (continuing) education. Thus in the year 2003, only 43% of unskilled or semi-skilled workers took part in informal CVET, in contrast to 79% of managerial employees (Arens and Quinke, 2003).

For despite the fact that under the German system for financing CVET, companies and the state bear a substantial share of the monetary cost, the bulk of the financial burden (38%) is nevertheless borne by the individual participants themselves (cf. Beicht et al., 2005, p. 264 and Sections 2.1 and 2.3).

### *Recognition of informally acquired learning*

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As indicated in Section 2.3 above, the main thrust of current trends in the Europeanisation of VET is to improve the transparency and reciprocal recognition of vocational qualifications in Europe. In future, however, both European and national qualifications frameworks will be expected not to concentrate solely on formal qualifications<sup>17</sup> and quantitative learning input “[...] but on competencies – regardless of how they were acquired and the length of time taken. This places informal learning on an equal footing with learning which is the outcome of formalised education processes.” (Schopf, 2006, p. 200).

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<sup>17</sup> Like the ISCED97 framework, for example. [Author’s note]

In Germany there is relatively limited recognition of informal learning in comparison with countries like Great Britain, France or Finland, for example (cf. *ibid.*, p. 202).

The following procedures are cited as two examples of how, within the German system, certification can be obtained for informally acquired competencies, or how such competencies can be used to qualify for access to the next stage of the educational pathway: the first is the instrument of *additional qualifications in IVET*, a procedure governed by the Vocational Training Act whereby young people at the very beginning of their careers may be awarded certification for elements of CVET completed during their apprenticeship (cf. *ibid.*, p. 201). Secondly, the Vocational Training Act includes a provision on special admission to the qualifying examination in a recognised occupation (referred to as the *Externenprüfung*), which gives workers who have missed out on an apprenticeship the opportunity to gain “recognised formal certification for competencies acquired in informal settings.” (Straka, 2006, p. 214).

According to Schopf, the “major weaknesses” or “blank spaces” (Schopf, 2006, p. 202) in the award of credit for informally acquired competencies in the context of German VET are the absence of an adequately tried-and-tested national qualifications framework for IVET and CVET, the fact that it is unclear who may award certification, and finally, according to Schopf, that German companies lack “a ‘culture’ of promoting the retrospective acquisition of formal qualifications.” (Schopf, 2006, p. 202).

Based on the problem area that informal competencies are constantly acquired in active working life but can seldom be documented and reliably and transferably certified, Koch (2006) carried out a company survey under the TbQ pilot project on the transparency of vocational qualifications for SME staffing (“TbQ-Transparenz beruflicher Qualifikationen für den Personaleinsatz im KMU”) in which he asked German small and medium-sized business owners to define their expectations of certificates which have been acquired outside of formalised VET (cf. Koch, 2006, p. 217). Within the pilot project, a set of instruments was developed for collecting evidence of the qualifications acquired informally by employees in the course of their working lives, in a form capable of providing meaningful documentation for (future) employers (cf. *ibid.*, p. 218). One initial finding of the study is that both informal and organised CVET is taking place in the majority of companies. However, only 55% of companies surveyed stated that they regularly document and certify the CVET activities of their workforce (cf. *ibid.*, p. 220). Above all, “complex social and personal qualifications remain largely invisible and – at the point of moving to a new job, for instance – cannot be purposefully used. [...] This is a serious gap in the present system of on-the-job certification.” (*ibid.*). The company surveys nevertheless showed that despite their past shortcomings in documentation and certification, the business owners questioned have precise ideas on the way that certificates need to look in order to be useful and meaningful: 91% of the companies surveyed regarded it as “very important” or “important” for the document to state how long a particular activity had been carried out. 84% found it “very important” or “important” for activities within the workplace to be listed. Finally, in the view of the Human Resources managers questioned in companies, the certificates should

normally be restricted to one page, and thus document the qualifications in a relatively compact format (cf. *ibid.*, pp. 222f.).

Koch comes to the conclusion that, as a practical company-based certification system, the usefulness of both ECVET18 and other credit point systems is constrained by certain limitations: “They are not transferable to practice and do not include the activity-related details that companies consider relevant.” (*ibid.*, p. 225).

Consequently it could be of interest for future research activities to develop qualifications frameworks which are not only compatible with the current developments at European level, but which can also be used by companies in practice without generating any great “translation” and specialist abstraction workload.

### *Advantages of the company-based learning venue* *Findings from teaching and learning research*

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Finally, when examining the individual benefits and the advantages of German VET for participants, it is worth underlining the merits of the company-based learning venue within the dual system of IVET.

However, this should be prefaced with the observation that the specific branch of vocational education research informed by educational psychology is not currently undertaking any longitudinal studies covering a variety of occupational group, or any genuine experiments with control groups or comparative studies of such scope.

Oberth et al. (2006) make the general point that practice-based, on-the-job learning in the company-based context is conducive to an “immediate” style of initial vocational training which excels by enabling apprentices to “directly experience the benefit of what has been learned. Learning progress can be experienced directly.” (Oberth et al., 2006, p. 7). Furthermore, workplace practice develops personal and social competencies which can only be appreciated when the individual comes to use them in practice. The purposeful interlinkage of theoretical learning from the part-time vocational school and the company with practical experience can be a good source of motivation, especially for less able pupils. They discover “the practical relevance of apparently ‘abstract’ vocational knowledge. The experience of accomplishing tasks – and overcoming problems – successfully can boost and stabilise self-esteem.” (*ibid.*, p. 16).

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<sup>18</sup> ECVET stands for “European Credit System in Vocational Education and Training” and refers to a credit transfer system which will be introduced in the course of the Europeanisation of VET under the Copenhagen Process. ECVET is intended to be an instrument which facilitates the transfer, validation and recognition of learning outcomes. For further information, please refer to: Deutscher Bildungsserver, 2009

In the AUDI study, Seifried and Sembill (2005) specifically address the psychological “construct of emotional well-being”<sup>19</sup> and its meaning for vocational-school-based and company-based teaching and learning processes. The study aimed to explore to what extent emotional well-being represents a relevant parameter in the company and training-centre learning venues used for industrial-technical IVET (cf. Seifried and Sembill, 2005, pp. 666f.). In a longitudinal study planned to run over two years, apprentices at AUDI AG were surveyed on a weekly basis using questionnaires to determine their “degree of learning motivation” (ibid., p. 667). The core findings of the study showed that apprentices rate the practical atmosphere in the workplace considerably more positively than the more theory-based training centre. Working in the company, the young people surveyed tend to have more opportunities to contribute actively, can work autonomously, and moreover they feel socially integrated and taken seriously as members of staff (cf. ibid., p. 668).

Seifried and Sembill therefore conclude that IVET in the school and company settings should be oriented to the experiences and needs of young people and designed to encourage apprentices to take responsibility for themselves, since these represent “important conditions for the success of teaching and learning processes” (ibid.).

At this point, one existing research desideratum needs to be addressed in the context of international comparative vocational education research. There is still a lack of valid comparative attainment studies for the German VET sector of equivalent quality to those in the general education sector. Some initial developmental approaches exist in this area, but will require further elaboration in future (Baethge et al. 2006).

The comparative attainment study by Fulst-Blei (2003), at least, which compared German and British youths in the VET sector, indicates that standards of attainment vary between the two countries, dramatically in some instances, in relation to both overall attainment and individual dimensions of competence; also that the levels hitherto used at EU level, for example, are not very informative and tend to disadvantage Germany.

### *Findings from surveys of apprentices*

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In the research project on IVET quality in Germany from the viewpoint of apprentices (*“Ausbildungsqualität in Deutschland aus Sicht der Auszubildenden”*) conducted in 2008, some 6,000 part-time vocational school pupils in the second year of an apprenticeship in the 15 most popular training occupations were asked “what quality factors they consider important in their companies and part-time vocational schools, and to what extent their quality expectations are fulfilled in reality.” (Beicht and Krewerth, 2008(a), p. 4). Initial findings of the survey showed that

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<sup>19</sup> “The construct of ‘emotional well-being’, along with its connotation of medical ‘well-being’, reflects the emotionally and motivationally-rooted, subjective and situation-specific experience of a state that arises as a catalyst, a side-effect and/or a consequence of cognitive processes.” (Seifried and Sembill 2005, p. 658)

young people attached particularly high value to comprehensible explanations of learning content by the vocational school teacher (75%) and by the apprentice-instructor (67%). Vocational school pupils also expect their teachers to demonstrate good mastery of the learning content. 70% of the apprentices questioned rated a good working atmosphere and respectful treatment by colleagues as “very important”. The reality of IVET does not fully live up to the young people’s expectations. Nevertheless, 74% of respondents affirmed that their instructors’ mastery of the subject matter was very good, while 52% of apprentices said the same of their vocational school teachers. Even if the vocational school teachers, for example, received somewhat poor ratings from their pupils for what they deemed to be the most important quality criterion, namely “explaining the subject matter comprehensibly”, the young people surveyed were satisfied overall with the conditions of their apprenticeship in the school and the workplace. For example, 71% of apprentices “(very) strongly” agree that an instructor is always available in the workplace for them to talk to at any time. The best average grade for a dual system apprenticeship was awarded by trainee banking employees (cf. *ibid.*, pp. 12f.).

Consequently, future studies should look more closely at the strengths and weaknesses within individual occupations, to provide a basis for making specific improvements to each given training regulation and framework curriculum to ensure the quality of IVET, as is already the case, for example, during the annual cycle of modernising existing occupational profiles and creating new occupations requiring formal training (cf. Section 2.3.2).

### **3. Summary and unanswered questions**

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The present report documents that the German system of IVET (and particularly the dual system) combined with continuing education make an important contribution to the education and training of the younger generation and guarantee a qualified workforce. Although the monetary and non-monetary costs for all stakeholder groups (see “Synthesis Chart” and “Introduction”) cannot be disregarded, the costs are far outweighed by the benefits, which extend far beyond what can be quantified in purely monetary terms.

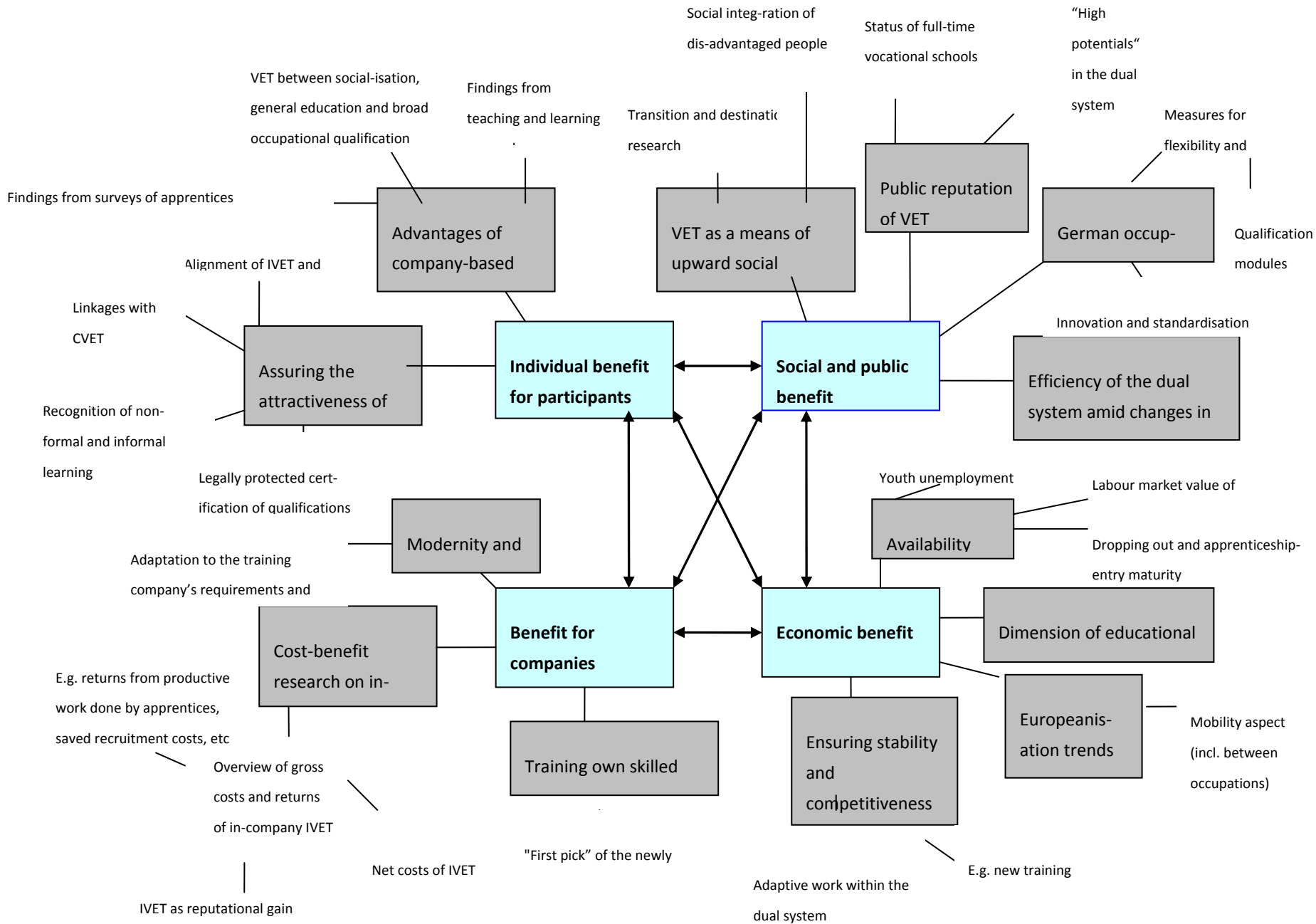
Nevertheless, and this must be spelt out in clear terms, there are various aspects which are difficult if not impossible to “convert” into easily comparable units. Job satisfaction for employees, for example, cannot be measured in monetary units, and neither can the reputational gain of the companies who train apprentices.

Another problematic fact is that any comparison of the costs and benefits of VET which goes beyond a purely economic cost calculation in monetary units has to include a variety of different disciplinary approaches, as can be seen from the present report.

Consequently, it is necessary to reconcile the most diverse academic cultures and research methods, e.g. from the fields of economics, sociology, psychology, labour market research, education, teaching and learning research, in order to build up anything even approximating to a comprehensive picture of the issues.

The task of vocational education research in this context may be to bring together the different disciplines, approaches and findings to that end, and either to tackle the research desiderata relevant to VET research itself, or to encourage adjacent research disciplines to undertake wider-ranging research activities. The present report has tried to put forward appropriate suggestions at various points.

Accordingly, German vocational education research can continue in its efforts to develop a multidimensional as well as consistent and robust model of the cost-benefit ratio of vocational education and training. As the next step, this national approach can be extended into a model that is serviceable for the whole of Europe, which would enable multidimensional comparisons between the Member States. The first step in this direction on a national basis has been taken with the synthesis presented at the outset, which may also succeed in stimulating further developments. Only if the findings of the various disciplines involved are pooled effectively will it be possible to flesh out the “Benefits of VET” construct in such a way as to lend momentum to national and European innovations in the context of VET policy.



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# Mobility and Migration

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Ingrid Wilkens

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## **1. Foreword**

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Based on a worldwide comparison, Germany came second only to the USA in the level of immigration it experienced over the past few decades (OECD 2008). Most recently, however, immigration has fallen considerably. A majority of the migrants living in Germany can now be categorised as longstanding migrants (Altzuwanderer), who have already been living in Germany for ten or more years. What can be done to expedite their integration, which has not yet been a complete success, is currently an issue of the utmost relevance in Germany.

Participation in working life is deemed to be an important factor in the social integration of migrants (OECD 2007; Beauftragte 2007a). Since the 1980s, however, the unemployment rates for Germans and migrants have increasingly followed divergent trends; nationally, the rate for non-Germans is now about double the rate for Germans. In part, this can be attributed to the fact that – in comparison with other countries' immigrants – they have attained a significantly lower than average level of education (e.g. Commission of the European Communities 2007): a major proportion of unemployed longstanding migrants received only a low level of schooling

and have not completed a formal occupational qualification (e.g. Grundig et al. 2006). Hence, the situation of the younger generation now coming up through the education and employment system, and that of recent migrants entering it laterally, is coming under increasing observation. Studies of participation in company-based initial vocational education and training (IVET) likewise show a growing divide opening up between Germans and migrants. A marked under-representation of migrants is also found in continuing vocational education and training (CVET) which has been called the “key to employability” (Bundesvereinigung der Arbeitgeberverbände 2007).

Many young migrants are ultimately left without any vocational qualification<sup>20</sup> (on this, see Krekel et al. 2009). Yet in Germany, the completion of IVET in a recognised occupation is increasingly a vital prerequisite for entry into working life, continuity of the employment biography, and security against unemployment and poverty (on this, see Bonin et al. 2007; Klös et al. 2008). Thus, the trend described has substantial consequences for the future position of – relatively young – migrants in the labour market, as well as their socioeconomic situation.

On the other hand, a shortage of sufficiently qualified junior employees is noted, which may have a detrimental impact on the national economy. Hence, there is a vast need for action in the vocational education and training (VET) system for several reasons. The Federal Government has explicitly emphasised the goal of raising the participation of migrants in IVET and CVET in its National Integration Plan (Beauftragte 2007a).

The present article begins by describing the broad features of the German VET system and explaining how the concept of the “migrant” is dealt with statistically. It goes on to discuss current research questions and introduces the institutions involved in such research. There follows an outline of the key results of studies, by tracing the participation of migrants in the different segments of the VET system and then giving an overview of the broad discussion of the causes of the described development. In addition, it sheds light on potential issues to be addressed in the emerging discussion about utilising the potential of young migrants. The last two sections draw conclusions about future research needs and bridge the gap to the discussion on migration and the shortage of skilled workers.

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<sup>20</sup> On a European comparison, the proportion of young people in Germany without school-leaving qualifications is still comparatively low but slightly rising counter to the trend (Autorengruppe 2008).

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## 2. Introductory information

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### *The German VET system*

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The German system of initial vocational education and training comprises three segments (Autorengruppe 2008; detailed account of the German VET system: Arnold et al. 2006; Hippach-Schneider et al. 2007). Traditionally VET is organised within the “dual system”: companies take responsibility for the practical training, which is supplemented by instruction at public part-time vocational schools to cover the theoretical orientations and knowledge-based elements of the occupation. For many years, dual system IVET has met Germany’s needs for young skilled workers, kept youth unemployment at a low level in comparison with other European countries, and integrated young people from less well-educated families into recognised occupations (Autorengruppe Bildungsberichterstattung 2008).

Since apprenticeship contracts are market-allocated, however, overall imbalances can arise in sector-specific, occupation-specific or regional subsegments of the market. Although the pressure on the apprenticeship-place market has been alleviated somewhat since 2007, it can still be assessed as difficult for applicants. Since young people used the predominantly publicly financed school-based vocational system as a fall-back option, this segment gained in significance. The main institutions in this category are the full-time vocational schools offering courses leading to a full vocational qualification, with qualification during employment and pre-vocational training as additional options, and the health service vocational schools. In contrast, the various programmes offered within the Transition System, which has undergone similar expansion, only cover knowledge and skills “relevant” to IVET or, in some cases, to particular occupational fields, but are primarily intended to help young people attain “apprenticeship-entry maturity”. Rather than leading to a recognised vocational qualification, the system frequently results in a series of work-scheme placements.

In the year 2006, new entrants to the German IVET system were distributed across the three segments of VET as follows: 43.5% joined the dual system, 16.8% the school-based vocational system and 39.7% the Transition System (Autorengruppe Bildungsberichterstattung 2008).

Continuing vocational education and training (CVET) plays an important role in safeguarding jobs (Wilkens 2005). Depending on the providers and the type of financing, formal continuing education – i.e. organised courses, training programmes and seminars – can be differentiated into company-based, individual and publicly funded forms (Wilkens/Leber 2003). CVET consists of an extremely diverse range of forms and options, however, which makes it more difficult to collect data on CVET activities (e.g. Bellmann 2003; Seidel 2006).

### *On the definition of migrants and collection of relevant statistics*

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The main influences on migration into Germany have been the influx of low-qualified migrant workers from the mid-1950s, the subsequent arrival of family members to join them, a temporary rise in numbers of asylum seekers, and immigration by (recent) ethnic German

repatriates from the former Eastern bloc. The latter group, who have, on average, acquired middle-level vocational qualifications (e.g. Herbert 2001), are descendants of German emigrants and have been granted privileged rights to German citizenship based on “*ius sanguini*” (the principle of descent) under procedures similar to naturalisation.

The reforms of German citizenship law (including the introduction of elements of the “*ius soli*” or the territorial principle) increased the numbers of migrant workers and their families undergoing naturalisation as well as the numbers of children of migrants having German nationality. (On the composition of the migrant population, particular with regard to education, see Konsortium Bildungsberichterstattung 2006.) Since the standard official statistics only distinguish between people of German and non-German nationality but take no account of the migrant status of individuals or their families, they no longer do justice to the growing demand for information on an increasingly diverse society and its educational needs and achievements. People born in Germany as the children of migrant workers, i.e. the “second generation”, are recorded as migrants, whereas (recent) ethnic German repatriates, who have experienced migration directly and whose German-language skills may be poor, are recorded as German citizens. In order to remedy this shortcoming, the concept of the “migrant background” was developed. People are said to have a migrant background if “they themselves or their parents or grandparents migrated to Germany after 1949, regardless of their current nationality” (Autorengruppe Bildungsberichterstattung 2008: VIII; Alda 2008). Until the statistics have been adapted accordingly, studies based on official data on the participation of migrants in IVET<sup>21</sup> generally make use of the “non-German” concept, whereas empirical studies and the Microcensus are already using the concept of “migrant background”. This causes disjunctures in argumentation and stands in the way of differentiated disclosure of the integration problems in German VET.

As a proportion of Germany’s resident population, non-Germans make up about 10%, whereas people with a migrant background account for nearer to 18%. This rises further when younger cohorts are considered; for example, for people up to 25 years of age the rate is 27%, and for children, it can be as high as approx. 50% (in cities). Non-Germans are distributed very unevenly across the German Länder and their level of integration varies from region to region (see Riesen 2009; Woellert et al. 2009). As a consequence of recruitment behaviour, they live predominantly in urban agglomerations in the west of Germany. While the proportion of non-Germans among 18 to 21-year-olds in the western part of Germany amounts to almost 12%, in the former GDR it is only 2% (BIBB 2008). Analyses of non-German youths in IVET therefore refer primarily to the territory of pre-unification West Germany. The majority hold the citizenship of one of the countries where Germany used to recruit: Turkey (41%), former Yugoslavia (11%), Italy (10%) or Greece (4%) (Siegert 2009). The proportion of non-German apprentices who are EU citizens is about one-quarter in total (BIBB 2008).

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<sup>21</sup> In this text, the word “migrants” is used as a generic term for non-Germans and people with a migrant background.

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### *Measurement of integration*

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The indicators used to assess the integration of migrants into the education and employment system are, firstly, non-Germans as a percentage of a particular group (e.g. apprentices), which can be compared with the percentage that they represent of the general population, and secondly, the group-specific ratios for non-Germans. A key indicator is the group-specific training participation ratio for non-Germans, which states the size of the percentage of non-German young people who have concluded a new apprenticeship contract, relative to the total number of non-German youths of the relevant age for IVET (BIBB 2009b). It is assumed that the more the group-specific ratios for non-Germans move towards those of the German comparison group, the more the gap between participation opportunities for non-Germans and Germans must be closing.

### **3. The German research landscape**

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#### *Research questions on the vocational education of migrants, and data sources*

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The central questions addressed by German research into the initial vocational education and training of migrants is how their opportunities develop in comparison to those of Germans (without a migrant background), particularly in (dual system) VET, what are the causes of their difficulties in the different segments of the VET system, and what need for political action can be identified. The investigation of these questions is based predominantly on data from VET statistics, which yield information on IVET in the dual system, as well as statistics from the vocational schools. Hence, the analyses tend to be descriptive in approach.

To supplement these, representative surveys are available for the VET sector, although these have no specific focus on migrants. The resulting analyses generally differentiate based on whether the “migrant background” criterion is met, allowing the construction of groups of migrants and comparison groups without a migrant background. One example of these surveys are the regular school-leavers surveys carried out by the Federal Institute for Vocational Education and Training (BIBB), which deal with the vocational orientations of young people, their occupational-choice behaviour and their success in finding company-based IVET (e.g. BIBB 2008; Friedrich 2006, 2008). Vocational Training Applicant Surveys are conducted by the Federal Employment Agency (BA) and BIBB at irregular intervals (last survey 2008). These investigate application behaviour and placement after the start of the initial vocational training year (Ulrich/Granato 2006; Granato 2008, 2009). The BIBB Transition Study (2006) used a retrospective longitudinal data survey in the attempt to generate statements about promising as well as unproductive IVET pathways, and at the same time yielded insights on transitions into the full-time vocational school model of IVET (e.g. Beicht et al. 2007b, 2008; Beicht/Granato 2009). In order to gain information on the connections between socio-demographic characteristics of young people with low educational attainment (*Hauptschule* leavers), their orientations and routes through the transition system, the German Youth Institute (DJI)

Transition Panel was initiated (2004–2009; Gaupp et al. 2008). The panel is also used to collect information on the question as to the significance of support potentialities, school-based and out-of-school support, young people's action strategies and their competencies. The findings have not yet been fully evaluated, however.

Studies on participation in continuing education are also based in large part on surveys of individuals or companies but, as yet, few studies are available which explicitly deal with the participation of migrants in continuing education. In this case, side-analysis is conducted to investigate any differences in the development of participation opportunities for migrants and for Germans (e.g. Kuwan et al. 2006; Leber/Möller 2005, 2008).

In addition, some migrant-specific research projects are undertaken, which are frequently qualitative in nature. For example, they study the ways of making use of migrants' intercultural competencies (see Section 6), the possibilities of specific support for non-German learners (e.g. through course design) and the requirements faced by teaching staff at vocational schools and in continuing education establishments due to the growing heterogeneity of learner groups. Sociological issues are also addressed, for example by investigating the extent to which cultural practices, or society's assessment of these, influence the status passage of migrants between school and IVET (Schittenhelm 2005a, 2005b).

Furthermore, case studies, evaluations and scientific monitoring reports are available on national and regional programmes and projects to support disadvantaged young people – including young migrants – in VET. These also describe best practices and derive recommendations for action (as one of many examples, see Schaub 2007 on the Vocational Qualification Network BQN; an overview is given in Linten et al. 2009). In the last few years, numerous studies have also been conducted in the course of flanking research or evaluation of occupation-specific (language) support courses or similar measures for people with migrant backgrounds (e.g. Deeke 2004, 2005, 2006, 2007; Schweigard 2006, 2007, 2008; Karg 2009; Badel et al. 2008).

Against the background of the challenges of the Treaty of Lisbon, it is the European Commission's aim not only to establish transparency between VET systems and comparability between the knowledge and skills acquired in the course of IVET in the individual Member States, but also to foster cross-border initial vocational training activities. Some examples of binational exchange of experience and cross-border cooperation in VET can be observed in Germany. The German Vocational Training Act has recently opened up the option of completing a phase of IVET abroad, which some international companies are now making use of.<sup>22</sup> At the

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<sup>22</sup> Some sectors, prompted by the impending skills shortage in eastern Germany specifically, are calling for the recruitment of apprentices from regions of Poland or the Czech Republic close to the German border (Ulmer/Ulrich 2008).

moment, however, there is no sign of research activities on cross-border IVET or on migration motivated by the desire to pursue VET in Germany.

### *Participating research establishments and networks*

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The central German research establishment in the field of vocational education research is the Federal Institute for Vocational Education and Training (BIBB), which observes and investigates IVET and CVET in Germany, identifies the future tasks of IVET, promotes innovations and develops practice-based proposals for supporting IVET and CVET (on the statutory basis of the Vocational Training Act of 23 March 2005). BIBB cooperates with universities and research institutes on these activities (BIBB 2009c). It produces the Annual Vocational Training Report, which aims to describe the status and prospective development of vocational education and training in Germany, and regularly contains a – relatively brief – section on the participation of migrant youths.

The Authoring Group Educational Reporting (Autorengruppe Bildungsberichterstattung, formerly the Educational Reporting Consortium – Konsortium Bildungsberichterstattung) pursues the aim of providing information on “the framework conditions, features of progress, the results of and returns from educational processes” with reference to a set of indicators (Konsortium 2005). This involves describing the institutional options, on the one hand, and their use within the learning biography, on the other. The Authoring Group explains the development of the education system, works up appraisals of its strengths and weaknesses, and supports the identification of needs for political action. Based on official data and social research surveys, the indicators are documented in time series, differentiating as far as possible between Germans or people without a migrant background, and non-Germans or persons with a migrant background.

Other institutions which carry out research activities on the integration of migrants into the (vocational) education system and the labour market – albeit not as their specialist research focus – are the German Institute for Employment Research (IAB) (e.g. Burkert et al. 2007, 2008; Leber 2006; Bellmann 2003) and the Federal Office for Migration and Refugees (BAMF) (Siegert 2008, 2009). The German Youth Institute (DJI) conducts research on children, young people and families. The research focus of “transitions into work”, to which the DJI Transition Panel is also assigned, investigates life circumstances and trajectories in different education systems, paying particular attention to young migrants.

Infratest Social Research is commissioned by the Federal Ministry of Education and Research to publish the Continuing Education Reporting System (Berichtssystem Weiterbildung, BSW) on a three-year cycle, based on a representative survey of the population (Kuwan/Thebis 2004; Kuwan et al. 2006). The German Institute for Adult Education (DIE) makes information available on CVET activities and the providers of such training measures.<sup>23</sup> The German Business Institute

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<sup>23</sup> However, this presentation concentrates predominantly on general continuing education.

(Institut der Deutschen Wirtschaft Köln, IW) and the Federal Statistical Office conduct company surveys on in-company CVET.

University research on the (vocational) education of migrants is another relevant strand of work. As representative examples of many different institutes, mention is made here of the Interdisciplinary Centre for Education and Communication in Migration Processes (IBKM) at the University of Oldenburg, and the Institute for Migration Research and Intercultural Studies (IMIS) at the University of Osnabrück.

#### **4. Young migrants in the German IVET system**

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##### *Under-representation of migrants in the dual system*

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Germany's Annual Vocational Training Report 2009 (BIBB 2009b) shows that a good 1.5 million young people were engaged in a dual system apprenticeship in 2007. The proportion of non-Germans was 4%. The fact that, in the same year, non-Germans made up almost 10% of the relevant age-group shows that non-German youths are under-represented within the dual system. The training participation ratio for non-Germans reached 24% compared with 58% for Germans. Young women – regardless of their citizenship – embark on a dual system apprenticeship less frequently than men (see Tables 1 and 2).

The discrepancies between the participation rates of non-Germans and Germans in dual system IVET is considered “dramatic” (Granato 2006: 36; Beauftragte 2007b). The greatest cause for concern is that both the cited ratios have fallen faster for non-Germans than for Germans in recent years. The proportion of non-Germans fell from 6% to 4% between 2000 and 2007, and while the training participation ratio for Germans fell during the same period from 63% to 58%, that of non-Germans dropped from 30% to 24% (see Table 1). Accordingly, the opportunities for participation in dual system IVET have worsened for migrants. This specifically affected male migrants – and particularly those of Serbian/Montenegrin, Greek and Turkish origins (Siegert 2009).

Analysis of IVET participation by nationality shows it to be highest for young people with Croatian citizenship, followed by those from Italy and Bosnia/Herzegovina, and lowest for people from Serbia/Montenegro (Siegert 2009).

Apart from analysis of the participation of migrants in the dual system, another important consideration in relation to equality of opportunity is that of distribution among different occupations requiring formal training (training occupations). Non-Germans often fill unattractive, monotonous jobs, and when it comes to IVET they also tend to be found in the less popular occupational fields. A few studies indicate that the vocational (choice) spectrum of young non-Germans is very narrow (BIBB 2008; Siegert 2009). Although around 350 training occupations exist, almost half of non-German apprentices (45%) undergo initial vocational training in just ten occupations. A subset of these occupations offer a comparatively low

probability of subsequent permanent employment, lower than average pay and limited opportunities for advancement (Granato 2003; Gogolin et al. 2003; Boos-Nünning 2006; see also DGB 2007). At the moment, the civil service, which could take on a trailblazing role with regard to the initial vocational training of non-German youths, barely trains any young people who are not German nationals.

### *Migrants in the school-based vocational system*

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This segment of VET comprises full-time vocational schools (*Berufsfachschulen*, BFS), advanced technical schools (*Fachschulen*, FS) and health sector vocational schools (*Schulen des Gesundheitswesens*, SdG). The cultural sovereignty of the German Länder results in a great heterogeneity of institutions. In contrast to the dual system, the school-based vocational system provides training mainly for service-sector occupations (e.g. in the fields of health, care and childcare). Thus, the tertiarisation of the economy partly explains the growth of this sector (Autorengruppe Bildungsberichterstattung 2008). Since this segment provides IVET for many traditionally women's occupations, the proportion of female learners is high (see Krüger 2003).

In the Integration Report of the Federal Office for Migration and Refugees, Siegert (2009) shows that in the context of scarcity of places in the dual system, IVET at a full-time vocational school has evidently proved to be an important fall-back option, especially for young people of non-German citizenship: during the period between 2000/01 and 2006/07, non-Germans as a proportion of all dual system trainees fell by 11% (males) and 9% (females), whereas their presence at full-time vocational schools increased by 9% (males) and 6% (females). For young non-German females, in particular, the school-based vocational system plays an important role: almost one-third of them attend a full-time vocational school. This group consists mainly of Turkish nationals. The health sector vocational schools provide IVET to fewer trainees but present an even more extreme picture with regard to gender distribution: here the proportion of women is almost 80%. In particular, numerous young women of Polish or Russian nationality (17% and 12% respectively) opt for this form of IVET. – It is problematic that qualifications acquired in some branches of the school-based vocational system are less highly regarded than qualifications from the dual system (Schreier 2008).

### *Over-representation of migrants in the Transition System*

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The Transition System, too, has expanded markedly in the last few years (e.g. Ulrich 2006). This is very heterogeneous in structure, comprising the school-based IVET pathways of the prevocational training year (*Berufsvorbereitungsjahr*, BVJ) and one-year basic vocational training (*Berufsgrundbildungsjahr*, BGJ), full-time vocational schools not offering a full vocational qualification, employment agency prevocational courses, support measures provided by local authorities and the German Länder, and work-experience placements, e.g. introductory training for young people (*Einstiegsqualifizierung Jugendlicher*, EQJ). In some cases, young people also have the opportunity to retake a school-leaving qualification (Autorengruppe 2008).

The fact that 60% of the young people in the Transition System are non-Germans underlines the problematic situation of migrants in the German VET system (Autorengruppe Bildungsbericht 2008). Large numbers of young men end up in the Transition System. Their educational biographies are often hallmarked by diversions, repeated resits and periods spent marking time, from which finding a route into formal training in a recognised occupation can be extremely difficult (Beauftragte 2007b: 70; Eberhard et al. 2006; on the different trajectories, cf. inter alia Beicht/Granato 2009).

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### *Resumé*

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Migrant youths have poorer opportunities in the German initial vocational education and training system than Germans without a migrant background (see also Figures 1 and 2 and Table 4). The probability of their obtaining an in-company apprenticeship or indeed a full-time school-based programme of IVET leading to a recognised occupational qualification is considerably lower (Lehmann et al. 2005; Autorengruppe Bildungsberichterstattung 2008; Beicht et al. 2009; Beicht/Granato 2009; a survey of the literature is provided by Boos-Nünning/Granato 2008). In 2008, non-Germans accounted for 13% of unplaced applicants (BIBB 2009b). Cross-referenced with the factor of a migrant background, the BIBB school-leavers surveys show that, of the applicants without a migrant background, 35% find a company-based apprenticeship, as opposed to only 23% of those with a migrant background (BIBB 2009b). For people from a migrant background, opportunities for obtaining a company-based apprenticeship do not improve commensurately with the more highly valued school-leaving certificates (Granato 2007); this can also be observed with regard to school grades (Ulrich et al. 2006). Furthermore, the transition from school and IVET takes longer, on average, for young people with a migrant background (Reißig et al. 2006; Beicht et al. 2007a). Ultimately 22% of these applicants end up unemployed or in casual jobs (Granato 2007; BIBB 2009b). These figures, along with the observation that if non-German youths have a low-level of school education but have completed IVET in a recognised occupation, their transition into the labour market is “easier and largely analogous” to that of their German peers (Autorengruppe 2008: 182; Burkert et al. 2007; Brück-Klingberg et al. 2009), show how important it is to increase the participation of young migrants in IVET.

## **5. Approaches to explaining the lesser opportunities of migrants in the IVET system**

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In numerous studies, the question is pursued – albeit often only as an ancillary line of inquiry – of where the causes for the (increasing) disadvantage of migrants in VET might be found. These are grouped thematically below.

### *Demographic, regional, economic and legal framework conditions*

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The Annual Vocational Training Report (BIBB 2008) attributes the described trend partly to demographic factors. Firstly, in the last few years, some high birth rate year groups have reached

school-leaving age. The improved supply situation allowed many companies to operate more vigorous selection. This led to crowding-out processes in the IVET system, which tended to work to the detriment of non-Germans (e.g. Granato et al. 2006). Secondly, the reforms of German citizenship law have reduced the numbers of non-Germans (e.g. Uhly/Granato 2006). Since naturalisation is nevertheless selective (Zwick 2006; Beauftragte 2007b; Seibert 2008), and the migrants who opt to take up German citizenship are primarily those with comparatively few vocational integration problems, it is possible that the less successful migrants are disproportionately represented in the category of non-Germans. A regional factor which adversely influences the opportunities of migrants to obtain an apprenticeship is their concentration in urban conglomerations, where only about a quarter of all apprenticeships are offered (Autorengruppe Bildungsberichterstattung 2008).

Several studies (Burkert et al. 2008; Brück-Klingberg et al. 2008; Beicht et al. 2009) indicate that economic developments are another key factor. In the last few years, Germany recorded a massive reduction in employment subject to mandatory social insurance, particularly in industry – where many migrants have traditionally worked – which was mirrored by a reduction in the supply of apprenticeship places. In industry, the number of non-German apprentices has declined by 62% since 1995. The fact that even in the services sector, their numbers have declined by 22%, is a sign that tertiarisation and structural change affecting occupations can only partly explain the deterioration in opportunities for migrants in the VET system.

One aspect barely touched upon in the debate, on the other hand, is that legal regulations governing the job and apprenticeship market can also disadvantage non-Germans. Owing to the expansion of the EU, the status of numerous migrant workers and their offspring has changed from non-German nationals to EU citizens, giving them full access to the labour market. A large proportion of non-German youths have Turkish nationality, however, and thus fall into the category of “third-country nationals”, to whom certain employment restrictions apply. Trade unions point out that companies fear bureaucratic procedures and will exclude young people from the outset if their application does not make it clear that they have a permanent residence permit (Roßocha 2008: 20).

#### *Prior educational deficits and discrimination in the school system*

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A central aspect of the debate on the opportunities of migrants in the education system concerns the frequent occurrence of language deficits (on linguistic self-assessment of migrants, see Frick/Wagner 2001; Schweigard 2007b) and inadequate school-based and family-based prerequisites for education (Beauftragte 2007b). Young people come to the apprenticeship-place market with school-leaving qualifications of different types and standards or without qualifications. Young people with an intermediate secondary school-leaving certificate or with the *Abitur* (upper secondary school-leaving certificate giving university entrance entitlement) have markedly better prospects of finding an apprenticeship than those with a lower secondary school-leaving certificate from the *Hauptschule* (Eberhard et al. 2005; also see Ulrich 2008; for a better understanding of the possible transitions, see Figure 3). In recent years, school pupils with non-German citizenship and/or a migrant background have succeeded in improving the prior

qualifications they bring from school. Nevertheless, on a national scale they are still under-represented to a slight extent in the *Realschule* and to a great extent in the *Gymnasium*, whereas they are over-represented at the *Hauptschule* (on educational qualifications by nationality, see Table 3; on the educational opportunities of migrant children, e.g. von Below 2003; Fuchs et al. 2008). Considerable differences can be observed, however, both between the German Länder and on the basis of country of origin (Konsortium Bildungsberichterstattung 2006; Autorengruppe Bildungsberichterstattung 2008); children and young people with a Turkish migrant background often have difficulties at school (Konsortium Bildungsberichterstattung 2006). Pupils whose parents have a low level of education themselves or were not socialised in the German school system are deemed likely to be at a disadvantage (ibid.). Many parents are unable to realise the significance of IVET in a recognised occupation, or to support their children in seeking an apprenticeship place (Schreier 2008; Kanschat 2009). In part, these arguments are also supported by human capital theory (based on Becker 1964; e.g. Diefenbach 2008a; Granato 2003 including the cited literature), which interprets educational endeavour as a kind of investment that is only made if it promises commensurate returns (in detail cf. Wilkens 2009).

The poor performance of migrants in the school system is also attributed to institutional discrimination: in barely any other country is school success found to correlate so strongly with social background and language skills (Baumert et al. 2001; Prenzel et al. 2004, 2007). The main reasons for this are a lack of language support, early selection at the end of the primary phase, and the middle-class orientation of the school in terms of teaching content, teaching staff and use of language (e.g. OECD 2006; Auernheimer 2009). A lack of public funding, and the fact that half-day teaching is still widespread, places financial and time constraints on the necessary support. At school, this gives rise to a kind of “social screening with ethnicisation effects”, in which the combination of belonging to a lower social class and speaking a language other than German at home prove particularly disadvantageous (Britz 2006: 26). This applies most of all to “late entrants” who joined the German system at age six or above (Beicht et al. 2008).

### Orientation and search strategies

From some quarters, migrant youths are reproached for a lack of interest in an apprenticeship and low commitment to the application process. Whereas a survey from the year 1998 provided evidence that, at that time, half of non-German youths without a vocational qualification had never applied for an apprenticeship at all (Ulrich 2005, 2006), more recent studies by BIBB have revealed only minor differences between the search and application practices of young people with and without a migrant background (Ulrich 2006; BIBB 2009b; Diehl et al. 2009; Granato 2008, 2009). However, analysis of the DJI Transition Panel data shows that the intention of “wanting to start an apprenticeship soon” is less widespread among youths with than without a migrant background (38% versus 52%). Instead, the former were more frequently planning to stay on at school (30% versus 22%). Furthermore, their orientation to IVET was found to vary depending on their country of origin: ethnic German repatriates proved to be significantly more interested than young people from Turkey in embarking on an

apprenticeship as soon as possible (Reißig et al. 2006; Gaupp et al. 2007; on possible reasons: inter alia, Skrobaneck 2007; Kuhnke et al. 2006).

### *Company selection procedures*

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Companies' decisions about the recruitment of apprentices are guided by their expected manpower needs (for a more differentiated discussion, cf. Dietrich et al. 2009). The concentration of tasks in the world of work, along with technical progress, result in growing demands in the training occupations and higher expectations on the part of companies with regard to the competencies of applicants (Ehrenthal et al. 2005; on selectivity, Baethge et al. 2007). Companies frequently criticise the candidates' lack of "apprenticeship-entry maturity", particularly that of non-German youths (Imdorf 2008; on this discussion, e.g. Ehrenthal et al. 2005; Müller-Kohlenberg et al. 2005; Dressel 2006). In making their selections, human resources managers are guided primarily by school-leaving qualifications and grades (discussed more extensively in Ulrich 2006), where the performance of migrants tends to be poorer. Studies show, however, that young people with a migrant background have substantially lower opportunities even when they do have comparable school-leaving qualifications or good grades (Boos-Nünning 2006; Uhly et al. 2006; Anon. 2007a; Ulrich 2008). This is attributed to an undifferentiated view of migrants as a homogeneous group, to culture-specific selection procedures in companies, and to reservations on the part of human resources managers (Granato 2003, 2006), which are also explained by aspects of signal theory (Solga 2005). Evidently, many human resources decision-makers assume that applicants with a migrant background will have "insufficient knowledge of German (company) culture" and will lack certain competencies. "Problem avoidance" and anticipated customer reservations may also come into play (Imdorf 2008). Other possible reasons may include language problems (Kalter 2006) and the fact that applicants with a migrant background can be significantly older, since they are more frequently downgraded and required to repeat grades at school (Ulrich 2006). Some recruitment evidently follows ethnic lines, which operates to the particular detriment of young people of Turkish origin (Boos-Nünning 2006; Kalter 2006).

An additional exacerbating factor is that migrant youths are less able to rely on networks or informal contacts within companies, which are possibly of considerable value in the allocation of apprenticeship places (Boos-Nünning 2006). An older study found that 25% of German as opposed to only 13% of non-German apprentices owe their apprenticeship place to their parents' personal contacts (Rieker 1991; cited after Granato 2003).

### *Resumé*

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Clearly the poorer opportunities for young migrants in the IVET system can be attributed to a whole cluster of causes. The strained market conditions favour processes whereby some young people are crowded out from the dual system, and in which non-German nationality or a migrant background seems to be an especially significant factor (Granato 2003; Uhly et al. 2006; Granato 2006; Diehl et al. 2009). More research needs to be devoted to the influence of German language competence on access to the IVET system.

## 6. Migrants in CVET in Germany

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The major differences between the existing German studies on continuing vocational education and training (CVET) with regard to definitions, data-collection units and study periods mean that the findings can only be used comparatively with certain provisos. In spite of this, the studies arrive at similar findings and make it clear that participation in continuing education varies depending on qualification, occupational status, nature of employment contract, and citizenship (Kuwan et al. 2006; Wilkens 2005; Bellmann 2003; Schröder et al. 2003). Germans are more likely to participate in continuing education than non-Germans; this effect is significant (Wilkens/Leber 2003) and may be attributable to non-Germans' lower average level of qualification and generally lower occupational position. However, the participation of Germans in continuing education is markedly higher than that of non-Germans, even when groups with good school-leaving qualifications are compared.

By differentiating by country of origin, it is clear that no major differences are found between Germans and non-Germans from other EU countries as regards participation in continuing education. Participation rates are higher than average for Eastern Europeans and lower than average for Turkish citizens (Leber/Möller 2008). Furthermore, differences in participation in continuing education may be caused by barriers on the part of participants ("self selection") or by the willingness of companies to finance continuing education ("external selection") (Leber/Möller 2008). Finally, the language difficulties experienced by non-Germans may be an important factor in their lower participation. Explanatory approaches to participation in continuing education are derived partly from human capital theory (Becker 1964). Other approaches to be drawn upon come from segregation and segmentation theory (Doeringer/Piore 1971), and reference is also made to discrimination (Leber/Möller 2008).

Due to the unusual situation of migrants in the education and employment system, publicly funded continuing education is of particular importance to this group. But even at continuing education events run by the Federal Employment Agency, the participation of unemployed non-Germans has trailed behind that of Germans for years. One inhibiting factor can be seen in the need for special support (Bethscheider 2008), often specifically to address insufficient knowledge of the German language. For this reason, occupation-specific German language courses for people with migrant backgrounds and job experience (Deeke 2004, 2005, 2006a, 2006b, 2006c, Schweigard 2007a) place the emphasis on teaching the specialist language of an occupation, as well as job-application training.<sup>24</sup> But only a minority subsequently accomplish the leap into a regular job covered by social insurance (Deeke 2007). Such courses tend to increase labour market opportunities for recent ethnic German repatriates, but are of little

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<sup>24</sup> In contrast, the so-called integration courses are not classified as part of VET. They are intended to teach basic German language skills and provide information on Germany's culture, legal system and values.

benefit to non-Germans or other naturalised citizens. Turkish nationals have particular difficulties in re-entering the labour market (Schweigard 2008).

The proportion of people without a qualification in a recognised occupation is especially high among migrants (Granato/Gutschow 2004). They, too, can make use of numerous time-honoured measures supporting qualification during employment, which are intended to give people a second chance to obtain a recognised occupational qualification. Other programmes link qualification modules, language support courses and offers of employment, but often fail to result in the hoped-for transition into employment. It is pointed out, however, that the successes of such programmes should not be measured merely in the form of certificates or destinations following the measure, because they equally support “socialisation, vocational orientation and the development of generic competencies” (Badel et al. 2008).

## **7. More recent approaches to utilising the potential of migrants**

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People with a migrant background may have particular experiences, broader horizons and intercultural and foreign-language competencies by virtue of that background. These personal resources, some of which can be utilised for work purposes, are still distinctly undervalued in German industry (Granato 2009). Only gradually is a mind-shift taking place in the political debate: increasingly, a migrant background is being conceived of as a resource rather than a shortcoming.

At the same time, individual authors (e.g. Settlemeyer 2008) are emphasising that it is not only in jobs with an international dimension (foreign trade, etc.) that intercultural communication has an important role to play. The growing proportion of migrants in the population also makes it necessary to refine customer or client orientation with this group in mind, and to adapt the products and services offered accordingly. This takes on special relevance in relation to personal services – e.g. in the medical or social sectors – where more culturally sensitive arrangements are called for. Staff with migrant backgrounds and intercultural competence can facilitate contact and communication by, for example, explaining or interpreting, speaking to the clientele in a more targeted way, or helping to overcome misunderstandings (e.g. BIBB 2006; in great detail, Settlemeyer 2009).

A variety of recommendations are made in existing studies for capitalising more effectively on the resources of individuals with a migrant background. Firstly, more openness to the intercultural dimension is called for in VET. For example, institutions should deal more “productively” with increasing heterogeneity (e.g. Kimmelman 2009a, 2009b; El-Mafaalani 2009a, 2009b; a practical example on the development of intercultural skills in vocational schools is described by Seibt 2009). According to studies by BIBB, the special learning situation of migrants is not adequately taken into account in continuing education sessions with a mixed participation structure – i.e. German and migrant attendees – even though this could be achieved with very little additional effort (Bethscheider 2008). The prime focus of such efforts would concern the methodological and didactic competencies of teaching staff, along with

flanking support for CVET courses. Secondly, the principles of diversity management should be put into practice more vigorously in companies, i.e. making the diversity of employees a conscious element of human resources management and organisational development (Kimmelman 2009a: 7).<sup>25</sup>

But it is not just a matter of sensitising industry and society to diversity, but also making targeted efforts to foster existing bilingualism and intercultural competencies in the school-based and vocational education system (Beauftragte 2007: 71). Experts (e.g. Granato et al. 2006; Settlemeyer 2008, 2009) believe supplementary (specialist) teaching through the medium of the first language as well as on-the-job training after initial vocational training to be important considerations, since generally the knowledge and skills acquired during training are found not to be adequate. Thus, specialist terminology, a higher linguistic register, written German and business conventions should be systematically learned and developed in the course of IVET and CVET.

A problematic issue is the common automatic assumption that people with a migrant background will have intercultural competencies (for the education sector, see Mecheril 2002). But not all migrants are equipped with the relevant skills and ready to build on them in IVET and CVET (Settlemeyer 2008). That aside, research shows that the use of migrant-specific competencies at work can be difficult (Benneker et al. 2005) and can give rise to additional burdens and ambivalences for migrants because, from their viewpoint, their professionalism is the overriding concern; they may not feel like a person with a migrant background or may not wish to be seen as such (Settlemeyer 2009; for social work, see Braun 2009).

## **8. Research desiderata**

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Non-Germans or people with a migrant background are disadvantaged in many respects within the German education system. This prevents them from integrating successfully into the employment system, and thus jeopardises their integration into society and their social participation. The substantial proportion of low-qualified non-Germans in the German labour market and the high group-specific unemployment rate for non-Germans are thus reproduced, impeding the upward social mobility of migrants.

As in other migration-specific fields of research, in the domain of VET criticism can be levelled at shortcomings in the official statistical data which leave considerable information gaps. This lies partly in the continuing widespread use of the “non-German” concept, which underestimates the proportion of individuals with migrant backgrounds, and partly in the fact

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<sup>25</sup> On international comparison, German companies rank especially low on the scale for cultural heterogeneity (Kanschat 2009), which explains the particular need for action.

that key characteristics of school pupils, such as age or prior school attainment and other highly informative data – e.g. success rates in final examinations – are not recorded in a form that differentiates by country of origin. Furthermore, the institutional heterogeneity of the school-based vocational system and the diversity of the transition and continuing education systems result in uncoordinated provision, and militate against detailed analysis of the efficiency of these segments – particularly with regard to the integration of migrants (Autorengruppe 2008; Planque 2006).

If the problem of inequality of opportunity for migrants in German VET is to be tackled successfully, more information must be made available on the individual and socioeconomic factors that negatively influence the opportunities of migrants on the IVET market, in the school-based vocational system and in CVET. The DJI Transition Panel reaches its conclusion in 2009, and is expected to yield interesting results. There is little other data on an individual level which, like the DJI Transition Panel or the BIBB Transition Study 2006, permit longitudinal analyses. The studies mentioned should, therefore, be continued as a matter of urgency. In the longer term, the German National Educational Panel Study (NEPS) which started in 2009 promises to shed light on new areas, including the educational behaviour and the training careers of individuals with a migrant background. Analyses should be differentiated according to the particulars of the migrant background. It should be borne in mind that differentiation of findings by ethnic origin is a matter of some controversy in Germany,<sup>26</sup> even though it can identify specific needs for assistance and support. In addition, it would be desirable to gain more in-depth insights into the research-based factors with a tendency to disadvantage migrants at the point of access to dual system IVET – economic developments, legal regulations, social-spatial distribution, company selection procedures and limited networks. Also, there are scarcely any studies on the reasons for the under-representation of young migrants in the German school-based vocational system, and on possible selection mechanisms in this segment.

Furthermore, little systematic evidence is available on the strategies of successful and unsuccessful young people with a migrant background, on the assessment of their situation, their response to experiences of discrimination in the IVET system, and the underlying reasons for their occupational choices and initial vocational training plans. This could be addressed by carrying out qualitative studies, but these should be broadly based.

A general criticism is voiced that too little attention is paid to assistance and training for adult migrants in comparison with young migrants (Bethscheider 2008). This is directed at CVET research, which should focus more attention on people with a migrant background in future. In

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<sup>26</sup> In the Berlin integration strategy, for example, this is rejected based on the following rationale: "... that differences between ethnic-cultural population groups can be explained based on the social situation, and are often impossible to trace back causally to the immigration situation or cultural peculiarities" (Anon. 2007b: 83).

addition, in-depth study is required of the factors which favour or inhibit the participation of migrants.

At the same time, research on the existence, utilisation and development of intercultural competencies in people with a migrant background is still in its infancy. More vigorous research efforts are necessary in this area in the immediate future. It is likely that the current economic crisis will, once again, exacerbate the situation in the apprenticeship place market and the labour market. This harbours a risk of escalating the crowding-out processes mentioned above. Against this backdrop, feasibility studies would be advisable, to examine – in the light of a comparative evaluation of the results of pilot projects and the large numbers of regional assistance programmes in existence nationwide – which instruments are most likely to bring about a lasting increase in the participation of migrants in dual system IVET, in the school-based vocational system leading to full vocational qualifications, and in CVET.

## 9. Outlook

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As a result of the demographic trend, German society is gradually ageing. By 2025, the proportion of young people aged between 15 and 30 years within the population will have declined by almost 20% (Badel et al. 2008). Even now, German industry is reporting a considerable shortage of skilled workers. The potential demand for dual system apprenticeships is already shrinking (e.g. Ulmer/Ulrich 2008). Consequently, this raises the question of whether the skilled worker shortage could not be alleviated by the migration of qualified people to Germany. Currently, however, the vast majority of migration to Germany is motivated by the desire to reunite a family or to start one. This tends to involve low-qualified migrants and will probably continue to do so. Although numerous regulations exist whereby people from other countries can take up short-term – including well-qualified – employment, as yet there is no overall strategy for steering migration, nor are measures in place to improve Germany's attractiveness for well-qualified people interested in migrating (e.g. Schultze 2007).

Raising the qualifications of the population – and especially those who lack solid vocational training – is therefore an urgent requirement, not just from a social policy perspective but also on economic grounds. A whole set of objectives can be derived towards this end (Ulmer/Ulrich 2008). These range from lowering the rate of school drop-outs or refusers, or eliminating the need to mark time in the Transition System, to monitoring vocational orientation and vocational choice processes, and minimising the drop-out rate from apprenticeships. Other important elements include qualification during employment for people without a school-leaving qualification, and the expansion of continuing education, specifically for groups that have been less keen to participate in the past. In addition, efforts can be made to reinforce the motivation of upper secondary school-leavers with university entrance qualifications to embark on dual system apprenticeships. In order to implement such packages, it is first necessary to improve the so-called regional transition management system. Secondly, targeted programmes need to be

developed for migrants, who will make up a growing proportion of the population yet face increasing disadvantages in the VET system.

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*Annex: Tables and Figures*


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*Table 1: Development of training participation ratios 2000 and 2007 (%)*

	<b>2000</b>	<b>2007</b>
<b>Germans</b>	63.4	57.6
- <b>Men</b>	73.5	68.5
- <b>Women</b>	53.0	46.1
<b>Non-Germans</b>	30.0	23.9
- <b>Men</b>	34.6	26.3
- <b>Women</b>	25.2	21.3

Source: BIBB 2009b: 159

*Table 2: Young people attending vocational schools, by nationality, 2007/2008 (%)*

	<b>Germans</b>	<b>Non-Germans</b>
<b>Part-time vocational schools (dual system)</b>	94.2	5.8
<b>Prevocational training year (BVJ)</b>	82.5	17.5
<b>One-year basic vocational training (BGJ)</b>	88.9	11.1
<b>Full-time vocational school</b>	90.2	9.8

Source: Statistisches Bundesamt/Federal Statistical Office, Fachserie 11, Reihe 2, 2007/08: 14

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*Table 3: Non-German and German school-leavers from general education, by qualification, nationality and gender (%)*

Qualification	German school-leavers		Non-German school-leavers	
	M	F	m	f
None	8.0	4.8	18.8	13.0
Hauptschule (lower secondary school-leaving)	25.1	18.6	43.2	40.1
Realschule (intermediate secondary school-leaving)	40.9	42.3	28.9	33.9
Higher education entrance	26.0	34.2	9.1	13.1

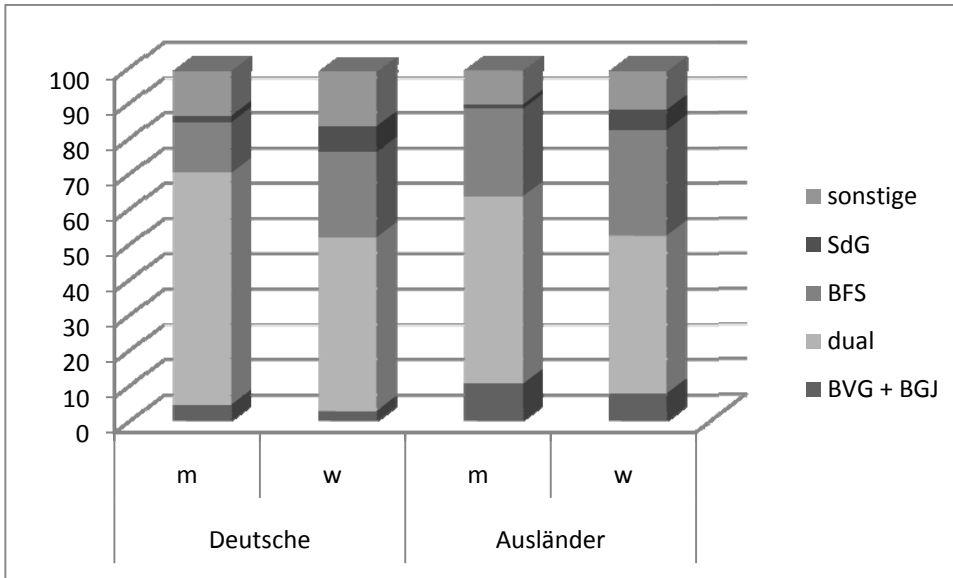
Source: BIBB 2009b: 133

*Table 4: IVET and employment pathways of school-leavers who, in the spring, stated an interest in a company-based apprenticeship (autumn 2008), by migrant background (%)*

	Without migrant background	With migrant background
In-company IVET	54	32
Non-company based/ school-based IVET	4	2
School-based or civil service initial vocational qualification	6	4
Higher education	4	3
General and vocational schools	5	9
Full-time vocational school not leading to a qualification	11	17
Unemployed, unplaced	5	11
Other	12	23

Source: BIBB 2009b: 78

Figure 1: Distribution of young people at vocational schools in the 2006/2007 school year, by nationality and gender (%)



Source: adapted from Siegert (2009: 42)

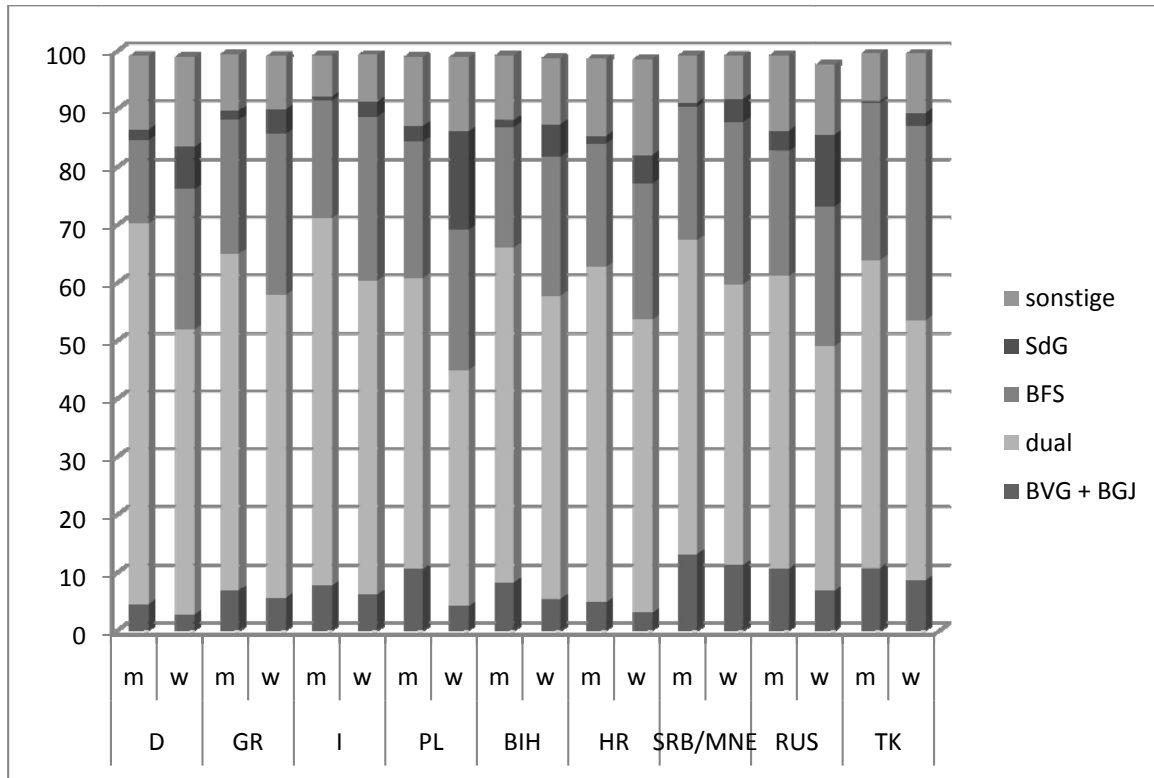
<i>DE</i>	<i>EN</i>
m	m
w	f
sonstige	other
SdG	SdG
BFS	BFS
dual	dual
BVG + BGJ	BVG + BGJ
Deutsche	Germans
Ausländer	Non-Germans

SdG = Health sector vocational schools

BFS = Full-time vocational schools

BVG + BGJ = Prevocational training year + One-year basic vocational training

Figure 2: Distribution of young people at vocational schools in the 2006/2007 school year, by nationality and gender (%)



Source: adapted from Siegert (2009: 43)

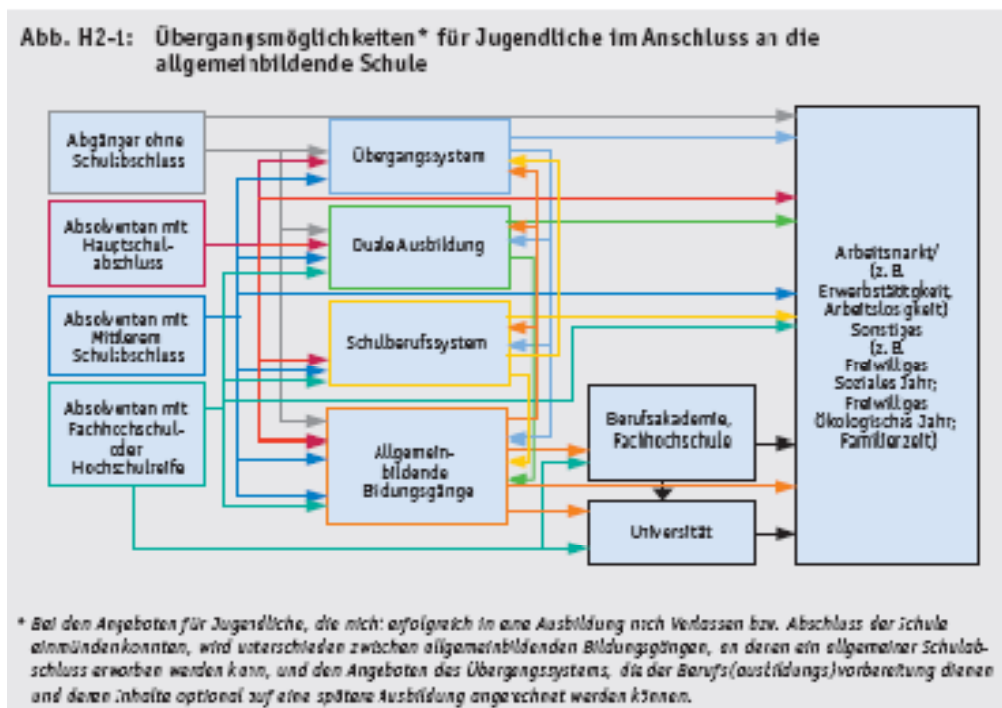
<i>DE</i>	<i>EN</i>
m	m
w	f
sonstige	other
SdG	SdG
BFS	BFS
dual	dual
BVG + BGJ	BVG + BGJ

SdG = Health sector vocational schools

BFS = Full-time vocational schools

BVG + BGJ = Prevocational training year + One-year basic vocational training

Figure 3: Transitions of young people leaving schools of general education



Source: Autorengruppe Bildungsberichterstattung 2008: 156

Abgänger ohne Schulabschluss	Unqualified school-leavers
Absolventen mit Hauptschulabschluss	Qualified school-leavers: lower secondary school-leaving certificate
Absolventen mit Mittlerem Schulabschluss	Qualified school-leavers: intermediate secondary school-leaving certificate
Absolventen mit Fachhochschul- oder Hochschulreife	Qualified school-leavers: subject-specific or universal higher education entrance qualification
Übergangssystem	Transition system
Duale Ausbildung	Dual system apprenticeship
Schulberufssystem	School-based vocational system
Allgemeinbildende Bildungsgänge	General education system pathways
Berufsakademie, Fachhochschule	College of advanced vocational studies, University of applied sciences

Universität	University
Arbeitsmarkt (z.B. Erwerbstätigkeit, Arbeitslosigkeit)	Labour market (e.g. employment, unemployment)
Sonstiges (e.g. Freiwilliges Soziales Jahr; Freiwilliges Ökologisches Jahr; Familienzeit)	Other (e.g. Voluntary Community Service Year; Voluntary Ecological Service Year; parental leave)
Bei den Angeboten für Jugendliche, die nicht erfolgreich in eine Ausbildung nach Verlassen bzw. abschluss der Schule einmünden konnten, wird unterschieden zwischen allgemeinbildenden Bildungsgängen, in denen ein allgemeiner Schulabschluss erworben werden kann, und den Angeboten des Übergangssystems, die der Berufs(ausbildungs)vorbereitung dienen und diese Inhalte optional auf eine spätere Ausbildung angerechnet werden können.	Within the provision for young people who are unsuccessful in finding an apprenticeship after leaving school, with or without qualifications, a distinction is drawn between general educational system pathways, where a school-leaving certificate from general education can be acquired, and options within the Vocational Transition System, the aims of which are prevocational or basic vocational training. Contents from the latter system can optionally be credited towards a subsequent programme of initial vocational training.

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# Effectiveness and quality assurance

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Sandra Bohlinger

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## **1. Questions and research themes from a German perspective**

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‘Quality’ and ‘effectiveness’ do not genuinely belong to the terminology of education. Accordingly, for many years they played little part in vocational education research in the German-speaking world, which preferred to conceive of them as intrinsic to the system, based on the centuries-old tradition of apprenticeship with a master craftsman and highly regulated, institutionalised initial vocational education and training (IVET). Nevertheless, it is evident that over the last twenty years, these terms have begun to gain some currency in education policy, education practice and academic discourse in the discipline of education. It is no longer disputed that quality and effectiveness have a place in the discourse and, indeed, are central functions in all areas of vocational education and training (VET). This is clearly mirrored in the emphasis of current objectives and models, which focus on the thematic issues of stability, development, effectiveness and efficiency of high-quality education.

The reorientation of objectives towards quality and the implementation of quality assurance (QA) procedures have fundamentally changed the German VET system in the past decade. This is betokened by weakening of the traditionally high level of self-referentiality and strong professional autonomy, which were associated with rather poor transparency, weak supervision structures and a minimal requirement for accountability to outsiders. Ideas have shifted towards the realisation that clarity of objectives, assessment of efficacy, and quality assurance are as necessary in the German system as elsewhere, in order to perform well and remain competitive and compatible in international markets, and especially in the education and labour markets of the European Union. It is also undeniable that the individual subsystems of education are

progressing in this direction at different rates: whereas quality assurance and effectiveness are longstanding traditions in adult education and higher education and, especially, in-company continuing education where the diversity of approaches almost defies analysis, they have only recently begun to make their mark on the (vocational) school system. It is also striking that, with regard to initial vocational training in the dual system, research activities have paid far less attention to the quality of in-company training than to the quality of the part-time vocational school component.

Another interesting observation is that the core ideas underlying current research activities derive from the curriculum and evaluation research of the 1960s and 1970s. This applies to demands for comprehensive introduction of standardised tests, for instance, or for an approach based on learning objectives, which are discussed today in terms of *standards* and *learning outcomes orientation*. What has changed, however, are academic attitudes towards such innovations. Whereas early approaches were characterised by a ‘naively technocratic attitude’ (Klieme/Tippelt 2008: 8), which largely ignored issues such as resistance to reform, management issues, contexts and long-term consequences, today’s research approaches are analysing these aspects explicitly, and in some cases exploring them right through to the concrete teaching and learning process. Of particular note are the studies which additionally focus on the interaction between international or supranational and national reforms, approaches and measures for QA and the effectiveness of VET. The initial hypothesis of these studies is as follows: comparisons with a) other countries, some of which can boast substantially longer experience of QA procedures and effectiveness research, and b) the advancing European integration of the education sector, which is manifested in numerous papers, programmes and projects on the creation of a European education area, have created staunch allies but intensified the pressure of competition that the German VET system has to contend with. The core question here is how VET can be given a more international emphasis and structured attractively so as to facilitate the design of compatible courses which promote mobility and transparent qualifications.

## **2. Summary and appraisal of key research findings**

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The following is an outline of research activities and findings in the domains of work and education-related research in Germany. It reflects the current lines of consensus and dissent on quality and effectiveness in VET in those subdisciplines which accept QA as a valid theme rather than rejecting it altogether. It immediately brings to light some practical questions which require academic clarification; for instance, the question of how to manage the diversity of quality perspectives and criteria, or the role of professionals and course participants in the QA process. Another implicit question that continually rears its head is how far customer-orientation – aimed at individual participants and their social milieus – is transferable to education processes as a robust, realistic and desirable concept. Connected to that is the question of whether quality can only be engendered by ex-ante accreditation of courses and institutions, or whether such accreditation always requires additional ex-post confirmation, in the form of evaluation of actual learning outcomes. And going right to the heart of the QA issue: how, in this process, can the

theoretical and methodological foundations be established for objective, reliable and comparative assessment of learning outcomes and competences? This question also leads to a somewhat neglected problem within the quality and effectiveness debate, namely the quality of QA itself, which will be dealt with separately in the final section.

### 2.1 Definition of quality and effectiveness

Few studies from the reference period 2005-2009 attempt to pin down a generally valid definition of the concepts of quality and effectiveness. The omnipresence of the two concepts may explain their apparent self-evidence, and offers one possible reason for the terminological ambiguity. Another is undoubtedly the plurality of extant schools of thought, methods and instruments, all of which militate against a coherent definition. In VET, 'quality' is generally conceived of as a relativistic approach, i.e. a context-based, relational and ideally also consensus-based attribute, albeit one that is usually dictated de facto by legal or regulatory positions of power, and which is thereby defined and evaluated with reference to sub-aspects of quality. In the (vocational) school sector, on the other hand, quality is understood more as a multidimensional concept which breaks down into the areas of orientation, structure, quality, outcomes, and organisation/management. These in turn can be evaluated and provide the starting point for concrete quality development and assurance. Thus, quality assessments – and on this point, the different schools of thought on quality are agreed – must be preceded by an implicit setting of quality criteria, which must be rationally legitimised and objectivisable, before evaluation-related statements can be made about the level of quality achieved. The same applies to the QA of quality and effectiveness research, which is a special case within the quality discourse.

In comparison with the concept of quality, rather more difficulties attach to the concept of 'effectiveness', a concept which the German VET debate largely tries to sideline. It had largely vanished from education policy debates by the time the 1973 General Plan for Education (*Bildungsgesamtplan*) met its demise, if not before. Only in the context of comparative performance studies and the European milestones of Bologna, Lisbon and Bruges-Copenhagen did it resurface on the educational research agenda. One exception was the area of publicly financed (continuing) vocational education and training measures (specifically: Active Labour Market Policies (ALMP) at the interface of labour market research and policy). A longstanding tradition of programme evaluation prevails in this area, for the purpose of justifying public expenditure. 'Effectiveness' and 'quality' are measured, in the majority of cases, by the indicator of (re-)integration into the labour market and the length of time on subsidised wages, whereas educational and learning processes are of secondary importance.

Even greater ambiguity attaches to the concept of 'effectiveness' than to 'quality assurance', however. Rarely if ever are clear distinctions made between 'effectiveness', 'efficiency', 'efficacy', 'impact' or simply 'effects'. This applies in equal measure to VET research and to the ALMP area. The close link with the quality concept is more obviously apparent where 'effectiveness' is understood as a fixed element in the quality cycle and defined as an output or outcome of VET.

Where this close connection is not made, 'effectiveness' is understood more in terms of costs and benefits. For instance, for years the Federal Institute for Vocational Education and Training (BIBB) has carried out regular studies on the costs and benefits of dual system IVET from the viewpoint of companies (von Bardeleben et al. 1995; Beicht et al. 2004; Wenzemann et al. 2009<sup>27</sup>). However, this definition of effectiveness will not be pursued further in the present paper.

One clear difference between research on Active Labour Market Policies (ALMP) and VET research is that the VET research perspective gives more central priority to *processes*, which represent the core of vocational teaching, learning and action, as opposed to the input, output and outcomes model.

## *2.2 Architecture of quality and effectiveness research*

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Mapped across the categories of the education production model (input – process – output – outcomes), it is possible to isolate three levels of system architecture about which quality questions can be asked:

the micro level, i.e. domain-specific and/or individual teaching and learning processes (e.g. within a course);

the meso level, i.e. the organisational unit, e.g. a school or a company. Among the QA approaches located on this level, those which dominate are business administration concepts such as Total Quality Management whereby customer satisfaction and the optimisation of processes are central concerns. This concept was first transferred to the service sector and later to education, where it was substantially influenced by the European Foundation for Quality Management (EFQM). Criticism is levelled at the problematic issue that the inherently economic logic of the concept gives insufficient regard to the training content and learning outcomes, and can turn into a vacuous process of bureaucratic documentation in extreme cases.

the macro level, i.e. the system as a whole. International school performance comparison studies such as PISA, TIMSS or IGLU are assigned to this level, which have paved the way for a 'vocational education and training Pisa' (VET Large Scale Assessment, LSA) These studies can be considered as QA initiatives which are adapted for the meso and micro level by means of education standards. Here quality assurance is based on theories and insights from school, teacher and lesson effectiveness research and is thus – at least in part – science-based.

A further aspect to be assigned to the macro level is the introduction of modern methods for the management of public institutions (New Public Management), which aims to decentralise the operative responsibility for state services while instituting closer and more precise monitoring of results. The key actors in this area are the European Union, the OECD and the UN.

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<sup>27</sup> The latest study is not yet concluded and can be viewed online at <http://www.bibb.de/de/wlk28857.htm>

Under this logic, QA can be equated with the implementation of political management instruments and dominant ideas from the discipline of public administration.

A matrix derived from the above structure provides a framework for situating research activities during the reference period. This gives complete coverage of quality assurance, and of effectiveness as outcome quality.

### *2.3 Architecture of quality and effectiveness research in VET*

Quality dimension / Quality levels	Input quality	Process quality	Output quality	Outcome quality / Effectiveness
Micro level	Resourcing of the learning environment, individual preconditions for learning and action, socio-demographic contexts of teachers and learners	Capture, assessment and standardisation of the teaching/learning process, individual attitude, behaviour and involvement	Certified learning success, learning outcomes	Career in a recognised occupation and income, long-term use of learning acquired, civic participation
Meso level	Infrastructure, curriculum, educational and course provision, professionalisation of teachers	Models, change management and feedback culture, learning atmosphere, methodology and didactics	Annual reports, course completion statistics, teaching and working conditions, organisational matching processes	HRD strategies, revenues and performance of providers and/or companies
Macro level	Rules, laws, ordinances, resource allocations, institutional framework conditions	National standards	National and international comparisons of indicators, benchmarks, meeting labour market needs	Effectiveness of national policies and of the VET system

Quality assurance can thus be understood as the entirety of formalised and institutionalised methods by which the quality of organisations in the education system, particularly their process and outcome quality, can be described and comparatively assessed. It is striking that QA

methods usually relate to individual operative units (part-time vocational schools, companies) but rarely to an entire system. In this respect, QA moves closer to the concept of quality management, comprising not only the description and assessment of vocational teaching and learning processes, but also the areas of quality development and the implementation or reform of QA methods.

However, the state of research, including relevant empirical studies, differs from one educational subdiscipline to another, which can be seen as evidence that these subsystems are engaging in discrete and, in many cases, divergent quality discourses. In continuing education, the quality discourse has been closely linked to professionalism for around 20 years. Defined in this way, quality can only be understood through the professionalisation of educators and/or all stakeholders. This makes reference to three areas, namely:

Programme quality by virtue of theoretical reflection, assessment of needs, transparency and systematic structure of course offerings, and academically oriented curricular modules;

delivery quality by virtue of participant counselling, lecturer selection and advanced professional training, accompanying materials, course observations, etc.;

Outcome quality by virtue of operationalised tests and examinations, surveys of participants and programme evaluation (Schlutz 1996: 28).

On vocational and business education, the comment can be made that, in the majority of studies, professionalisation only relates to first-phase teacher training, and that more strategic papers than empirical findings are available on how this should be designed (Bauer/Grollmann 2006: 271; Buchmann/Kell 2000; Terhart 2000).<sup>28</sup> Furthermore, the few empirical studies fall outside the reference period and/or relate only to teachers at schools of general (i.e. non-vocational) education (e.g. Lamprecht/Korneck 2008; Münk 2001; Oser/Oelkers 2001; Terhart 2006). That said, the few empirical findings (Bauer 2006; Grollmann 2005) are not indicative of a high level of professionalisation as regards the content of teaching and learning processes (application of competencies, coping with everyday work tasks); instead, the high level of professionalisation refers primarily to formal aspects such as educational level, pay, representation of interests – in other words, a different form of quality and effectiveness. This sheds further light on a problem that obviously runs through all areas of the quality discourse: the more that quality development and assurance efforts engage with the core of VET, i.e. its teaching and learning processes, the less the different QA measures, approaches and management systems make any obvious difference. And the more they steer clear of the core of

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<sup>28</sup> Another example of this is Issue 12 of the online journal *bwp@* on the theme of 'Training of vocational and business teachers between professionalisation and polyvalence'. All the articles relate to initial teacher training, omitting any coverage of the training of vocational and business teachers e.g. in industry or science, or of in-company training staff. (<http://www.bwpat.de/archiv/#a13> – in German)

VET, and focus on formal, structural or resource-based aspects, the more the processes actually seem to be manageable by means of quality and efficiency efforts and evaluations.

Other stakeholders, e.g. company training staff, learners – i.e. apprentices – themselves (Beicht et al. 2009; Beicht/Krewerth 2009; Müller 2009) and training companies (Ebbinhaus) – are only slowly being drawn into this discourse, and into the quality and professionalisation debate. In adult education or in-company CVET, the situation is different: this sector per se is focused on in-company training staff. Furthermore, there have been recent signs of early efforts towards an integrative professionalisation debate, in which the focus is not directed at a specific occupational group, but which foregrounds the process of professionalisation as such and explicitly links it with the quality and effectiveness discourse (Kraft 2006; Meyer 2008; Nittel/Schütz 2005).

As regards the relationship between QA and professionalism, however, not only in the theory but most of all in practice, massive conflicts are emerging, and these in turn have repercussions on the development of theory. Quality assurance as a task of organisations (part-time vocational schools, companies, inter-company training centres etc.) comes into conflict with the role identity of education practitioners, who understand their task as to make autonomous use of their professional knowledge to solve specific problems in occupation-specific education or job-related education and to structure learning processes. The autonomy of educators' professional practice represents a central challenge for the idea of systematic QA. The inherent logic and case-specific nature of any pedagogic practice can never be fully reflected in standardised criteria, assessment procedures and benchmarks of the kind defined e.g. in education standards or quality management systems. This is all the more valid, if it is acknowledged that educational processes are co-constructively defined by educators and participants, according to Klieme and Tippelt (2008:12), who point out that ascribing the responsibility solely to organisations and the professionals working there must rightly be perceived as unreasonable.

### 2.3 Quality assurance in initial vocational education and training

In Germany's initial vocational education and training (IVET) system even more than in other education subsystems, the concept of quality is vague, and relevant studies and approaches are confined principally to the part-time vocational school component of training whereas the company-based component of IVET is largely ignored. In addition, some studies explicitly refer to the interaction between the different learning venues, which it is hoped will distinctly raise quality and efficiency.

On the *micro level* of quality development and quality assurance of teaching and learning, several strands of research can be identified that are highly prioritised. Apart from the introduction and implementation of standards (for lessons and for teacher training), a distinct avoidance of efficiency and impact issues and preference for 'quality assurance and development' approaches can be noted, most likely because it is perceived as 'offensive' to consider education and teaching as a management problem (Gonon 2003). This change in

perspective is shown, for example, in the standardised school student survey conducted by Seeber and Squarra (2003), characterised by the authors as a contribution to the analysis of teaching quality and school development. Beutner (2006: 55) also assigns his study on the design of workplaces that are organisationally and technically conducive to learning to the domain of quality assurance, although it is equally concerned with aspects of effectiveness. Standards are another core issue in the more recent discussion of quality. Based on the findings of the internationally comparative PISA study, a similar procedure is being called for in vocational education and training. The proposed VET-LSA (Large Scale Assessment) is currently at the feasibility study stage (Achtenhagen/Baethge 2008; Baethge et al. 2008). Defining and introducing standards is vital for IVET in so far as they should help to drive quality management and quality assurance across and beyond organisational levels (Ebner 2006: 184ff; Fach-Overhoff 2004; see detailed discussion below). In *'Qualität der beruflichen Bildung'* (Quality of vocational education), Oser and Kern (2006) analyse a series of issues concerning the role and effectiveness of stakeholders in teaching and learning processes. The aim of this is to explain, describe and improve the practitioner competence of those responsible for vocational education. This approach pins its hopes on standards, and standards-based management of output, to bring about improvement. Beck 2006 and Hallmann (2006) are rightly critical of this project's multifarious integration of vocational teaching and learning into a number of learning venues and occupational fields, which they find highly questionable.

Studies assigned to the micro level prove problematic in that they deal with individual teaching and learning processes. The fact that quality development and quality assurance have been largely fruitless where they have not addressed the framework conditions of teaching and learning processes has already been shown above.

The *meso level* of QA relates to educational establishments as organisations and is thought of as the 'classic domain' (Gonon 2008a: 98), in which QA is geared towards the tasks of corporate controlling. Central aspects are the adaptation of concepts, methods and instruments which on the one hand are aligned to DIN ISO, TQM, EFQM etc. but, unlike these systems, give greater recognition to the particular characteristics of teaching and learning processes rather than attempting to reduce them to their product character. The effectiveness of these approaches remains unclear, however: In the vocational schools sector, for example, in 2005 the state of Lower Saxony instituted EFQM as a mandatory quality management system in its part-time vocational schools. In reporting on early experience, however, reference is only made to its potential for successful implementation rather than its actual effects (Spöttl/Becker 2006; Szewczyk/Alexander 2006: 231). Similar conclusions can be drawn from a comparison of the German federal states (*Länder*) with regard to developments on QA within schools (Becker et al. 2006). And in a critical study on quality management in vocational schools, Gessler (2006) concludes that it has more to do with 'myths' and 'wishful thinking' than with actual and empirically verifiable improvement of teaching structures. With regard to QA in vocational schools, *school development* and *school autonomy* can be identified as two further key research aspects (Becker/Spöttl 2008; Schmidt 2007; Zöllner 2008).

For the company-based component of IVET, some definite conflation of levels is seen, which affects a) the micro and the meso level, and b) IVET and CVET. This is evident, for example, with reference to a study by Scheib et al. (2008), which undertakes a comparative analysis of the company-based quality debate with regard to the aspects of *company competitiveness, skilled worker training and continuing education and IVET*. Ebbinghaus (2007) follows this approach by presenting concrete quality assurance approaches from IVET practice and developing orientation aids for skilled workers in IVET roles.

On the macro level, the acceptance of quality as a management parameter has been growing appreciably for many years. This applies both to the interplay between the supranational and the national level, and (a particular issue for the German vocational school sector) the interaction between the Federal government and the Länder. The aim of programmes and standards at European level (CQAF, benchmarks, EQF etc.) is firstly to create a planning and implementation model which contributes to increased transparency and mutual trust, and also inspires good practice in the Länder (EC 2005; 2006; 2008a; 2008b; 2008c). Secondly it should lend weight to the quality debate overall, thereby reducing the scepticism, at least of individual stakeholders, in VET research and policy. A similar contribution was made by the 2005 reform of the Federal Vocational Training Act (*Bundesberufsbildungsgesetz*, BBiG) aimed at strengthening school-based IVET, helping to develop in-company training quality and drastically lowering the apprenticeship dropout statistics. The main publications found on this level are official responses (Bünning/Richter 2005; Hanf/Hippach-Schneider 2005), conceptual papers on the adaptation of European instruments to national circumstances, and the (mostly very pessimistic) development of future scenarios (Drexel 2005; Rauner et al. 2006; Severing 2005). Only a tiny minority of studies are empirically based, at least in part, and analyse the effectiveness and quality of national and supranational QA approaches (Bohlinger 2008; Langer 2008).

All in all, it is striking that the majority of the specialist literature on quality assurance and effectiveness consists of manuals, first-hand reports, documentary records and official responses. Any well-founded research on impact and effectiveness, problems, resistance and the long-term consequences of QA approaches is lacking, for the most part. Furthermore, during the reference period only a few studies giving an overview of the whole thematic areas were produced, examples being Euler (2005) and Bülow-Schramm (2006). However, both of these concentrate on specific subsystems of German education.

#### 2.4 Quality assurance in continuing vocational education and training

The quality discourse in CVET considerably predates the current quality discourse spanning the entire VET sector. Originally aligned to training staff professionalisation issues, in recent years the quality debate in CVET has been pursued on different levels, namely:

- a) the level of ongoing development of the CVET system as a whole, i.e. including general, vocational-corporate and political continuing and adult education. Central

- aspects are the framework conditions provided by regulatory policy, the needs of society, resources and system design;
- b) the level of organisational development, structures and processes;
  - c) the level of pedagogic interaction, i.e. the detailed design of adult teaching and learning processes.

If individual studies or discourses are aligned with these levels, it tends to happen indirectly, and varies enormously with time and shifting interests. At the same time, several 'orientations' can be identified from these analyses (Meisel 2008; Hartz/Meisel 2006; Müller 1998; Peters 2004). Content-based analyses are concerned with questions of role identity, and the aims and tasks of CVET in the context of lifelong learning. Studies with a profession-theoretical orientation analyse the assurance and development of educational quality and emphasise a professionally acceptable system of practice (whereas economically-oriented studies give greater importance to aspects such as market shares, financing options and efficiency). Also found are studies with a regulatory policy orientation, which focus on the transparency of courses – also incorporating the aspect of consumer protection, – course accreditation and recognition prior learning, and financial support.

Following the logic set out in the introduction, the majority of studies can also be assigned to the micro, meso or macro level of quality and effectiveness research.

On the micro level of teaching and learning processes, there are several large-scale surveys (the BSW Continuing Education Reporting System, now known as the Adult Education Survey, the IAB<sup>29</sup> Establishment Panel, the BIBB<sup>30</sup>/IAB studies and the CVTS Continuing Vocational Training Surveys) which are used for academic research. The data obtained from these yields information on participant numbers and participants, costs, funding, forms of continuing education and in some cases also motives. They are often used in combination with other data (often case studies) for detailed sector and occupation-specific analyses (Dietrich/Kohl 2007; Meyer 2006; Molzberger et al. 2008).

On the meso level, the main publications during the reference period addressed quality assurance and improvement in CVET by developing transparent and valid methods for the recognition of non-formal and informal learning (Bretschneider 2008; Käpplinger 2007) and for the implementation of quality management systems in companies (Knedel 2005).

On the macro level, the implementation of key European policy ideas on lifelong learning is the foremost theme with a QA focus. Central aspects of this include the development of national strategies for lifelong learning in the context of CVET (Benz 2007; BMBF 2008; Loebe/Severing 2006).

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<sup>29</sup> Institut für Arbeitsmarkt- und Berufsforschung: Institute for Employment Research, Nuremberg.

<sup>30</sup> Bundesinstitut für Berufsbildung: Federal Institute for Vocational Education and Training, Bonn.

The striking point here is that many of the studies from the reference period explicitly conflate at least two of the three levels. For instance, a study on participation in continuing education by Schiersmann (2007), who uses findings about CVET participation as a basis for drawing conclusions on the design of high-quality CVET provision. A similar comment can be made about the *Habilitation* thesis by Iller (2006) who implicitly pursues the quality and effectiveness question by analysing aspects of career structure from the perspective of companies (macro level) and employees (micro level) and derives conclusions for the structure of future learning and employment biographies.

The conflation of perspectives also occurs in the studies published by the Concerted Action Campaign for Continuing Education (KAW)<sup>31</sup>: in the course of the decades-long and highly multistranded debate about QA in general and vocational continuing education, the campaign has developed a series of structural elements for a system-oriented quality policy (KAW 2002). These include developing a model and reference framework for quality development, linking quality management with organisational and human resources development concepts, fostering the professionalism of CVET staff and increasing the transparency of CVET provision. Examples of the approaches developed and studies undertaken during the reference period include the conceptual elaboration of the KAW structural elements for political continuing education (Meisel 2005), development of the education quality management system '*Bildungs-Qualitäts-Management BQM*' for CVET by the national association of VET providers, *Bundesverband der Träger beruflicher Bildung* (2005), key points for a framework model for quality development in education and training provider networks (Liebald/Seiverth 2005) and the Federal-Länder network project on quality testing in CVET ('*Qualitätstestierung in der Weiterbildung*'; Hartz et al. 2006; Zech 2005), the aim of which is the nationwide implementation of a quality testing procedure. Over time, three supraregional quality management models have proved their relevance in the German CVET sector as a whole, namely:

- (a) DIN-EN-ISO 9000ff, which is marketed predominantly by the certification firm CERTQUA in the German continuing education sector. This model is based on a cybernetic control loop (from customer expectations to the achievement of customer satisfaction) and because of its high recognition value within companies, it is well regarded despite the associated documentation workload and costs (Hartz/Meisel 2006: 66ff.). On a critical note, due to its product-cycle orientation it gives little scope for references to the interaction of teaching and learning;
- (b) the EFQM model begins with a self-assessment of enabling criteria (leadership, staff, strategy, resources etc.) and outcome criteria, and is most frequently found in general (i.e. non-vocational) continuing education. Here too, it can be noted that it is

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<sup>31</sup> Konzertierte Aktion Weiterbildung: the Concerted Action Campaign for Continuing Education is an alliance of the main supraregional providers of general and vocational education, which was convened as a policy advisory organ to the Federal Ministry of Education and Research.

geared far less towards to educational quality than towards the structure and internal logic of organisations;

learner-oriented quality testing (*'Lernerorientierte Qualitätstestierung'*; Ehses et al. 2001) is a method whereby minimum requirements are described in eleven quality areas, e.g. model, infrastructure, teaching and learning process, management, etc. and the educational establishment must provide information on their implementation in a self-assessment report. In contrast to the other two models, this explicitly takes account of the aims, conditions and teaching and learning interactions in educational establishments. Nevertheless, academic monitoring studies by Bosche and Veltjens (2005) and Hartz et al. (2006) found that in practice the model is more geared towards organisational aspects of continuing education.

The common thread in these and other models is that – albeit in different ways – they combine self- and external evaluation, adopt a process-oriented approach to the implementation of quality management, and concentrate on core aspects of continuing education management (Hartz/Meisel 2006: 89ff; Meisel 2008: 116f.). The great number and variety of quality efforts in the continuing education system testify to astonishing productivity, but have also brought two negative aspects in their wake: the other side of the diversity coin is the lack of transparency for individuals and institutions on the demand side; but there is also a lack of research on how effectively these approaches are across programmes, or any stringent link with basic research on the development of quality indicators. It is also striking that while the specific approaches of the individual models claim to do justice to quality development and quality assurance of teaching and learning processes, in practice they are ultimately geared towards the organisational side of quality assurance and development.

### 2.5 Quality assurance in higher education

Since the mid-1990s comprehensive reform efforts have brought about massive change in the German higher education landscape. This gained even greater momentum from the Bologna Declaration (1999) and its follow-up conferences from Prague (2001) to London (2007), at which European cooperation in the area of quality assurance was a chartered objective. Two aspects, one being accreditation and the other being QA in teaching, were more instrumental than all others in changing the higher education landscape; equally, they present a kind of prototype for the VET sector and will therefore be outlined here in more detail.

Accreditation is defined as the trust (credit) that society or the state accords to institutions, which is reasoned, revocable and based on transparent criteria (Daxner 1999: 47). The two 'credit point systems' for higher education and VET – the European Credit Transfer and Accumulation System (ECTS) and the European Credit System in Vocational Education and Training (ECVET) – also follow this logic.

Accreditation is aimed equally at quality assurance, at a different mode of management (away from state control towards deregulation and autonomous self-regulation of higher education), at greater institutional differentiation of the higher education system (as required by

the 'excellence initiative') and at the implementation of the Bologna Process and internationalisation of the higher education sector. In Germany there are currently four differentiated forms of accreditation:

- (a) accreditation of degree courses (programme or cluster accreditation);
- (b) accreditation of QA agencies;
- (c) accreditation of higher education institutions' quality management concepts (system accreditation); and
- (d) institutional accreditation of higher education institutions, which is only applicable to non-state higher education institutions so far.

The German Rectors' Conference (HRK) is involved as one of the key stakeholders. As a voluntary association of state and state-recognised universities and higher education institutions in Germany, it engages equally with current problems and action areas concerning research, teaching and study, academic training, knowledge and technology transfer, international cooperation and academic self-regulation. In the area of quality assurance, the quality of teaching and study as well as student mobility are prime concerns. In the reference period, HRK projects and studies on quality assurance and effectiveness concentrated on the consequences of the Bologna Process and its follow-up conferences (the HRK Higher Education Policy Forum 2004), questions on evaluation (HRK 2004; 2005a; 2005b), and on the development of instruments for QA and, specifically, for accreditation (HRK 2007; 2008), which have become a central aspect of QA in the past few years.

The principal task in the accreditation of degree courses consists of ensuring minimum standards of subject-discipline content, occupational or labour-market relevance, employability and the provision of internationally comparable and equivalent degree qualifications. Accreditation itself is undertaken by one of the six German accreditation agencies,<sup>32</sup> which for their part have to be accredited by the German Accreditation Council (DAR). Accreditation projects are generally brought to a successful conclusion. According to Wolter and Kerst (2008), by the middle of 2006 only 30 out of over 6,600 applications had been declined. However, accreditations were given subject to conditions in more than half of cases (Akkreditierungsrat 2007a, b). In that respect, it seems to Wolter and Kerst (2008:147) that accreditation certainly fulfils the expectation vested in it as an instrument of quality assurance.

In addition to the accreditation of degree courses, key initiatives addressing the aspect of 'teaching' include teaching quality evaluations (including student feedback on classes), inter-

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<sup>32</sup> FIBAA (specialised in business and economics), ASIIN (specialised in engineering and natural sciences), AHPGS (specialised in special needs education, health, care and social work), AQAS (regionally specialised for the Länder of North-Rhine/Westphalia and Rhineland-Palatinate), ACQUIN (Bavaria, Baden-Württemberg, 'new' German Länder), ZEVA (Lower Saxony).

institution evaluation networks, rankings and teaching quality reports. An important role is also played by course-related QA, which is associated with the paradigm shift from 'teaching to studying' or from 'teaching to learning'. The quality and effectiveness of teaching is determined by four categories, namely:

- (a) the course structures which form the framework for teaching and learning processes;
- (b) the teaching and learning processes themselves, the detailed design of which depends substantially on the teacher;
- (c) the higher education institutions which create the framework for study and teaching and which, in turn, are influenced by teaching;
- (d) the practices of individual stakeholders and their interaction;

Quality can be established initially on the level of classes and seminars, but is also reflected in appropriate structures of provision and adequate institutional framework conditions. Accordingly, indicators can be identified for all four areas which should yield information on quality for the micro, meso and macro levels of teaching and learning processes. For the micro level, reference is usually made to students' subjective judgements about a class or seminar; however, this completely screens out the individual prerequisites for learning, so that the results should be considered critically. Nevertheless student class and seminar feedback – where available in a standardised form – is routinely used as a quality testing instrument (Kromrey 2005; Schmidt/Tippelt 2005) and has also served for some time as a basis for assessing higher education staff effectiveness.

On the meso level, university rankings and evaluations of departments and faculties have become established, which are based on a combination of internal and external evaluations (in the form of self-assessment reports). These are often characterised by insufficient self-reflection, which can be attributed in turn to fear of funding cuts, a lack of interest in accountability, and inadequate staff resources. In order to counter these weak points, it would seem worthwhile to introduce universal standards for these kinds of teaching evaluations.

On the macro level of outcomes of teaching and learning processes, which could also yield information on effectiveness and quality, there is a gaping lack of data. In this respect, data would need to be gathered on the whereabouts of graduate, their career and income trajectories and continuing education and learning pathways. Where such data are available at all, they tend to relate only to individual subjects or degree qualifications and are often restricted to particular regions. Examples of this can be found with regard to the destinations following 'dual system' initial vocational training, e.g. in Hall and Schade (2005), Schumann (2005) and Zlatkin-Troitschanskaia (2005).

In the context of new management methods aimed at improving effectiveness and quality, however, there can be many parallel concerns, e.g. indicator- or ratio-based allocation of funding, the evaluation of target agreements or university contracts and lately also individual

assessment of university teacher performance. New management methods, for their part, are seen as ensuring and raising quality and effectiveness by applying various target-oriented strategic instruments. These instruments include different forms of contract management, such as university contracts, performance and target agreements, or performance-based distribution of funding. Greater autonomy and greater accountability are presented as two sides of the same coin here. Accountability has come to be accepted as the ex-post legitimization of public resources by way of transparency about performance, evidence of target achievement and of effective and efficient service delivery. In specific terms, it involves new forms of coordination and reporting, e.g. through participation in university councils or university reports which may also include cost-benefit analyses (cf. Wolter/Kerst 2008: 140f.).

An alternative to the forms of institutional, system and programme accreditation outlined above is process accreditation, which does not cover individual degree courses or entire higher education institutions but the accreditation of higher education processes and QA procedures, and hence a university's internal quality management system. A pilot project initiated in 2006 and implemented by the accreditation agency ACQUIN at four higher education institutions shows that process accreditation is well suited to quality optimisation (ACQUIN 2006). Nevertheless, the German Accreditation Council (Akkreditierungsrat 2007a; b) rejects a comprehensive introduction of process accreditation and an abolition of other forms of accreditation and QA, in keeping with the criticism advanced by Banscherus and Staack (2007). Their objection to comprehensive introduction was that insufficient time had been taken to gain experience with these new management instruments, which – as the authors show in their international comparison of higher education systems – is necessary in order to be able to carry out reliable process accreditation. At the same time, the critical point must be mentioned that process accreditation is not so much a content-based form of management as a new concept for higher education management and organisational development. While this renders QA manageable, albeit indirectly, it does not solve the fundamental problem of directly managing the quality and effectiveness of teaching and learning processes. Other open questions include whether the main objectives of accreditation (QA, institutional profile-building, deregulation through new forms of management) are actually being achieved, and whether accreditation actually leads to lasting quality improvement or just takes a snapshot of the quality situation at the given moment in time. Here it would also be necessary to investigate whether, and to what extent, accreditation actually contributes to innovation, excellence and individual universities' profile-building efforts, or whether it is generating a time-consuming and costly straightjacket of documentation which satisfies formal aspects of QA but never quite touches on the core teaching, learning, research and development processes.

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## 2.6 Education standards

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Education standards have long been considered a solution to the fundamental problem, revealed at several points in this paper, of the difficulty of managing the quality and effectiveness of individual learning processes. This is definitively the case for schools in the general education system, the higher education sector and teacher training, but is increasingly being taken up in the debate in relation to IVET and CVET.

Education standards describe the course outcomes that educational institutions guarantee to deliver or strive towards. They generally consist of a list of skills, abilities, knowledge and competencies that learners should achieve by the end of the course. They are equally intended to contribute to the quality assurance and management of a course and of entire education systems. At the same time, they count as a yardstick for target figures and, in this sense, are political instruments. Moreover standards can be classified according to a wide variety of categories, but are commonly differentiated into curricular, instructional, organisational and evaluation standards. Education standards – together with an orientation to learning outcomes – therefore seem an ideal means of fulfilling several fundamental modernisation, reform and QA needs:

they assure quality by defining targets and checking compliance;

they specify performance norms by defining educational outcomes (the attainment of particular knowledge, skills, abilities, competence and attitudes at a particular point in time);

they leave it up to the educational institutions to choose the methods with which to achieve the learning objectives;

in the detailed formulation of classes of standards (e.g. minimum standards, maximum standards) the education institutions have freedom of action; and

they can be centrally or non-centrally checked and compared (cf. Heid 2003: 176; Klieme et al. 2003: 7).

Making reference to education standards, generally valid (vocational) education targets will be drawn up and specified by describing competencies. Hence education standards can also be understood as competence standards which, when expressed as concrete descriptors and transposed into tasks, can be captured by means of testing methods and comparatively assessed. The German debate in particular is also considering whether and to what extent the concept of education standards, developed for the general education sector, is transferable to the vocational sector. The core of this debate is the question as to whether the general educational concept of competence, rooted in the cognitive sciences, is compatible with concept of vocational 'action competence' in VET (cf. Baethge 2006; Bohlinger 2009; Klieme et al. 2003). Even if the dividing line that prevails in this debate between the two views of competence cannot be scientifically proven (cf. Bohlinger 2008), the division is nevertheless upheld and is leading to the development of different (vocational) education standards. These relate not only

to the respective definitions of competence but also the level (minimum, average and maximum standards) and to the location within the learning process (input, process and output or outcome standards).

From the reference period, a series of studies are available on the classification and possible scope for deploying standards. Oelkers and Reusser (2005) differentiate between curricular standards, performance standards and standards of teaching and learning conditions, and on the same basic approach is adopted by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK 2005), which also differentiates between minimum, average and maximum standards. Sloane and Dilger (2005) criticise what they see as the rather too narrow differentiation between input and output, and additionally call for process and outcome standards. In this context, Beutner (2007) and Ziener (2006) emphasise the need not only to develop and implement standards but to evaluate them regularly, for only then can they be referred to for quality reporting. Despite the call for (regular) evaluation of standards, the majority of studies are non-empirical. This includes the critique by Heid (2007), who very sceptically pursues the question of whether the standardisation of desirable learning outputs actually leads to quality improvement in education systems. He comes to the conclusion that so far no indications are available, and that therefore it would be more useful to concentrate on teacher competencies. Oser (2007) also addresses the issue of competencies and standards in teacher education, considering them to be a necessity educationally, with the proviso that there will also always be areas of activity in which standardisation is not useful. It is noticeable that both authors, along with Ruhloff (2007) and Merckens (2003; 2007) conclude that if standards are used, there must always be sufficient non-standardised freedom (of action) in order to do justice to the complexity of educational processes. Here once again, the obvious impossibility of capturing educational practice with the aid of standards or standardised QA methods is pointed out.

With regard to the introduction of standards, Berner et al. (2008) derive several central aspects from an international comparison of nine countries. They show that the embedding of education standards substantially depends upon the compatibility of the targets they are designed to pursue (curricular design of teaching and learning processes) with other components of the system. This aspect relates not only to the use of system resources but also to the available academic, political and practice-based support systems. In this context, the authors refer to the 'sensitive point', in the sense of balancing regulatory specifications, learning and support provision and professional freedom of action, on the way to achieving specified targets (Berner et al. 2008: 224). By successfully bringing political and educational aspirations into harmony rather than playing them off against each other, standards could make an explicit contribution to QA in VET as well.

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### **3. Implications for future research projects and the quality of quality assurance**

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The statements made up to this point have completely skirted around one question, namely who will guarantee the quality of quality assurance, and how. Those at the forefront in addressing this question – in keeping with the emphasis of the present report – are academic institutions engaging with the theme of quality, rather than individual companies or agencies such as accreditation agencies.

The necessity for studies, approaches and programmes on quality development and quality assurance to be subjected to quality review and research evaluation forms the basis for continuous QA and autonomous self-management of the work units that deal with this theme. At the same time, it serves as a means of legitimation vis à vis financial backers and public funding institutions. Hence funding must be distributed according to clear and systematic quality criteria. Research evaluations assist the management of relatively autonomous functions in society which have to prove themselves competitively. The relevant evaluation commissions must therefore be independent in their decisions and may not be too closely associated with the research units to be evaluated.

In the ideal scenario, research evaluations cover the most recent period to date, but also take account of trend descriptions for preceding years. It is also self-evident that the plurality of methodological approaches is a desirable characteristic for the quality assurance of quality assurance. Thus, case studies, field studies, in-process evaluations and pilot projects start out on an equal footing with each other as long as they adhere to the principles of validity, reliability and objectivity and the research results are transparent, verifiable and publicly accessible (e.g. through publications). If research institutions or units are evaluated, the assessment of quality – and, based on that, the assessment of effectiveness – is generally oriented to aspects such as structural features, provision of resources, personnel, service and work results. The evaluation of the latter is very controversial, as within quality research as a whole, because here the concern is with assessing the content of research (method design, theoretical approaches, findings) or of teaching and learning processes (acquired knowledge, expertise, competencies, abilities, skills, application and transfer of acquired learning – and not just on the part of learners!). Whereas the quality of quality assurance has long made its mark on the research sector, as yet there is a complete lack of any comprehensive research for the review of quality procedures and proof of their positive impact in the initial and continuing vocational education and training (Gonon 2008b).

Fundamentally all QA models, procedures and instruments depend upon the existence of established insights on the effectiveness and impact of educational processes in the given sector of education. On that basis, criteria and indicators can be defined and findings can be evaluated. Such findings should not be limited to cross-cutting data (comparative studies, benchmarks, rankings) but should also shed light on the opportunities and obstacles to development processes in educational organisations. In a nutshell: QA is ultimately only academically rigorous when research-backed insights are available as to a) which observations and measures actually

work as indicators for high or not so high (educational) quality, and b) what conclusions (structural changes, specific measures, etc.) can be drawn for the further improvement of quality. But impact and intervention research is not far enough advanced in every sector of education for all such statements to be backed by solid research. This is especially the case in the IVET and CVET areas of the vocational sector. While a large number of conceptual papers are available on the development of standards, of quality and professionalism, and of quality and effectiveness indicators, the empirical surveys to support – or rebut – these concepts are singularly lacking. Only by means of such empirical studies could valid research be conducted into factors of education quality, and incorporated into well-founded standards and QA systems. Ideally basic knowledge about quality assurance and effectiveness develops by means of, and alongside, concrete quality and effectiveness assurance in practice. This presupposes a clear idea of what quality assurance and effectiveness efforts are meant to achieve. It has become evident that ideas about this vary:

*Quality aims of (higher) education institutions from different perspectives. Adapted from Euler (2005)*

Perspective	Aim of quality	Measures
<i>Educational</i> Maximum conscionable degree of autonomy is expected to lead to communication and cooperation, high ethical standards, a self-confident school culture, critical self-assessment and distinct performance orientation.	Characteristic: development of quality via bottom-up and top-down movements. Guaranteed by creative scope, use of the competencies of all stakeholders, delegating responsibility, changing the culture of the environment	Motto: ‘the journey is the destination’
<i>Educational organisation</i>	Largely autonomous management of organisations/ institutions/ establishments	Unclear
<i>Education policy</i>	Developing attractive educational provision, abandoning the ‘stopgap’ role of schools in initial vocational training, providing full-time school-based courses, ‘regional competence centres’	Development of quality management systems
<i>economic</i>	Dismantling overregulation and bureaucracy, shifting competencies	Global budgets with funding and budget decisions delegated to individual education providers

For each perspective, another aspect to be scrutinised is who or which institution, invoking legitimation from which source, is defining the concrete aims of QA? Furthermore it was shown that the German quality assurance debate is currently very closely linked with that on education standards. These can be referred to in order to draw up generally valid (vocational) education targets and specify them by describing competencies. Hence education standards can also be understood as competence standards which, when expressed as concrete descriptors and transposed into tasks, can be captured by means of testing methods and comparatively assessed. The German debate is also considering whether and to what extent education standards are transferable to the vocational sector, and what concept of competence they should be based on. Linked to this, different aims for the introduction of standards, which for their part have implications for the level (minimum, average and maximum standards) and the location within the learning process (input, process and output or outcome standards).

So while standards define what quality is accepted, the different components of a quality management system specify the concrete implementation process to achieve and maintain a specific level of quality. While evaluation standards are suited for the orientation of quality control and the quality audit, curricular, instructional and organisational standards are the reference values for quality assurance, review and improvement. Two questions remain open, however. The first is what concrete QA measures should be applied for a specific area: the choice, for instance, between Q2E (*'Qualitätsevaluation und -entwicklung'*, quality evaluation and development), the EFQM model for 'education excellence', TQM models, DIN ISO models or the development of new models is largely left to the particular educational institutions. Secondly, it remains unclear what indicators can be used for comparative quality and who defines them, particularly as the concrete benefit or the effectiveness of QA methods in the education sector is unclear as yet. That may be attributed initially to the fact that many of the methods are still in development or have not yet been implemented for long enough to supply adequate material for evaluation; another reason may be that neither the European instruments (CQARF – Common Quality Assurance Reference Framework, ECVET – European Credit System for Vocational Education and Training, EQF – European Qualifications Framework) nor the national institutions such as the *Gemeinsame Wissenschaftskonferenz* (GWK; formerly the Bund-Länder Commission, BLK) or the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK) have provided concrete indicators. In fact the only 'indicators' in use are the European benchmarks (Council of the European Union 2009<sup>33</sup>; European Commission 2002). However, these apply both to vocational and to general education, and can only contribute indirectly to assuring the quality and effectiveness of vocational education and training.

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<sup>33</sup> For the period 2010-2020 these include raising the participation of adults in lifelong learning to min. 15%, increasing the proportion of 30-40 year olds with higher education degrees to min. 40% and reducing the proportion of school and apprenticeship dropouts to less than 10%.

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And last but not least, it should be borne in mind that it is no easier to pin down an unequivocal and objective definition of quality as a *tertium comparationis* than it is for specific QA instruments. The German debate is unlikely to produce unambiguous definitions of quality and standardised indicators in the immediately foreseeable future. That said, there is a very clear desire to leave sufficient freedom in educational activity areas for elements that cannot meaningfully be standardised and captured through normed procedures, and to regulate this freedom through mutual trust.

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# Transitions and Research on Transitions in VET

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Dietmar Frommberger

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## **1. Transitions and research on transitions – Clarification of terms Questions and research themes from a German perspective**

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The passage of children, young people or adults from one phase of education, socialisation or training to another is called a “transition” [German: Übergang]. Academic analyses devoted to the associated phenomena and issues are subsumed within the specialist branch of what is known as “transition research” [Übergangsforschung]. A range of academic disciplines take an interest in the phenomenon of “transition”, particularly sociology, psychology, educational research and vocational education and training (VET) research.

“Transitions” take place at typical thresholds of personal, educational and occupational biographical development. Some examples are the move, in early childhood, from pre-school day-care or kindergarten education into the primary phase of the education system; the passage into different forms of schooling, VET and academic education at lower, middle and upper secondary levels and into higher education; the shift into employment or unemployment, or from working life to retirement. In transition research, transition processes are studied on an individual level along with the relevant contextual conditions. Of interest in this connection are the individual and structural factors and correlates which contribute to successful or unsuccessful transition processes. Usually distinctions are made between contextual, sociodemographic, biographical, work-related, social and personal factors and correlates (cf. summary presentation in Eckert 2007).

The current paper seeks to circumscribe the broad field of research. The discussion will be confined to selected research findings concerning transitions at the thresholds of VET, within VET, and from VET into employment in Germany. It will focus on addressing the theme from the viewpoint of VET research.

A concept that has assumed considerable significance in VET policy and in the expert discourse is that of “permeability” [Durchlässigkeit]. The semantic emphasis of the permeability concept in the educational and vocational context is on accessibility and the ease of transition between different educational courses and phases, both within the national education system and its different sub-sectors and – in international terms, especially in the European policy context, – between different education systems. The objective of permeable education structures and training pathways is to foster individual mobility opportunities and the readiness to take advantage of them. These include educational mobility, geographical mobility, occupational mobility and, crucially, social mobility, which targets the opportunity for social integration and advancement.

The growth in significance attributed to the question of permeability in recent years goes hand in hand with the growth in research and development activities in this field. Reference will be made to selected programmes below. In policy terms, the growth in significance of permeability and the list of measures to promote it in the educational and vocational system derives from different lines of argumentation and interests (cf. Frommberger 2009 for in-depth discussion of this). Traditionally, the dominant strand is the social and education policy argument of promoting equal opportunities. In the VET sector, the economic policy argument of securing the supply of young skilled workers regularly gains prominence in the short term. For the last few years, however, the policies of organs of the European Union have also been contributing substantially to promoting permeability within the education system and between education and employment systems: At the same time, VET, despite its specific social and economic significance, is increasingly looked upon in a similar way as higher education, which means that the so-called “Bologna Process” and the “Lisbon-Copenhagen Process” have to be seen as two sides of one medal as they follow similar principles of harmonisation (within the legal framework of the EU treaty) and as they clearly aim at transparency as well as ease of transition and progression within a permeable and unified education system (Deißinger 2008).

In Germany, the question of permeability is discussed in VET policy and VET research with particular regard to the diverse interfaces, which will be dealt with in Sections 2, 3 and 4 below. Section 5 addresses the significant transition from VET into employment.

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## 2. Transitions from school into VET

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Based on the qualifications attained at lower secondary level, a transition takes place either to the upper secondary level of general education, or into the various options for VET. Generally there are four available transition routes from lower secondary into higher secondary education: the dual system, the school-based vocational system, the Transition System, or entry to 11th grade of a general academic or vocational Gymnasium (university-track secondary school; see 2.2). Over half of an annual cohort moves into vocational education and training. Here, the dual system clearly dominates in terms of supply and demand (see 2.3). Full-time school-based initial vocational education and training (IVET) is also of growing importance (see 2.4). However, there are not sufficient apprenticeship places in the dual system and in the school-based vocational system to meet the level of demand. Many young adults fail to find an apprenticeship. Equally, many young adults who have found an apprenticeship complete a programme of initial vocational training which does not reflect their interests. School-leavers without qualifications or with a lower secondary school-leaving certificate make up a disproportionately large segment of the so-called Transition System (see 2.5). They cannot compete for attractive initial vocational training places in the dual system or in the school-based vocational system against holders of intermediate secondary school-leaving certificates, or indeed upper secondary school-leaving certificates conferring university entrance entitlement (known as the *Abitur*). The quantitative and qualitative matching problems at the 1st threshold can be explained with reference to the supply structure of vocational education and training, as well as the conditions of individual demand and vocational-choice behaviour (see 2.6).

Vocational education research on transitions at the first threshold focuses on the quantitative and qualitative trends in supply and demand for VET. Differentiated statistical analyses are available on the supply-demand situation on the apprenticeship-place market in Germany. In addition, important findings are available on the question of young adults who face disadvantages, particularly with regard to disadvantaged groups of people in VET. The question of apprenticeship-entry maturity and apprenticeship-choice behaviour has also begun to command greater attention in recent years.

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### *The lower secondary level and the three sectors at the first threshold in Germany*

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In vocational education research the point of transition from school into VET is normally referred to as the “first threshold”. Following a period in the 1960s and 1970s, when the pre-eminent issue was that of transitions within general education, particularly from the primary to the secondary phase, at the end of the 1970s in (West) Germany, the transition or “status passage” from school-based general education into IVET decisively gained in significance. The reasons for this were rooted in demographic trends, in the increasingly heterogeneous school qualifications on entry into vocational education, in modified transition behaviour on the demand side and, finally, changed trends in apprenticeship places and recruitment strategies on the supply side. The first-threshold transition phenomenon in Germany since the end of the 1970s has tended to be characterised by quantitative and qualitative matching problems.

The transition at the first threshold occurs after the completion of compulsory full-time school attendance at lower secondary level. In most of Germany's federal states (Länder), compulsory full-time school attendance for young people ends after nine years of schooling; but only after ten years in a few of the German Länder. At the end of their compulsory schooling, young people acquire school-leaving certificates, which vary distinctly in their valency and in the entitlements they confer. Many young people end up as unqualified school-leavers (Abgänger) by leaving without a final certificate.

The hallmark of the lower secondary level of Germany's school system is the differentiation of school forms. Depending on achievement at school, teachers' recommendations and the wishes of parents or carers, at the end of primary schooling children transfer into one of essentially three types of school: the Hauptschule (lower secondary general school), Realschule (intermediate secondary school) or the Gymnasium (university-track secondary school). The Sonderschule and Förderschule (special schools) are forms of school where children and young people with learning difficulties, learning disabilities, intellectual or physical disabilities are taught by means of programmes geared specifically towards their special needs.

The difference between the school forms at lower secondary level is found initially in the assumption that pupils are equipped for different levels of learning achievement. Those who, on the basis of their past school grades, are expected to be comparatively high achievers transfer to the Gymnasium. The school forms and educational pathways of the Realschule and the Hauptschule are also available at other types of school that offer multiple pathways, which go by different names in different Länder. These include the Mittelschule (intermediate school, Saxony), Regelschule (regular school, Thuringia), Sekundarschule (secondary school, Bremen, Saxony-Anhalt), Erweiterte Realschule (extended intermediate school, Saarland), Integrierte Haupt- und Realschule (integrated secondary general and intermediate school, Hamburg), Verbundene or Zusammenfassende Haupt- und Realschule (joint or combined secondary general and intermediate school, Hesse, Mecklenburg-Western Pomerania, Berlin), Regionale Schule (regional school, Rhineland-Palatinate) and the Gesamtschule (comprehensive school).

A key reason for attending one of the three mainstream school forms is the expectation, on the one hand, of being taught and being able to learn in accordance with one's own learning background and ability, in order to "increase the functional value of knowledge for complex life situations" (Kutscha 1995, p. 16). A further aim, however, is to acquire a school certificate which gives access to subsequent pathways and/or vocational opportunities within the framework of a qualification system.

Apart from the plethora of special characteristics and exceptional provisions that exist in the different German Länder and are sporadically brought up to date, the qualifications that can be obtained from the various school forms at lower secondary level in Germany are the Hauptschulabschluss (lower secondary school-leaving certificate) and the mittlerer Bildungsabschluss (the intermediate secondary school-leaving certificate).

At the end of the 9th grade, in all Länder there is the opportunity to obtain the lower secondary school-leaving certificate as an initial qualification from general education. It is known as the *Hauptschulabschluss* in the majority of Länder. Under the regulations of the Länder of Berlin, Brandenburg, Bremen, Mecklenburg-Western Pomerania, Lower Saxony, North Rhine-Westphalia and Schleswig-Holstein, at the end of the 10th grade it is possible to acquire an extended lower secondary school leaving certificate, known variously as the *erweiterter Hauptschulabschluss* or *erweiterte Berufsbildungsreife*. In Baden-Württemberg, suitably qualified pupils may continue for an extra year at the *Hauptschule* in the aim of acquiring a *mittlerer Schulabschluss* (intermediate secondary school-leaving certificate).<sup>34</sup>

This is the school-leaving certificate acquired from schools of general education at the end of the 10th grade, and is known in the majority of Länder as the *Realschulabschluss*. For exceptional attainment and grades, an *Erweiterte Sekundarstufen I – Abschluss* (extended lower secondary certificate) is awarded, which confers entitlement to enter the *Gymnasium* at upper secondary level.

The lower secondary level certificates and completion of the compulsory period of school attendance can confer a range of entitlements for the transition at the first threshold into upper level general and vocational education. For entry into IVET in the German dual system, there is no formal requirement for a particular school-leaving certificate because IVET is undertaken on the basis of an apprenticeship contract in private law between the training company and the apprentice. In practice, however, the chances of an apprenticeship are closely linked to the school-leaving qualifications previously obtained.

Qualifications are increasingly becoming decoupled from school forms. The lower secondary school-leaving certificates formerly associated with the *Hauptschule* are increasingly being acquired at the *Realschule*, while intermediate certificates are also being awarded at the *Hauptschule*, and to an even greater extent in the VET sector (cf. *Autorengruppe Bildungsberichterstattung 2008*, p. 87 ff).

Both qualified school-leavers holding lower secondary school-leaving certificates and unqualified school-leavers face the challenge of continuing their education at upper secondary level. Generally there are four available transition routes from lower secondary into higher secondary education: the dual system, the school-based vocational system, the Transition System, or entry to the 11th grade of a general academic or vocational *Gymnasium*. In 2006, young people in Germany moving into VET at the first threshold were distributed across the

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<sup>34</sup> Pupils who pass the 9th grade of the *Realschule* successfully but leave school early are also awarded the lower secondary school-leaving certificate. Pupils who have already completed nine years of school attendance on entering the ninth grade of the *Hauptschule* because they had to repeat a grade can still obtain the lower secondary school leaving certificate by completing a tenth school year at the *Hauptschule*. Those who do not take this opportunity or have not attained the required standards to pass the 8th grade after nine years of school attendance must leave the *Hauptschule* without any school-leaving qualification.

three sectors of VET as follows (cf. Autorengruppe Bildungsberichterstattung 2008): Dual system: 43.5 percent; school-based vocational system: 16.8 percent; Vocational Transition System: 39.7 percent. Over the course of the last few years, this distribution has followed a downward trend for the dual system as opposed to an upward trend for the school-based vocational system and for the Transition System. The relative importance of the transition into dual-system IVET is declining.

A conceivable fifth option, that of direct transition into the world of work as an unskilled worker, is precluded in Germany. In addition to the nine or ten-year period of compulsory full-time school attendance, at least three more years of compulsory part-time schooling is enshrined in the school laws of the German Länder. Alternatively, the three-year part-time attendance obligation can be discharged by means of one year's attendance at a full-time vocational school.

The transitions from lower secondary level and from the upper secondary level of general education into the upper level of vocational education at the first threshold are substantially determined by the school-leaving qualifications already obtained (cf. Autorengruppe Bildungsberichterstattung 2008, pp. 157 f). Unqualified school-leavers or qualified school-leavers with a lower secondary school-leaving certificate make up a disproportionately large segment of the Transition System (see 2.4) and cannot compete for attractive initial vocational training places in the dual system or in the school-based vocational system against holders of intermediate secondary school-leaving certificates, or indeed upper secondary school-leaving certificates giving university entrance entitlement.

#### *Transitions into IVET in the German dual system*

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Quantitatively the dual system of IVET is dominant in Germany, i.e. entry to a form of initial vocational training based on an apprenticeship contract with a training company, where vocational learning takes place predominantly in the workplace and is flanked by attendance at a part-time vocational school (Berufsschule). From the viewpoint of attractiveness, too, the dual system clearly dominates the vocational-choice behaviour of unqualified school-leavers (Bundesinstitut für Berufsbildung 2009, pp. 70 ff).

Demand for a dual system apprenticeship dominates the vocational-choice behaviour of those who have not acquired university entrance entitlement; but in addition, it also substantially determines the choices of those who could go on to university (cf. Friedrich 2008): around 75 percent of school-leaving certificate holders from the Hauptschule, 60 percent of those from the Realschule and 25 percent of university entrance qualification holders are interested in immediate entry to a dual-system apprenticeship. The comparable figure is 85 percent for leavers who have undertaken the school-based "prevocational training year" (Berufsvorbereitungsjahr), 90 percent for those from the full-time school-based "basic vocational training year" (Berufsprüfungsjahr), 50 percent for those from both the specialised upper secondary school (Fachoberschule) and the vocationally oriented university-track secondary school (Fachgymnasium), and 65 percent for completers of basic vocational

training at full-time vocational school (Berufsfachschule). There is also immense pent-up demand from those who were unsuccessful in obtaining a dual-system apprenticeship directly after leaving general education the previous year (Altbewerber) and consequently spent the year in alternative vocational orientation and qualification processes, particularly within the Transition System (cf. Friedrich 2008).

In other words, school-leavers with every kind of school-leaving certificate from general education opt for the dual system of IVET. It has been attracting significantly higher proportions of those holding an upper vocational school-leaving certificate (Fachhochschulreife), which confers a subject-specific entrance entitlement to higher education, or a universal higher education entrance certificate (the Abitur or allgemeine Hochschulreife) from the Gymnasium. Close to 20 percent of apprentices (cf. BMBF 2008) hold a higher education entrance qualification. In some metropolitan areas, the proportion of Abitur holders in company-based dual system IVET is as high as 30 percent. School-leavers with an intermediate secondary school-leaving certificate are the dominant group taking up apprenticeships, while the proportion of school-leavers with the lower secondary school leaving certificate from the Hauptschule has declined significantly. For the most part, the latter group move into the Transition System (cf. Bundesinstitut für Berufsbildung 2009, pp. 128 ff).

Quantitatively the transition into the dual system is described and evaluated on the basis of the supply-demand ratio, in accordance with Section 86 of the German Vocational Training Act (BBiG). The ratio of supply to demand in the apprenticeship-place market yields information on young people's chances of being able to gain a recognised vocational qualification and on the size of the candidate pool from which companies and other training organisations can select trainees. The figures for the supply-demand ratio pursuant to BBiG Section 86 are based on the supply of apprenticeship places registered with the Federal Employment Agency and the reported demand for apprenticeships. Offers and demand in the school-based vocational system and in the Transition System are not included. For that and various other reasons (cf. Ulrich 2008) the supply-demand ratio which substantially influences the public debate about VET in Germany is only meaningful to a limited extent.

In addition to the stated quantitative problems of matching supply and demand in the apprenticeship-place market, another factor influencing transition into the company-based dual system of IVET is that many young adults who sign an apprenticeship contract and embark on initial vocational training cannot train in their personal first-choice occupation (cf. Bundesinstitut für Berufsbildung 2009, pp. 72 ff). Often attractive apprenticeship offers, for example in the commercial sector, are in very heavy demand, with the result that many applications are initially unsuccessful. Frequently, applicants then pursue IVET in a different occupational field, which matches their interests only partly or not at all. It can be assumed that concluding an apprenticeship contract which diverges greatly from one's own interests leads to a higher than average likelihood of considering terminating the contract or actually dropping out. Conversely, many occupations requiring formal training ("training occupations") are unattractive in the eyes

of school-leavers, so that it is not unusual for certain apprenticeship places to remain unfilled (cf. Bundesinstitut für Berufsbildung 2009, p. 30).

Initial vocational training in the German dual system is the first choice for most young adults and school-leavers. Hence, the importance of dual system IVET (i.e. company-based IVET accompanied by part-time vocational school attendance) must be rated extremely highly. In total, including those who first obtain a higher education entrance qualification from the general education system, two-thirds of an age-cohort obtains a vocational qualification of this kind.

### *Transitions into school-based programmes leading to a full initial vocational qualification*

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The alternatives to the dual system and to upper secondary general education at the first threshold are only minimally attractive, and are associated with a significantly lower likelihood of successful entry to employment and an occupational career path. The sole exceptions are the school-based vocational training courses which lead to recognised qualifications in the health and care services or in commercial assistant-grade occupations (cf. Autorengruppe Bildungsberichterstattung 2008). In the period from 1992 to 2007, the proportion of these forms of IVET at the first threshold has risen considerably (cf. Feller 2004; Ulrich 2008), while the proportion of apprenticeships in the dual system has declined in absolute terms and in relation to the alternative forms of vocational education.

### *Transitions into the Vocational Transition System*

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The so-called Transition System has undergone major growth in the last two decades. With certain caveats, this is a form of provision taken up by those unqualified school-leavers who are unable to take advantage of an attractive vocational training opportunity or a subsequent education course when they reach upper secondary level. In Germany's National Education Report 2006, the Vocational Transition System is described as covering (vocational) education provision stopping short of formal training in a recognised occupation or not leading to a recognised initial vocational qualification, but aimed at improving the individual competencies of young people to take up IVET or employment and, in part, enabling the retaking of a general education school-leaving certificate (Konsortium Bildungsberichterstattung 2006, p. 79).

This is a very heterogeneous type of provision which takes place at different state and private vocational training establishments and consists of a broad spectrum of varied vocational training pathways (cf. Kutscha 2005). Often the vocational orientation and competence-building offered in the Transition System is supported by one-off financing programmes from the Federal Government, the Länder and the local authorities (cf. Werner et al, 2008). On a nationwide basis, it is scarcely possible to gain a coherent view of the options in the Transition System. Only in some elements of provision within the Transition System is there any coordination of content or organisation with subsequent school-based or company-based IVET options.

In addition, the young people and young adults in the transition represent an extremely heterogeneous target group (cf. Bohlinger 2004, Friese / Siecke 2008): young people with

learning difficulties, young people who have not attained occupational or vocational maturity, young people with disabilities, unqualified or semi-skilled workers, disadvantaged or educationally excluded young people, young people from migrant backgrounds, disadvantaged young women with low prospects of an apprenticeship and young mothers, as well as young people with solid school-leaving qualifications who are unable to find an attractive apprenticeship due to regional or economic conditions, and so on.

A high number of young adults who (have to) transfer into the Transition System at the first threshold between general and vocational education, later begin initial vocational training in the dual system. For many unqualified school-leavers, the Transition System functions as a staging post or a pause for orientation, prior to being able to complete company-based IVET in the dual system. Every year, this group of unplaced applicants from previous years increases the demand for attractive apprenticeship places on the apprenticeship-place market, which makes the situation that much harder for that year's regular school-leavers. It can be shown, however, (cf. Autorengruppe Bildungsberichterstattung 2008, pp. 161 ff), that the high proportion of school-leavers in the Transition System decreases considerably after 12 to 30 months as these young adults make their way into more attractive forms of VET. Nevertheless, "marking time" like this is unsatisfactory from an individual and a societal perspective. In total, almost 15 percent of an age-cohort in Germany was left without formal training for a recognised occupation (cf. Beicht et al, 2008).

Although the desire to undertake IVET leading to a full vocational qualification immediately after leaving full-time education is equally strong in young people, whether or not they come from migrant backgrounds, the opportunities for migrants are very much less favourable (cf. Autorengruppe Bildungsberichterstattung 2008, pp. 157 ff; cf. Gaupp et al, 2008). Overall, young people with a lower secondary school leaving certificate from the Hauptschule are an especially prominent group within the Transition System. But many young people with an intermediate school-leaving certificate also start off by completing alternative vocational provision in the Transition System – in the hope of finding an attractive dual system apprenticeship or a place in the school-based vocational system as soon as possible.

### *Approaches to explaining the matching problems at the first-threshold transition from general education into VET in Germany*

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Focusing on the supply structure of vocational and prevocational education and training, the following section will shed light on key factors that may help to explain the matching problems that occur at the first-threshold transition:

1) In comparison to the situation in other European and non-European countries, the supply of initial vocational training at the first threshold in Germany is driven primarily by an apprenticeship-place market, the organisation of which is largely left to the private sector and which is subject to a private-sector contractual relationship. Of course, the apprenticeship contracts concluded between the training company and the apprentices are governed directly by the qualitative standards of the Vocational Training Act, and indirectly by other state regulatory

entities (e.g. the Works Constitution Act, the Youth Protection Act). In quantitative terms, however, the decision on whether or not to create new apprenticeship places is the sole preserve of companies – leaving state-funded remedial measures out of the equation. In fact, around three-quarters of companies in Germany do not participate in IVET within the dual system (cf. BMBF 2008).<sup>35</sup> The situation at the first-threshold transition from general education into VET in Germany is therefore definitively influenced by corporate and human resources management priorities and recruitment strategies. On the one hand, this is associated with the particular advantage that those who obtain IVET also have relatively good chances of finding employment at the second threshold (see Chapter 5). On the other hand, this situation results in comparatively inauspicious vocational development prospects for those who miss out on the company-based IVET option under the dual system. This issue can be seen as the Achilles' heel of the dual system.

2) The supply of vocational training in the VET system pursuant to the Vocational Training Act, which represents the dominant form of IVET in Germany, is dependent to a very great extent on the overall economic trend, and hence on the general structure of employment and the business cycle. These dependencies have increased in recent years (cf. Troeltsch / Walden 2007). Other central framework conditions, for example the demographic trend, also have a direct impact on the supply situation on the apprenticeship-place market. The advantage of this direct coupling of IVET provision to structural economic development lies in the comparatively good chances of transition at the second threshold into subsequent employment for those who have completed an apprenticeship in the dual system. At the same time, the apprenticeship-place market is unpredictable from the viewpoint of school-leavers. Imbalances in the economy have a direct impact on the prospects of an attractive apprenticeship.

The differential between highly attractive company-based apprenticeship options in the dual system offering a wealth of opportunities, on the one hand, and the distinctly less attractive school-based VET provision on the other, contributes substantially to ensuring that for many young adults the transition from general education into vocational education at the first threshold in Germany leads to very good starting opportunities in a recognised occupation with good prospects of career advancement; yet at the same time, it leaves many of those who do not obtain a company-based apprenticeship to experience their first taste of frustration and personal failure, and substantially reduced prospects of integration into employment and the social status attaching thereto. It is telling that, in Germany, this group of individuals who do not gain access to IVET for a dual system apprenticeship or one of the attractive school-based occupations are deemed to be “disadvantaged”. This category also includes the so-called “market disadvantaged” young people; those who, despite having acquired high-value school-leaving qualifications from general education, cannot manage to use them to enter the dual

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<sup>35</sup> Nevertheless, it is worth remembering that there are major variations in company participation in IVET depending on company size. Companies with high numbers of employees tend to have a higher participation rate.

system because apprenticeships are in short or scarce supply for regional, economic or demographic reasons. So this group, too, misses out on access to the promising vocational pathway – despite having met all the usual requirements during their sometimes very successful individual school biographies, in compliance with an education system governed by meritocratic principles. Despite having met these requirements and acquired high-value school-leaving certificates, it is virtually inexplicable to these young adults why they nevertheless find themselves having to compete, without success, for attractive forms of IVET at the first threshold.

Initial vocational training in the dual system, i.e. learning in the company-based and task-related work and socialisation context, enjoys a degree of reputation in Germany that is rated extremely highly in international comparisons. The choice of a company-based dual system apprenticeship at the first threshold is highly attractive for young adults. In addition, a high number of those who have acquired a universal entitlement to enter higher education at the end of their upper secondary education likewise opt for this form of IVET. This in turn means that there is fierce competition between school-leavers for attractive company-based apprenticeships, so that in times when the supply of training places is tight, those leaving general education at the end of their lower secondary schooling have poor prospects of an apprenticeship and, effectively, no chance of access to popular and attractive IVET options. For instance, nowadays the vast majority of apprentices training for commercial-administrative occupations already hold a universal higher education entrance entitlement (BMBF 2008).

Other key propositions of great importance to explain the matching problems at the first threshold relate to the conditions of demand, above all the question of vocational orientation in general education and that of the apprenticeship-entry maturity of young adults:

1) The general education system in the various German Länder includes comparatively little specialised instruction in vocational orientation. Thus, the individual choice of a training occupation is relatively uncertain. For instance, studies can demonstrate (cf. Krewerth et al, 2004) that the title of a training occupation can carry a great deal of weight in the choice of an apprenticeship without school-leavers having any idea of the requirements and competencies they will be taught in order to gain that qualification. All in all, the process of identifying a training occupation at the first threshold in Germany is influenced and determined to a great extent by external conditions. In times of apprenticeship shortages, the only young people who are able to realise their individual interests are those with the highest grades on their school-leaving certificates or those with access to important social contacts.

2) In the quest for explanations for the – apparent – decline in the willingness of individual companies to engage in vocational training as well as in various surveys of companies, an argument that frequently crops up is that applicants “lack” the maturity for an apprenticeship. Allegedly it is difficult to find competent trainees (cf. BDA 2003; DIHK 2005; IW 2003; IHK-Schwerin 2002). Young people’s lack of apprenticeship-entry maturity is cited as a key reason that many training places are not offered or not filled (cf. Dorn / Nackmeyer 2004). In contrast to the school-based VET structures found in many European countries, the transition into the dual

system of vocational training is largely market-driven, i.e. it operates on the basis of supply and demand in the apprenticeship-place market. Trainees must apply for the available apprenticeships. Thus, their entry or transition into this system of vocational education – unlike in school-based systems – is not primarily dependent on the formal educational qualifications they have acquired at school. Instead, school-leavers' real-world knowledge and competencies are more relevant by far to the success of their application for an apprenticeship. Of course, school reports are taken seriously in the context of a company's selection procedures between applicants for apprenticeships. However, these training companies are not bound to make their recruitment decisions based on these school qualifications.

“Apprenticeship-entry maturity” is a theme that has commanded increasing attention in the German VET sector over the years. It concerns the relationship between the knowledge and competencies that young applicants, as individuals, bring to the apprenticeship-place market, on the one hand, and the expectations and demands made by the host establishments, meaning the companies providing vocational training, on the other. Currently the theme of apprenticeship-entry maturity is especially virulent because, evidently, growing discrepancies are perceived and observable between young people's actual entry qualifications and those that are expected. From the viewpoint of company-based training organisations it is often argued that applicants were (increasingly) “unsuitable” to fill the available or potential apprenticeships. Thus the applicants' (lack of) apprenticeship-entry maturity represents a barrier to IVET in the apprenticeship-place market.

Due to the pronounced market-driven nature of access to company-based IVET, reliable findings on the minimum conditions necessary for a successful apprenticeship search are virtually impossible to come by. Companies will normally modify their entry requirements depending on the quantity and quality of applicants, but also in response to underlying changes in technological and work-organisational conditions. Essentially there are also no firm empirical findings on what knowledge, competencies and qualities, or what “degree of maturity” will guarantee young people success in gaining an apprenticeship and, even more importantly, completing it to gain an occupational qualification. At best, there are empirical results from various surveys concerned with a subjective assessment of applicants' capacities (cf. for example Ehrental/Eberhardt/Ulrich 2005; cf. Frommberger 2009 for an overview). So these do not record the trainees' performance levels, but solicit the opinion of people who deal directly or indirectly with the young person. Likewise, the various selection procedures and entry tests intended to assess future performance potential are comparatively limited in their predictive validity. To be able to formulate robust statements on the verifiably successful features of “apprenticeship-entry maturity”, longitudinal studies over a number of years would be necessary, which have not been carried out so far. To date, however, a host of normative definitions of the construct of “apprenticeship-entry maturity” have been produced, which differ from one author to another (cf. the overview in Eberhard 2006).

Nevertheless, in publications on the results of the PISA study, conclusions were also drawn in relation to the capacity of young adults to complete the formal training necessary to qualify in

a recognised occupation: “With reference to the PISA data, it is not possible to determine what minimum level of reading competency must be achieved in order to succeed in gaining an initial vocational qualification. Considering the definition of competency level I, however, one suspects that any young people who are not able to meet the relevant requirements will face considerable difficulties in making the transition into working life” (Artelt et al, 2001). Making reference to competency level I, the lowest level on the competency scale model used for the PISA studies and their intended aim of describing and classifying the assessed levels of attainment, so-called “risk groups” are defined. A relatively high proportion of the German pupils tested remained below competency level I. Furthermore, the definition of the risk group also includes pupils who are classified as attaining competency level I in the learning area of mathematics. Overall, some 20 percent of the pupils tested in Germany belong to the risk group. To that extent, it is possible to claim – albeit with certain caveats – that conclusions relevant to the theme of apprenticeship-entry maturity can also be drawn from the PISA findings. On that evidence, a sizeable section of the German school population is clearly failing to achieve the necessary qualifications to give them an expectation of success in IVET.

Ultimately, additional research is important in this field: “Clarification of the question of which competency levels denote the minimum standard of apprenticeship-entry maturity and which levels of requirements are associated with occupation-specific suitability for apprenticeships in different occupations, is one of the most urgent but certainly also most demanding tasks facing empirical education research in the coming years” (Trautwein et al, 2008).

In the coming years, drastic demographic developments can be expected; it remains to be seen whether the relative proportion of transitions into dual system vocational training at the first threshold continues to fall, or will start to rise once again. Nevertheless there will continue to be matching problems even if there is quantitative growth on the supply side – particularly with regard to dual system apprenticeships – in relation to demand. The question that arises is whether, and to what extent, the system of VET in Germany can come up with attractive forms of provision at the first threshold which also provide compatible options to those school-leavers who are unable to meet the requirements for a complete programme of IVET. This group jostles for access to the initial vocational training market because without formal training in a recognised occupation they have no career development prospects, even in an employment system with a high demand for manpower. Whereas decades ago, it was possible to integrate this group into segments of employment as unskilled or semi-skilled workers, today these areas have increasingly vanished. This “integration gap” has to be bridged. The approaches and research and development needs in the field of “research on disadvantaged individuals” are described in Bojanowski (2006) and Bojanowski et al (2005). Mention should also be made of the memorandum “On the professionalisation of teaching staff in integrative support from a vocational education research perspective” by the vocational and industrial education section of DGfE, the German Association for Educational Science (Memorandum, Sektion Berufs- und Wirtschaftspädagogik der Deutschen Gesellschaft für Erziehungswissenschaft, 2008).

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### 3. Transitions within VET

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As outlined above, the analysis of IVET provision is broken down into three different sectors: the dual system, the school-based vocational system and the Transition System. The various forms of IVET and prevocational training in Germany are characterised by these strands of provision. They are supplemented by the system of continuing vocational education and training (CVET), particularly the provision of programmes eligible for funding under the Upgrading Training Assistance Act. The transitions between these four areas of VET are the subject of this chapter. The transitions between these four areas are also known as “interfaces”, and it is not unusual in the discourse of vocational policy and vocational education research to make reference to problematic “interface issues”. Evidently the transitions between the four different sub-systems of vocational education do not function satisfactorily.

Questions concerning the transition from vocational orientation or prevocational training into IVET have dominated the discourse in recent decades. Currently, other questions of growing significance are transitions between occupational fields within the dual system, between full-time school-based IVET and dual system VET in a recognised occupation, and between IVET and advanced vocational training. In key respects, the testing of a credit transfer system in German VET similarly addresses the question of improving transitions between the different subsystems of VET.

#### *Four interfaces in the system of VET*

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Each of the four “interfaces” in vocational education and training will be described below, along with an outline of the assumed or diagnosed barriers to transition.

Transition between prevocational training and IVET: According to Section 1 (1) of the German Vocational Training Act, prevocational training is an element of VET. The purpose of prevocational training is to convey the basic skills for the acquisition of occupational action competence. It can be undertaken particularly in the form of units of learning of defined content and length, developed from the contents of recognised training occupations (known as qualification modules, cf. Vocational Training Act, Section 69). The ideal-typical transition would be to progress directly from prevocational training into initial vocational training in a recognised occupation, receiving recognition and credit for qualification modules already completed. In vocational education practice, however, such a smooth transition does not occur at this interface because there is no certainty that training companies within the dual system will award credit for prevocational training, and as a rule they do not. The qualification modules completed during prevocational training are valued solely as an additional qualification or as a prerequisite for entry to IVET. Similarly, further provision and programmes completed in the Transition System do little beyond increasing the prospects of a successful application for an apprenticeship. Credit is rarely awarded towards the eventual qualification for learning accomplished over what is not infrequently a two- to three-year period. An occasional exception in this respect is the basic vocational training year, in regions where it is specified by training firms as a prerequisite for entry to IVET.

Transition between different IVET specialisations within the dual system: Dual system VET operates on the basis of different recognised occupations requiring formal training (“training occupations”). These training occupations are subsumed into occupational fields, for example the metallurgical or electrical engineering occupational field, or the commercial-administrative occupational field. Often there is a curricular overlap between different IVET specialisations within an occupational field and, in some cases, between different occupational fields. The question is, when switching from one specialisation to another, how can prior learning achievements be recognised and credited towards the new course, in order to avoid repetition and redundancy in the learning process? This question is of particular importance because a high percentage of apprenticeship contracts are terminated prematurely for different reasons and the apprentices (have to) move on to an alternative programme of IVET. To date, no transparent regulations exist to govern this recognition and credit transfer issue.

Transition between full-time school-based and non-school-based IVET: Section 39 of the Vocational Training Act states that in the context of the final examination in the dual system, the board of examiners of the competent bodies for VET may, for the purposes of assessment of non-oral examination performance in individual areas, solicit expert opinions from third parties, in particular from vocational schools. Despite this, in the system of non-school-based or company-based VET, there is practically no recognition of the learning and training accomplished at the vocational school. Likewise, Section 43 (2) of the Vocational Training Act stipulates that persons shall be admitted to the final examination if they have undergone initial training at a vocational school or some other vocational training facility and this qualification pathway corresponds to initial training for a recognised training occupation. Even in times of apprenticeship place shortages, this provision is only of minor significance. In most regions of Germany, there is no working system of recognition and credit transfer towards a dual system apprenticeship for modules completed in school or for qualifications acquired from a full-time school-based programme.

Transition between IVET and CVET: fundamentally, access to the range of CVET programmes eligible for support under the Upgrading Training Assistance Act is gained on the basis of successful completion of a relevant company-based or full-time school-based IVET programme in a recognised occupation, plus at least two years’ occupational experience. Admission to a form of CVET is granted on the basis of transparent criteria. The question, however, is to what extent learning achievements accomplished during IVET or subsequent occupational experience can be credited towards a later CVET programme. A related question is how the two subcomponents of the German system, IVET and CVET, which are separated both structurally and by a relatively large time-interval, can be more closely correlated.

### *Transition problems due to different statutory bases*

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The provision of VET governed by public law is subject to a variety of statutory bases in Germany. This presents the first hurdle with regard to transitions and/or recognition and credit for prior learning. The position of VET in German law is characterised by the division of essential competences and responsibilities between the Federal Government and its ministries, on the

one hand, and the *Länder* and their regional ministries, on the other. Responsibility for the education system – and hence the major elements of the VET system – is determined in Germany by the federal structure of the state. According to the Basic Law, i.e. the German Constitution, within this framework of competing legislation the Federal Government is responsible for economic and labour law (Art. 74 (1) nos. 11 and 12 of the Basic Law). From this provision, the Federal Government derives its responsibility for company-based vocational training. Legislative and administrative competence for school matters are assigned to the *Länder* (“cultural sovereignty of the *Länder*”). Thus, the *Länder* are responsible for the school system and hence also for VET that takes place in public and equivalent private (vocational) schools and part-time vocational schools. Education law comprises the full extent of the legal norms relating to school and the school system: school laws, legal ordinances, statutes and administrative regulations of the *Länder*.<sup>36</sup>

Legislative duality and polyvalency are thus hallmarks of the German VET system. The dominant form of VET, the combination of company-based and part-time vocational school elements (the “dual system”) is governed by bases in Federal and *Land* law. Other forms of school-based VET at full-time vocational schools are governed by *Land* law bases alone. Likewise, advanced vocational training provision can be regulated according to the Federal Vocational Training Act – which assigns specific responsibility to the competent bodies for vocational training, i.e. the chambers – or by the relevant laws of the *Länder*. The bases in *Land* law consist essentially of the education laws of each *Land*, which of course differ in each of the sixteen *Länder*.

### *The credit transfer system as an approach for solving the problem of fostering transitions in VET*

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Transition issues within VET in Germany are currently being tackled under the DECVET pilot programme of the Federal Ministry of Education and Research, among other initiatives. The focus of the DECVET initiative is the implementation of pilot projects to systematically trial a credit transfer system to record and transfer credit for learning outcomes or competencies from one subsector of the VET system to another. The aim of the initiative is to identify and test potential opportunities for credit transfer at interfaces throughout the dual system, and thus to help to increase its horizontal and vertical permeability (cf. [www.decvet.net](http://www.decvet.net)). With regard to the initial and continuing vocational education and training situation in Germany, the main endeavour of this exercise is to improve the access and transition options between the subsystems of the German VET system, but also to bring about greater flexibility within vocational education. The following additional objectives are associated with the pilot programme:

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<sup>36</sup> With regard to the distinction drawn here between Federal and *Land* law for the VET sector, IVET for the health care sector has special status. In that sector, IVET is largely regulated by Federal law (e.g. the German Law on Health Care), and IVET in these occupations is restricted to state-recognised schools.

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- increasing the transparency of qualifications and learning outcomes;
  - bringing about more open and flexible access to and transitions between vocational education pathways;
  - avoiding “marking time”, redundant acquisition of qualifications, and dead-end educational provision;
  - improving linkages between learning venues and increasing cooperation between educational establishments;
  - validation and credit transfer for informally acquired learning; and
  - increasing international mobility of individuals in IVET.

Thus the question of transition within VET also has a bearing on cross-border mobility, particularly within the Member States of the European Union. Vocational education and training in Germany, and specifically the question of transitions between the different forms of VET provision, is directly influenced by the education policy measures and instruments of the organs of the European Union to promote the mobility of workers within the European labour market and initial and continuing vocational education systems. On the basis of such principles as the right to freedom of movement, freedom of establishment and freedom to provide services between and within Member States of the EU, the equality of treatment rule and the basic right to free access to employment in the EU Member States, steps were taken from an early stage towards the recognition, alignment and equivalence of vocational qualifications, which later also led to transparency approaches. In addition to promoting mobility in general and vocational education, these measures also operate in the context of promoting the mobility of workers, and are thus indirectly a part of European education and VET policy (cf. in detail Frommberger 2006b).

Currently two approaches are being prioritised: a European credit transfer system in VET, and European as well as national qualifications frameworks. Transparency of qualifications and the transfer of credit for prior learning are pivotal elements for the creation of a European vocational education area. In the Maastricht Communiqué of December 2004, the ministers responsible for VET, the social partners and the European Commission therefore announced their intention to develop and implement a European Qualifications Framework (EQF). The EQF was formally adopted by the European Council of Education Ministers in November 2007. The transfer of learning achievements and the award of credit will be facilitated by the introduction of a points-based credit transfer system in VET, known as ECVET, the European Credit (Transfer) System for Vocational Education and Training (cf. Commission of the European Communities 2008).

These developments are influencing the expert discourse and the stakeholder discussion on VET issues in Germany. On the one hand, the instruments mentioned are intended to support transitions between the subsystems of VET, nationally and internationally; on the other hand,

the ensuing changes in German vocational education are encountering broad resistance. The introduction of a credit transfer system according to the ECVET recommendations is provoking a good deal more controversy in the German debate than previous EU standardisation efforts. In the view of many stakeholders, the fragmentation of full qualifications into certifiable modular qualifications threatens one of the cornerstones of the German dual system, the principle of the recognised training occupation, which is enshrined in law and regulatory policy as the superordinate objective of IVET. The possible threat to the principle of the recognised training occupation in the context of proposals for modularised vocational training structures is a subject of vigorous debate in Germany. The arguments can be reconstructed, initially in isolation from the European developments and solely in relation to the national problems, from the proposals by Euler and Severing (2007) and the subsequent reactions (cf. Kruse et al, 2008).

#### **4. Transitions from VET into higher education**

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The issue of transition from VET to university is closely linked to the argument from vocational education theory on the equivalence of general and vocational education. Hence, there is a longstanding tradition of work on this theme in vocational education research (cf. Husemann/Münch/Pütz 1995; Bremer et al, 1993). At the moment, only a limited amount of vocational education research is taking place on the theme, but relevant new research and development programmes are being set up by the Federal Ministry of Education and Research.

##### *The classic educational pathways into the universities*

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In the majority of cases, admission to a programme of studies at German universities of applied sciences (*Fachhochschulen*) or universities is based on a school-leaving certificate from an establishment of general education at higher secondary level (i.e. a *Gymnasium* or *Gesamtschule*). The linkage in terms of structure and content between general education and higher education is a firmly established tradition in Germany (cf. Wolter 1987). This “ideal route” to university is supplemented by what is known as the “second educational pathway” of evening classes (*Abendgymnasium*) or college (*Kolleg*). These forms of provision are intended for people in employment who would like a second chance to gain a higher education entrance qualification in order to study for a degree. They are governed by school law and their objective is the *Abitur*, the universal higher education entrance qualification from general education. Access to university is also possible by means of the examination for gifted working applicants (*Begabtenprüfung*) based on standards in general education. This examination is intended for applicants whose ability in a particular subject area is outstanding but who previously pursued an educational trajectory which did not allow them to take an *Abitur* examination. By enabling them to acquire the universal entrance qualification for higher education, it gives them access to a university degree course. The examination for gifted working applicants is not, however, an institution of the “second educational pathway” which leads to the *Abitur* via a school-based education programme. Preparation for the examination is done privately. Access to university by the gifted working applicants’ examination route is not significant in quantitative terms.

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### *The vocational pathway to university entrance*

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In the context of VET, another route of interest is the “third educational pathway”, i.e. acquiring the higher education entrance qualification and admission on the basis of vocational pathways and recognised occupational qualifications.<sup>37</sup> For several years, this educational pathway has been central to the education and VET policy debate. It revolves around the issue of opening up universities to working people or people pursuing the VET pathway. The main political motivation in the context of measures to open up access to the universities is to increase potential demand for university degree courses, particularly in light of Germany’s relatively low rate of participation in higher education, as diagnosed by international comparative studies (cf. OECD 2008). Nevertheless, the original motives for making it possible to acquire the higher education entrance qualification via the vocational pathway stem from within VET itself. For reasons of space, this line of argument cannot be expanded upon here (on this, cf. Frommberger 1999, pp. 265 ff.), but it is worth pointing out that this question of opening up the universities was resolved in principle several decades ago, both empirically and in terms of VET theory. Politically, however, it proved impracticable and was effectively blocked. Only international comparisons with reference to the rate of participation in higher education along with the necessity to increase the attractiveness of VET brought about acceptance in Germany of this age-old plea.<sup>38</sup>

### *Great diversity of admission regulations in higher education law and regulations on access to VET in school law*

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<sup>37</sup> Strictly speaking, it is necessary to maintain a distinction between the terms “university entrance entitlement” and “university admission”. The term “university admission” relates to the set of prerequisites, options, barriers and influences on entrance to a university. Access to university is associated with a codified legal right in the Framework Act for Higher Education. The problem of “university admission”, in contrast, relates to the concrete provisions for selection between qualified applicants or the process of acceptance at a university (cf. Frommberger 1999).

<sup>38</sup> The exigency that gave rise to the demand to “increase the attractiveness” of IVET and to fears of a future shortage of qualified skilled workers, can be dated to the year 1990 when, for the first time in the history of German education, the number of students at universities and other higher education establishments exceeded the number of apprentices. Although comparison of these two figures is highly problematic, they were interpreted as an alarm signal in relation to the ongoing trend in IVET. Creating the possibility of acquiring a higher education entrance entitlement via the vocational route was a means of making some form of vocational education a more attractive choice, rather than sticking to the classic academic route through general education. A collection of diverse stakeholder statements documenting the broad-based acceptance of wider access to higher education, from as far back as the 1990s, can be found in Mucke/Schwiedrzik (1995).

For the question of transition from VET into higher education, a distinction must be made between the admission regulations in higher education law, on the one hand, and the access regulations in school law, on the other. The number of different admission regulations in higher education law in Germany is profuse. An overview can be found in a publication by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK 2006b). The variety of forms of admission have continued to develop dramatically in recent years. A typology of the range of possible higher education admission regulations can be found in Frommberger (1999, pp. 283 ff). On a nationwide scale, the assortment of options is prolific. In the *Land of Bavaria*, for instance, Art. 45 of the Higher Education Law of the State of Bavaria makes the following stipulation: "(...) subject-specific access to a university of applied sciences is open to candidates who pass the Master Craftsperson examination, once they have attended a consultation interview at the university of applied sciences (...)." That is to say, successful completion of continuing vocational training in Bavaria automatically confers an entitlement to enter higher education, but only on a subject-specific basis and conditionally upon a consultation interview. The Higher Education Law of the State of Saxony-Anhalt states, in Section 27 (4): "Especially qualified working people who have the potential to study for a degree on the basis of their ability, their personality and their prior learning, but do not hold an entrance qualification to higher education, may demonstrate the knowledge and ability to study a particular discipline by taking and passing an examination to confirm their qualification for degree-level study (...) The details are regulated by the universities in an ordinance (...)." The last cited example shows that not only are there various regulations on university admission in the higher education laws of the various German *Länder*, but a diversity of rules for universities, universities of applied sciences and specific subjects exist within the *Länder* as well.

The university access regulations in school law relate to qualifications that can be acquired in school-based forms with a pronounced vocational orientation, which are regulated under the regional legislation of the German *Länder*. The first of these is the vocational *Gymnasium*, at which a universal or subject-specific higher education entrance qualification can be acquired on the basis of an in-depth subject specialisation (construction engineering, electrical engineering, home economics, metal technology, business and administration, etc.). Of special importance in this regard are the *Fachoberschule* and *Berufsoberschule* types of school, in which – likewise on the basis of subject specialisation and taking account of work experience in a company – an entrance entitlement can be acquired to a university or a university of applied sciences in the form of a universal or subject-specific higher education entrance qualification. In some cases it is also possible to acquire a higher education entrance qualification at a *Berufsfachschule* (full-time vocational school) or *Fachschule* (advanced technical school) within the school-based vocational education system. Essentially, the potential for transition into university on the basis of VET provision governed by school law in Germany can be assessed as very high (cf. Köller et al, 2004).

Thus, while the vocational education pathways regulated by the school laws of the German *Länder* are of great importance for transitions from VET into higher education, the admission routes regulated in higher education law are intended for people who have completed non-

school-based vocational training, i.e. dual system initial vocational training and/or a continuing vocational education qualification under the Vocational Training Act.

### *Promotion of the vocational route into universities: Approaches and discussions*

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The mainstay of VET in Germany is the dual system along with continuing vocational education and training (CVET). Three possible settings can be identified for CVET: school-based, industry-based, or in-company.

The potential vocational education route into universities of applied sciences and universities is via the school-based or industry-based forms of CVET.

School-based CVET takes place in the *Fachschulen*, which are part of the vocational school system. Generally this continuing vocational education option leads to the qualifications of state-certified technical engineer or business administrator.

The provision of industry-based CVET is coordinated by the “responsible bodies” for vocational education in the sense of the Vocational Training Act (the chambers of industry and commerce, chambers of crafts and trades, chambers of agriculture and chamber organisations of the liberal professions). In industrial-technical and crafts occupations, this form of CVET leads to the well-known master craftsman certificates (industrial master craftsman, foreman, etc.), while individuals in commercial occupations predominantly gain sector- or job-related qualifications at certified senior clerk level (certified senior bank clerk, certified senior trade specialist, etc.) or certified specialist level (certified accounting specialist, certified personnel management specialist, etc.).

In quantitative terms, the numbers making the transition into higher education on the basis of non-school-based vocational training (IVET in the dual system followed by CVET) are just about insignificant in Germany at the present time (cf. Autorengruppe Bildungsberichterstattung 2008, pp. 170 ff). However, the Federal Ministry of Education and Research is currently financing programmes which support degree-level study by “especially qualified” persons from a vocational education background, by means of grants.

Those who complete IVET in the dual system end up as permanent employees in skilled worker positions. They enjoy relatively stable employment conditions in companies and occupy roles and functions with good prospects of advancement (on this, cf. Harney/Kissmann 2000; Plicht 1998). In other countries, equivalent roles are not infrequently performed and occupied by graduates (cf. Maurice/Sellier/Silvestre 1979; later Heidenreich 1991; Drexel 1993; Backes-Gellner 1996; Brauns/Müller/Steinmann 1997).

Based on the minimum standards specified in curricula and legally standardised quality criteria, IVET in the dual system and the provision of CVET in accordance with the Vocational Training Act contribute greatly to participants’ professional and personal development. This form of vocational competence development is therefore highly attractive to many young adults. This factor differentiates vocational education in Germany from the situation in most

other countries, in and outside of Europe, where in-company vocational training has comparatively low status and is largely undertaken by school-leavers with poor school-leaving qualifications. Thus, the situation in Germany is characterised by a relatively attractive alternative for young adults at the first threshold. Instead of pursuing further personal and professional career pathways via the general education route, another available option is a competitive vocational education system.

Nevertheless, these qualifications are not traditionally linked with universal and systematic entitlements under the general education system giving access to subsequent higher education programmes. This structural deficit is currently a matter of intensive discussion in Germany. There appears to be growing agreement that the competencies acquired in industrial-vocational education may well help to equip people for degree-level study.

This is the background to the recent decision to launch the pilot programme ANKOM, with which the Federal Ministry of Education and Research pursued the superordinate education policy objective of making educational pathways more open and permeable. Transitions between educational institutions are to be evened out, and prior qualifications and competencies taken into account. The pilot projects focused on the development and representative testing of credit transfer procedures. According to the funding guidelines, “those competencies that people have acquired via the vocational route, in the course of IVET and CVET and at work, should be recognised at a level which corresponds to the performance requirements of the relevant degree course” (cf. [www.ankom.his.de](http://www.ankom.his.de)).

In terms of design, more is being done to link the system of CVET in Germany with the higher education sector. For instance, the IT continuing education system introduced in 2002 is an innovative model which represents a fundamental reform approach in CVET and is intended to ensure permeability between continuing education and higher education (cf. Ehrke/Hesse 2002). That said, this objective only has the status of a declaration of intent as yet (cf. Weißmann 2008).

Further arguments in favour of qualifications from CVET relate to their comparability with the Bachelor qualification from higher education (cf. Dobischat/Fischell/Rosendahl 2008; Diart et al, 2008). The continuing vocational education qualification (“Bachelor Professional”) is deemed to be of equivalent value to a higher-education Bachelor’s degree conferring a professional-entry qualification (cf. Diekmann 2007). This is intended to improve the formal connectivity between non-school-based VET and the higher education sector.

In current discourses concerning the question of opening up higher education institutions to working people, reference is made to developments in other countries. Above all, attention is drawn to the activities of universities aiming to open up access routes for working people and other groups (“non-traditional students” or “non-regular students”) and to respond to these groups with special measures (cf. Doering/Hanft 2008; Hanft/Knust 2008; Wolter 2008). This primarily concerns the continuing education strategies of the universities. These references are important and show how great the scope could be for creatively engaging with students for German universities. Nevertheless this problem-solving view is limited to the universities. With

regard to VET, it is simply assumed that the ability to study at degree level is acquired there, and that additional access entitlements must be regulated, where necessary, by means of new legal provisions. What is missing is any perspective on VET itself. The discipline of vocational education research has been discussing transitions into higher education on the basis of a vocational learning pathway for several decades already. It is a subject on which extensive discourses and varied pilot projects have taken place (cf. Kutscha 2003; 2009).

Traditionally, those in Germany who want to acquire both a higher education entrance qualification and a vocational qualification either complete the upper secondary level of general education to obtain the *Abitur* before training in a recognised occupation, or else they obtain the higher education entrance qualification after they have qualified in their occupation by attending a special educational establishment offering “second educational pathway” provision. When German *Gymnasium* pupils complete an occupational apprenticeship after passing the *Abitur*, or when skilled workers, permanent employees or journeymen obtain the higher education entrance qualification after completing an initial vocational qualification, in formal terms they are choosing to repeat the upper secondary phase of education. This takes them five to six years.

From the perspective of vocational education theory, it is deemed to be a special challenge to put in place the missing connectivity while maintaining the high performance of VET in delivering qualifications in recognised occupations. In the history of the development of the German education and VET system, the award of additional general-education qualifications, e.g. the higher education entrance qualification, was often accompanied by an overemphasis on academic schooling in the curriculum and organisation of IVET. With that in mind, it appears to be necessary to reflect on curricular and didactic linkages and integration of the different vocational training pathways and phases, in order to prevent any decline in the function of VET in the course of reforming qualifications.

The route into higher education via VET in Germany thus works primarily on the basis of diverse cumulative double qualifications (cf. Autorengruppe Bildungsberichterstattung 2008, p. 173). Statistically this transition behaviour is in decline but still applies to almost 17 percent of students in higher education. In this regard, options for acquiring an integrated double qualification, consisting of both an initial vocational qualification and a university entrance qualification, hold a great deal of appeal. In all other European countries, including Austria and Switzerland, the massive demand for both types of qualification is being met with comprehensive provision of education pathways leading to a dual qualification. This allows young adults – and large numbers of them are making use of the opportunity – to gain a vocational qualification at the same time as an entrance qualification for university-level studies, within a period of three to four years (cf. Frommberger 2006).

The challenge lies in offering programmes within the vocational education sector which not only lead to recognised occupational qualifications but also systematically build the necessary competencies for degree-level study. In Germany, this practice is not yet part of the mainstream. In non-school-based VET, no importance is attached to preparation for the higher education

entrance certificate; meanwhile, school-based education with a vocational orientation, e.g. at the vocational *Gymnasium*, *Fachoberschule* or *Berufsfachschule*, does not lead to a full, recognised occupational qualification.

## **5. Transitions from VET into employment**

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This thematic area has received relatively concentrated attention from the perspectives of labour market research and personnel economics. In this regard, the description and analysis of the willingness of companies to engage in training and permanent recruitment are significant elements of vocational education research. Discussion of the significance and, above all, the allocation function of the training occupation concept, is also common in this context.

The dominant segment of German VET, i.e. the dual system of IVET, is closely coupled to the labour market situation and to trends in the economic cycle (cf. Bundesinstitut für Berufsbildung 2009, pp. 173 ff). In principle, companies weigh up their own order book and staffing situation and take a decision on whether or not to offer apprenticeships to young adults to meet their future needs for skilled workers. Partly as a result of this structural feature, a relatively strong correlation exists between the need for skilled workers and apprenticeships, which means that in Germany, the transition from IVET into subsequent employment traditionally functions relatively well in quantitative terms.

Moreover, while IVET in the dual system is organised around the industry-wide concept of a training occupation, the company training programme itself generally operates on a highly company-specific and order-specific basis. Even before completing their initial vocational training, and especially during the third apprenticeship year, dual system apprentices often take responsibility for aspects of work that would otherwise be carried out by journeymen, skilled workers or permanent commercial employees. From a qualitative perspective, then, employability, marketability and the prerequisites for a successful transition into employment are traditionally very good. From the companies' perspective, they can spare themselves the costs of induction programmes once IVET is completed, as well as the risks associated with recruiting skilled workers on external labour markets (cf. Kutscha 2006).

The strong structural correlation between the dual system and the employment system essentially generates advantages for the transition at the second threshold. In contrast to school-based VET systems, the dual system performs its systemic functions of qualification, socialisation, allocation and absorption in a way that meets companies' expectations to a comparatively high degree (cf. Kutscha 2006). This comparative advantage which, in Germany, was accompanied by a relatively low rate of youth unemployment at least until the mid-1990s, is offset by the comparative disadvantage that apprenticeship qualifications from the dual system offer little or no connectivity with the general and higher education system.

However, the transition from IVET into employment in Germany has become significantly more precarious in recent years (cf. Kock 2008). Now the German rate of youth unemployment

also ranks at an average level for the countries of the European Union (cf. Eurostat 2007). One factor is that unemployment due to job-seeking directly after qualifying has risen drastically among completers of dual system apprenticeships since 2000, reaching approx. 36% of all apprentices who qualified in 2005. Another factor is the continuous rise in the youth unemployment rate since the early 1990s (cf. Autorengruppe Bildungsberichterstattung 2008).

A key reason for the deterioration of the transition situation at the second threshold can be found in a change in the training companies' practices in taking on newly-qualified workers. Between 2000 and 2006, the recruitment rates declined significantly (cf. Autorengruppe Bildungsberichterstattung 2008, pp. 180 ff). In the eastern German *Länder*, only two-fifths of those completing a dual system apprenticeship are taken on. Basically companies' recruitment practices and the individual chances of being taken on are subject to very clear regional, sectoral, training occupation-specific and company-specific differences in Germany. However, the deterioration in the recruitment situation is also a sign of matching problems between the provision of apprenticeships and the demand for vocational competencies and qualifications in the labour market. One indication of this is the decline in training adequacy; that is to say, the growing numbers who, on completion of initial vocational training, take up forms of employment that do not coincide with the occupational field of the initial apprenticeship: "Both facts, firstly the longer phases of job seeking and the higher level of unemployment for one section of completers of IVET, and secondly, one-third entering employment unrelated to their initial vocational training, are blatant signs of difficulties in the transition from IVET into employment, which force young people to respond with occupational flexibility and a high degree of adaptability. But both facts also testify to considerable matching problems between training structures and labour market demand, which are at odds with the conventional self-image of the German IVET system as an institution characterised by relatively frictionless transitions into employment thanks to its close alignment with the market" (Autorengruppe Bildungsberichterstattung 2008, pp. 184 f).

The situation for the full-time vocational schools (including provision in the Transition System) is characterised by the fact that over 70 percent of holders of qualifications from full-time schools do not progress directly into the labour market but into a dual system apprenticeship. To solve the transition problems, there is a need for educational and labour market policy strategies aimed at direct labour-market integration of completers of full-time school-based programmes, to alleviate the problem of apprenticeship shortages not just quantitatively but also qualitatively (cf. Ruf 2008). On the other hand, some established types of full-time vocational schools exist which contrive to produce a relatively frictionless transition into the employment system.

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## 6. Transitions within the education system: barriers and potential solutions

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### *Structural importance of the qualification system*

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The transitions between different subsectors of general education and VET are subject to the diverse allocation and selection mechanisms of social systems. The qualifications and certificates acquired are of crucial significance in negotiating these transitions. Thus, school biographies and occupational advancement depend to a relatively high degree on the acquisition of formal school qualifications. This link between school qualifications and job allocation opportunities is described as meritocracy, or a “meritocratic logic” (Lutz 1979).

In historical terms, the development of schools, apprenticeships and the qualification system in alignment with this “meritocratic logic” represents major progress from the traditional absolutist principles of distribution, selection and advancement. But the recent yet longstanding demand for “permeable” education and training structures, and hence the demand for improvement of transitions, reveals that the positive function of a qualification system can also give rise to detrimental impacts: as individuals escalate their aspirational efforts, which they can only satisfy by acquiring promising qualifications and consequently exposing them to inflation. As a result, the “valuable” qualifications become more important yet more worthless: those who fail to achieve a qualification for the next stage lose out on occupational and social opportunities, while those who achieve the qualification for the subsequent stage do not gain opportunities proportionate with the acquisition of the certificate (the “qualification paradox”). Informal distinguishing features, institutional affiliations and all kinds of supplementary achievements accrue more importance, eroding the function of the meritocratic principle and restoring pride of place to social capital acquired more or less by birth (cf. recent work on this by Glaesser 2007; Konietzka 2007).

In the wake of the expansion of education, this “qualification paradox” has become apparent in many countries, and is not a uniquely German problem per se. However, the German situation differs in the very close connection between educational and/or recognised occupational qualifications and subsequent access to the education and/or employment system (cf. Müller/Shavit 1998). For the following, i.e. the receiving institutions the substantial value of the qualifications previously acquired is elementary, since they traditionally have few means of selection of their own.

Thus, on the one hand, impermeable boundaries between discrete educational and vocational pathways are the product of diversity and heterogeneity, characteristics which culminate in the attempt to establish a distinctive target-group-specific and content-based profile; on the other hand, the boundary-drawing interests of the beneficiaries of high-prospect IVET opportunities are of major importance to the construction of access options and barriers to access.

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*Increasing educational mobility through the recognition and transfer of credit for acquired competencies: possibilities and limitations for VET in Germany*

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From the perspective of educational and VET theory, the outlined allocation and selection principles at the interfaces of the education system, which are caused by scarcity, are problematic because they inhibit or even prevent mobility, and hence impede the progression of individual educational and training trajectories. Humans have the capacity to learn and develop. They require the opportunity to be able to develop their potential. Barriers to access can have detrimental impacts. From the education policy perspective, adherence to this view is currently in vogue, particularly because the rate of qualifications and transitions into subsequent educational establishments often seems too low, and supporting individual educational mobility is thought to produce better results.

There are very varied approaches to supporting transitions at system interfaces. A fundamental distinction should be made between the question of access or admission to subsequent educational pathways and the question of transferring credit for previous units of prior learning towards the subsequent programme. To improve transitions for completers of vocational education, currently the dominant approach is aimed at implementing credit transfer for previously acquired certificates, modular qualifications and competencies. As shown above in the accounts of the different interfaces, the challenge is to develop and establish functional and acceptable credit transfer mechanisms, which must be transparent and reliable and allow an honest comparison of content.

In VET practice and in the expert discourse, different models have been constructed and discussed for regulating access and credit transfer (cf. Frommberger 2009). Credit transfer for modules of learning poses a particular challenge. For example, transitions from VET into higher education in the German *Länder* and at the universities quite overwhelmingly consist of stand-alone access and/or admission regulations, which are not linked to any credit transfer modalities. Nevertheless, a wide-ranging provision has been enacted by the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* (KMK 2002), whereby up to 50 percent of the requirements of a higher education degree can be covered by means of credit for learning acquired outside of the university.

The particular difficulty of credit transfer for modular learning from VET between subsystems of the vocational sector and to subsequent educational pathways stems from the fact that, within the vocational system, individual phases of learning and training are not separately assessed and certified. The objective of transferring credit for units of learning from vocational education, as a means of improving transitions within and outside VET, is thus at odds with the German vocational tradition and the principle of the recognised occupation that governs the dual system. That is to say, Germany has a system of VET (the dual system) in which the competencies, attitudes and qualifications acquired are extremely highly regarded by the labour market. The qualifications of skilled workers, journeymen and skilled clerks possess considerable utility and exchange value. Traditionally these are seen as a “hard currency” in the employment system, capable of competing with academic qualifications in many respects. An

essential reason for this strength lies in the fully integrated concept of the training occupation, which has developed traditionally and is accepted by the relevant stakeholders. Under this concept, the immediate company-based work and learning processes are linked with cross-functional and inter-company phases of training in order to relate theory to practice in the course of VET. As tried-and-tested structures and principles undergo modification and necessary differentiation, it is therefore especially important not to lose sight of these “unique selling points” of the German VET system.

Basically, the greatest barrier to improving transitions in Germany is probably the fact that young people completing general, higher and vocational education acquire competencies and qualifications which are not interrelated and, due to the lack of coordinated criteria, barely permit valid comparisons. What is lacking is a kind of common German and European “currency” which would allow individual competencies and qualifications acquired from the education and the VET system to be recorded transparently and linked with accepted equivalents and credit transfer mechanisms in alternative or subsequent pathways of the German system as well as international subsystems.

Other points which make the process of credit transfer more difficult are the following (cf. Frommberger 2009):

Transitions are made more difficult – especially with regard to the question of credit transfer – by the fact that within and between the different education and training sectors and phases:

- (a) different learning content is covered;
- (b) different standards of learning are expected; and
- (c) different training objectives are pursued.

Thus, the operative decision-making stakeholders have major reservations about recognising prior learning, which may vary in its definition in terms of subject, standard and training objectives, for the purposes of a different course.

Different learning venues have disparate training cultures, which are reflected in the training methods and the nature of learning processes. Some learning environments stress experiential learning whereas others stress theoretical learning.

It is not always clear how the relevant stakeholders in VET benefit from recognition/credit transfer. On some occasions, conflicting interests also come into play. While the benefit seems evident to learners because of the time and cost-savings, the dominant consideration in many cases, particularly for training companies, is scepticism as to the very possibility or even necessity of credit transfer mechanisms: consequences such as reducing the length of an apprenticeship are not always in the training establishment’s interests.

Another factor that makes transitions more difficult is ignorance of the other system or subsystem. This gives rise to distrust, which is focused especially on the question of the quality of the final qualifications.

Another important causal factor lies in the elaborate qualification system, specifically in Germany, in which the acquired learning from a previous course is traditionally understood as a valid prognosis of assumed future capabilities. Thus, access is very much tied to previously acquired qualifications.

Finally, permeability is made more difficult by the traditions of well-established boundaries between the subsystems, as well as the interests and beliefs of stakeholders.

A particular challenge is posed by credit transfer for learning between different levels of challenge. Frequently there are great similarities between the content to be learned for different training courses and examinations, yet different forms of acquisition result in competencies of a different nature. It is equally difficult to transfer credit for learning from courses and qualifications in very specialised subject areas. The more a training course and a qualification is focused on the practice of a specific occupational activity or even a regulated occupation, as the case may be, the harder it is to transfer credit for prior learning from unrelated areas.

#### *Learning outcomes – a current approach to support transitions*

A current curriculum strategy, which is also intended to help solve the recognition problem, and hence to support transitions between education systems and subsectors, is the “learning outcomes” orientation. The codification of initial and continuing vocational education and training profiles and the steering of the desired learning processes should not be carried out primarily – as in the past – on the basis of details of the specialist content, learning objectives, learning periods and learning venues (“inputs”), but by formulating “learning outcomes” which individuals must demonstrate in standardised evaluation processes in order to acquire qualifications, certificates and credit entitlements. Learning outcomes are statements of the knowledge, understanding and skills that serve as the basis for recording and validating individually acquired competencies. Depending on how the outcomes are formulated, it becomes possible to abstract out differences of content and structure, and to shift the main focus onto the individual’s behavioural dispositions. This reduces the weight attached to the diversity of forms and institutions in which the desired competencies are acquired, making it more feasible for informal and non-formal learning processes to be taken into account across the entire system of general and vocational education and training.

A particular challenge connected with outcome-orientation is that of guaranteeing the binding standards which permit the acquisition of the desired competencies. The less the emphasis on content and subject in defining the goals of general and vocational education, and the fewer the specifications and framework conditions that are imposed regarding learning venues, learning processes and the duration of learning, the more that individuals are left to take responsibility for learning processes. While this is basically a positive opportunity for

developing and actively incorporating individual educational and occupational biographies, it can also leave those who need higher levels of institutional support to develop their educational potential at a disadvantage, and perhaps deprive them of their opportunities. So this “opening” of educational and training structures can also lead to overt competition between training participants. A curricular orientation to outcomes is therefore predicated on preserving the bond with the structural framework conditions of IVET processes. Meanwhile, learning outcomes serve the purpose, purely from the didactic perspective, of connecting learning processes more closely to the achievement of individual behavioural and dispositional potential. Only thus can learning outcomes increase the success of desired learning processes. Learning outcomes must not lead to a situation where the responsibility for training standards drifts towards arbitrariness. Permeability and the decoupling of qualifications and training pathways therefore require at least a standardisation of the verification procedures for recording, documentation, validation and certification; otherwise qualifications will be awarded which do not guarantee the competence standard that is relied upon at the next stage.

Central to this approach is the idea of measuring learning outcomes as attained competencies rather than in the form of final qualifications. Since the traditional input-based regulations also acted as quality assurance for formal education and training programmes, new and wider-ranging quality assurance instruments and procedures which do justice to outcome-orientation must now be tested and established. The traditional input-orientation in conjunction with the principle of the recognised training occupation also gives rise to great scepticism, within the German debate, about the accumulation of learning units into a qualification regardless of how they were acquired. This is based on a suspicion of “arbitrarily” acquired qualifications (cf. Frommberger 2009).

### *Concluding remarks*

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The discussion on how to improve transitions neglects the approach that focuses on the development of knowledge and skills acquired in prior education and training processes. Opening up the system by means of accreditation and credit transfer alone is very likely to lead to growing experiences of failure, in the event that it proves impossible to acquire the required competencies. Since de facto educational mobility remains extremely limited, looking for example at European mobility in VET or transitions between VET and higher education, it is worth asking what steps are being taken to equip the target groups not just with an entitlement but also with the knowledge and competencies that seem vitally necessary in order to increase their opportunities for mobility and their readiness to take advantage of them. Supporting transitions, even if for the purpose of reducing social selection and segmentation mechanisms, must be seen as problematic as long as candidates are not offered the opportunity to acquire those competencies that they require for subsequent educational pathways and career options (“material equality of opportunity”).

With reference to the last aspect mentioned, studies are necessary in which transition trajectories and transition readiness are not only quantitatively described but also qualitatively

analysed. These can be expected to yield further indications regarding the individual and structural conditions that result in successful and less successful transitions.

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## List of Acronyms

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abH	Ausbildungsbegleitende Hilfen [apprenticeship support]
AES	Adult Education Survey
AEVO	Ausbildereignungsverordnung [Trainer Aptitude Regulation]
AFBG	Aufstiegsfortbildungsförderungsgesetz [Upgrading Training Support Act]
AGBFN	Arbeitsgemeinschaft Berufsbildungsforschungsnetz [Vocational Education Research Network Study Group]
AZWV	Anerkennungs- und Zulassungsverordnung – Weiterbildung [Accreditation and Certification in Further Training Ordinance]
BA	Bundesagentur für Arbeit [Federal Employment Agency]
BAföG	Bundesausbildungsförderungsgesetz [Federal Education and Training Assistance Act]
BAVBVO	Rechtsverordnung über die Bescheinigung von Grundlagen beruflicher Handlungsfähigkeit im Rahmen der Berufsausbildungsvorbereitung [Ordinance on the certification of the fundamentals of vocational proficiency in the context of preparation for vocational education and training]
BBiG	Berufsbildungsgesetz [Vocational Training Act]
BDA	Bundesvereinigung der Deutschen Arbeitgeberverbände [Federal Association of German Employers' Organisations]
BDBA	Bundesverband Deutscher Berufsausbilder [German IVET Trainer Association]
BFB	Bundesverband der Freien Berufe [Association of Liberal Professions]
BMAS	Bundesministerium für Arbeit und Sozialordnung [Federal Ministry for Employment and Social Affairs]
BMBF	Bundesministerium für Bildung und Forschung [Federal Ministry of Education and Research]
BMFSFJ	Bundesministerium für Familie, Senioren, Frauen und Jugend [Ministry of Family Affairs, Senior Citizens, Women and Youth]
BMWi	Bundesministerium für Wirtschaft und Technologie [Federal Ministry of Economics and Technology]
BIBB	Bundesinstitut für Berufsbildung [Federal Institute for Vocational Education and Training]
BQF	Berufliche Qualifizierung für Zielgruppen mit besonderem Förderbedarf [vocational qualification of target groups with special promotion needs]

BSW	Berichtssystem Weiterbildung [Continuing Education Reporting System]
BvB	Berufsvorbereitende Bildungsmaßnahmen [vocational preparation schemes]
DAAD	Deutscher Akademischer Austauschdienst [German Academic Exchange Service]
DGB	Deutscher Gewerkschaftsbund [Federation of German Trade Unions]
DIE	Deutsches Institut für Erwachsenenbildung e.V. [German Institute for Adult Education]
DIHK	Deutscher Industrie- und Handelskammertag [Association of German Chambers of Industry and Commerce]
DJI	Deutsche Jugend Institut [German Youth Institut]
DQR	Deutscher Qualifikationsrahmen [German Qualification Framework]
ECTS	European Credit Transfer System
ECVET	European Credit System for Vocational Education and Training
ENQA-VET	European Network on Quality Assurance in Vocational Education and Training
EQJ	Einstiegsqualifizierung Jugendlicher [Initial Qualification of Young People]
EQF	European Qualifications Framework
ESF	Europäischer Sozialfonds [European Social Fund]
GDR	German Democratic Republic
GWK	Gemeinsame Wissenschaftskonferenz [Joint Science Conference]
HEI	Higher Education Institution
HRK	Hochschulrektorenkonferenz [German Rectors' Conference]
HwO	Handwerksordnung [Trades and Crafts Ordinance]
IAB	Institut für Arbeitsmarkt- und Berufsforschung [Institute for Labour Market and Occupation Research]
IHK	Industrie- und Handelskammer [Chamber of Industry and Commerce]
IKBB	Innovationskreis Berufliche Bildung [Vocational Education and Training Innovation Circle]
IKWB	Innovationskreis Weiterbildung [Continuing Education and Training Innovation Circle]
INQA	Initiative Neue Qualität der Arbeit [New Quality of Work Initiative]
ISCED	Internationale Standardklassifikation für das Bildungswesen [International Standard Classification of Education]
IW	Institut der deutschen Wirtschaft [Institute for Business Research]
KMK	Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik

	Deutschland [Conference of State Ministers of Education in the Federal Republic of Germany]
NEC	National Europass Centre
SGB	Sozialgesetzbuch [Social Code]
StBa	Statistisches Bundesamt [Federal Statistical Office]
ÜBS	Überbetriebliche Berufsbildungsstätte [inter-company vocational training facility]
ZDH	Zentralverband des Deutschen Handwerks [German Confederation of Skilled Crafts]
ZVEH	Zentralverband der Deutschen Elektro- und Informationstechnischen Handwerke [Association of German Electrical and Information Technology Trades]
ZVEI	Zentralverband Elektrotechnik- und Elektroindustrie [Central Electrical Engineering and Electrical Industry Association]
ZWH	Zentralstelle für die Weiterbildung im Handwerk [Central Office for Further Training in the Craft Trades Sector]

## Glossary

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**Careers guidance:** this is a fairly lengthy and complex process and calls for learning organisations in various learning venues. It is designed to motivate individuals and enable them to undertake specifically targeted career and life planning.

**Comparability of qualifications:** this describes the extent to which correspondences can be achieved between the stage of education and the content of formal qualifications (certificate of qualifications, diploma, certificate, report) at sectoral, regional, national and international level.

**Competence:** the ability to apply knowledge, know-how, specific or vocational skills and/or specialised/subject knowledge and skills.

**Competent bodies:** implementation of in-company vocational training is always monitored by the competent body. Under the Vocational Education and Training Act, the competent body is usually the Chamber responsible for the training occupation or training enterprise, e.g. Chambers of Handicrafts, Chambers of Industry and Commerce, Chambers of Agriculture, Medical Chambers.

**Comprehensive schools (*Gesamtschulen*):** schools of this kind combine the various types of secondary school in a range of forms of organisation and content.

**Comprehensive universities (*Gesamthochschulen*):** comprehensive universities (in Hessen and North Rhine-Westphalia only) combine the research, teaching and study tasks that are otherwise performed by universities, colleges of education, *Fachhochschulen* and, in some cases, also by colleges of art and music. They are characterised by integrated courses of study. The comprehensive universities are known as *Universität-Gesamthochschulen*.

**Diploma (*Diplom*):** an academic qualification that is still widespread in many subjects, but which is increasingly being replaced by Bachelor's and Master's qualifications. The period of study on diploma courses is normally six to ten semesters. As an academic degree, the diploma may be awarded only by institutions of higher education (universities, colleges of education, *Fachhochschulen*).

**Dual system:** this is a form of initial vocational training that takes place in two differently regulated, managed and financed fields (school and enterprise).

**Educational programmes leading to dual qualifications:** the acquisition of more than one qualification, e.g. at vocational grammar schools. Acquisition of an academic qualification (entitlement to enter [subject-based] higher education) and a vocational qualification under *Land* law

(e.g. for occupations working as an assistant).

***Fachhochschulen* and colleges of public administration (*Verwaltungsfachhochschulen*):** their task is to provide strongly practice-oriented training to prepare students for vocational activities. They offer courses of study in the fields of business, social affairs, agronomy and

design in particular. In the Federal and *Land* colleges of public administration, public servants are trained for an executive level career in public administration. A subject-based entitlement to higher education is a requirement for admission.

**Formal learning:** learning that takes place in an organised and structured context, is explicitly designated as learning and is structured. Generally speaking, formal learning leads to certification.

**Foundation vocational training year (*Berufsgrundbildungsjahr, BGJ*):** participants are provided with general or occupation-specific basic vocational training through full-time and part-time education.

**Framework curriculum:** curriculum for vocational teaching in vocational schools (*Berufsschulen*) in the dual system of vocational training.

**Full-time vocational schools (*Berufsfachschulen*):** these schools build on the final certificate from intermediate school or a qualification recognised as equivalent to this. In the case of full-time education the school is attended for at least one year, and in the case of part-time education for up to three years. The final qualification constitutes an entitlement to access to higher education at a *Fachhochschule*.

**Further and continuing vocational training:** any form of education and training that is completed following the end of initial training or following transition to working life, and designed to help individuals to improve or update their own knowledge and/or skills, to acquire new competences with a view to occupational advancement or retraining, and to perfect themselves personally or vocationally.

**Grammar schools (*Gymnasien*):** secondary schools providing general education, which usually have 9 or 8 (classes 5-13 or 5-12) or 7 (classes 7-13) classes. Almost all the *Länder* are offering or planning to offer the option of sitting the *Abitur* (formal entitlement to enter higher education) after only 12 years. There are also 'extension' grammar schools, attendance at which is usually subject to possession of the final certificate from intermediate school. The grammar school school-leaving qualification constitutes an entitlement to study at any institution of higher education (general entitlement to higher education).

**Hochschulreife:** umbrella term for all school-leaving qualifications entitling the holder to study at an institution of higher education (entitlement to access to higher education).

**Immaturen examination:** this examination leads to subject-based entitlement to access to courses in all institutions of higher education (universities, technical universities and *Fachhochschulen*) in a *Land*. The student is examined in the subject that is to be studied. The conditions for admission vary from *Land* to *Land*. They usually include completion of two years of training in a recognised training occupation followed by at least two years working in this occupation, or at least five years working in a comparable occupation as the main job.

**Informal learning:** learning that takes place in everyday life, on the job, in the family circle or in leisure time. It is not organised or structured. In most cases, informal learning is not intentional, and it does not normally lead to certification.

**Initial vocational training:** this includes all training programmes that immediately follow the stage of school-based general education and lead to a vocational training certificate (dual or from a school).

**Intermediate schools (*Realschulen*):** secondary schools for classes 5 or 7 to 10. Generally speaking, the final certificate from intermediate school forms the basis for executive occupations of all kinds and entitles the holder to attend a *Fachoberschule* or a specialised grammar school, or to make the transition to an 'extension' grammar school.

**Module:** a module describes the fundamental areas of competence in a job profile and includes both theory and practice of the subject, and is specified within the framework of the vocational plan. Modules are certified following a modular examination or an observation procedure that is modular in structure.

**Non-formal learning:** this is learning that takes place in planned activities not explicitly described as learning, but containing a substantial element of learning. Non-formal learning is usually intentional on the part of learners and does not usually lead to certification.

**Occupation working as an assistant (*Assistentenberuf*):** assistants perform auxiliary tasks in a particular field for functions requiring academic training. The various occupational fields can be summarised as follows: technical assistants (e.g. chemical/technical, electrical, technical design assistants), business assistants and service assistants (e.g. healthcare, welfare and care assistants). Assistants are trained in full-time vocational schools. The training leads to a vocation qualification under *Land law*.

**Orientation stage:** this is a summary of classes 5 and 6 either in relation to secondary schools (school-type orientation stage) or separately from them (non-school-dependent orientation stage). It supports students and orients them towards one of the next stages of education.

**Preparation for vocational training/pre-vocational training (*Berufsvorbereitungsjahr, BVJ*):** this is aimed at providing a basis for the acquisition of vocational competences in order to lead on to vocational training in a recognised training occupation.

**Primary schools (*Grundschulen*):** these schools cover the first four years of schooling, except in Berlin and Brandenburg, where there is six years of compulsory attendance at primary school.

**ProfilPASS:** this is a tool supporting lifelong learning, aimed at boosting the individual. It is integrated into a system of portfolio, guidance and qualification. The status of competences acquired informally and non-formally is enhanced, helping to increase equality of opportunities, participation in education and horizontal and vertical mobility.

**Qualification:** a) an official document (certificate, report) confirming knowledge acquisition, and certifying successful completion of a course of general or vocational education/training and/or satisfactory examination performance, and/or b) the requirements that must be satisfied by the individual as a condition for access to an occupation or for advancement in a particular occupation.

**Qualification building blocks:** learning units delimited in terms of content and time, which are developed out of the content of recognised training occupations. They are designed in the context of planning of pre-vocational measures and are not standardised.

**Qualification pass:** a personal document accompanying the user, which can be used in secondchance qualification and in continuing vocational training. It makes it possible to document and compile vocational qualifications and experience obtained within and outside traditional training and continuing training. It is the basis for gradual acquisition of vocational qualifications in modules.

**Recognition:** a) formal recognition: the process of formal recognition of the value of competences either by the awarding of certificates or by the awarding of equivalents, credits, or by validation of existing competences, and/or b) social recognition: recognition of the value of competences by players in business and society.

**Retraining:** training aimed at enabling workers to make the transition to an occupation other than that which they have previously practised or for which they were trained.

**Secondary general schools (*Hauptschulen*):** attendance at these schools is compulsory for all students who are not going on to another form of secondary school after leaving primary school. They end with class 9, in some *Länder* with class 10. Secondary general schools provide general education as a basis for practical vocational training.

**Special schools (*Sonderschulen*):** these schools use special educational concepts and supporting measures to meet the particular needs of children and young people with disabilities. In addition to providing educational content, the aim is also to provide practical assistance with integration into life and society.

**Specialised grammar schools (*Fachgymnasien*):** vocationally oriented grammar schools that build on the final certificate from intermediate school or an equivalent qualification. After three years they provide an entitlement to enter higher education at any institution of higher education (general entitlement to higher education).

**Trade and technical schools (*Fachschulen*):** they are attended voluntarily following completion of vocational training and practical experience of an occupation, and provide further subject-based training in the occupation (e.g. master's schools, schools for technicians). In the case of full-time education, the course usually lasts between six months and three years, and in the case of part-time education from six to eight semesters.

**System of crediting study outcomes/work experience in VET:** a system that enables learning acquired in a course, a training programme or through work experience to be validated, recorded and compared within the framework of training programmes on the basis of credits, and transferred between different institutions.

**Trainer:** any person who, in an educational or training institution or in an enterprise, performs one or more tasks involving a theoretical or practical training function.

**Training directive (*Ausbildungsordnung*):** in in-company vocational training, there is a binding standard national training directive for every recognised training occupation. The directive lays down, *inter alia*, the designation of the training occupation, the duration of training, the knowledge and skills to be imparted, the framework training plan and the examination requirements.

**Training occupation (*Ausbildungsberuf*):** a vocational activity or a series of vocational activities, the assumption or practice of which involves, directly or indirectly, through statutory or administrative provisions, the possession of particular vocational qualifications.

**Universities and technical universities:** this is the traditional form of institutions of higher education in Germany. They offer a wide range of subjects and combine teaching and research. They are entitled to award doctorates.

**VET report (*Berufsbildungsbericht*):** this is published annually by the Federal Ministry of Education and Research and provides information on the main themes of the Federal Government's VET policy. These reports provide an overview of the German situation as regards training places and indicate trends and the outlook for policy initiatives and projects.

**Vocational academies (*Berufsakademien*):** the vocational academies are institutions of higher education that provide vocational training that is both academically based and at the same time geared to practice via training in an academy and in an enterprise under the dual system.

**Vocational extension schools (*Berufsaufbauschulen*):** these schools are attended by young people who are undertaking vocational training or practising an occupation. Successful completion of the course leads to a subject-based qualification equivalent to the final certificate from intermediate school.

**Vocational guidance:** this is the provision of information and advice on choosing an occupation, on vocational development and on changing occupation, on the labour market and job situation and trends, on VET opportunities, seeking a training place or a job, and on employment promotion benefits.

**Vocational schools (*Berufsschulen*):** these are upper secondary vocational schools, which usually provide general and vocational education within the framework of vocational training in the dual system.

## Authors

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### ***Susanne Berger***

Susanne Berger, M.A. is research assistant at the chair of economics and business education at the University of Cologne.

Career History:

Susanne Berger studied political and economic sciences and French at the Freiburg University of Education from 2009 to 2009 and was awarded the degree of Magistra Artium in European Bilingual Studies (for Intermediate Secondary School). She completed her studies with a six-month stay at the Lycée Hélène Boucher and the Collège Charles Peguy in Paris/France where she worked as an assistant teacher. From July to September 2009, she was a research assistant at the department of vocational and economic education and general economic studies at the Freiburg University of Education. Since July 2009 she is responsible for the EU-project "Fit for business – Developing business competencies in school".

### ***Sandra Bohlinger***

Sandra Bohlinger is Full Professor of Education at the Institute of Education at Osnabrueck University, Germany. Her main research interests are in the comparative education and competence development with particular reference to European VET research and policy. She has been working as a Seconded National Expert for Cedefop, the European Commission's agency for the development of VET and has been a Visiting Professor at the Technical University of Berlin. In 2005, she was elected Board Member of eurodoc, the European Council of Doctoral Candidates and Young Researchers. She graduated in philosophy, philology and education, holds a doctoral degree and a habilitation in education.

### ***Dietmar Frommberger***

Full Professor for Research on Vocational Education and Training, Otto-von-Guericke-University Magdeburg (Germany) (see [www.ibbp.uni-magdeburg.de](http://www.ibbp.uni-magdeburg.de)); main research interests: Comparative Vocational Education and Training.

Other work experiences: Temporary Full Professor at the University of Duisburg-Essen; Assistant Professor at the University of Jena; University Teaching Positions at the Universities Cologne, Lüneburg and Chemnitz; Student Assistant, Graduate Assistant, Scientific Assistant at the University of Oldenburg; Teacher in Vocational Education and Training; Apprentice in Trading and Commerce; Freelance Print Journalist.

***Matthias Pilz***

Prof. Dr. Matthias Pilz is full professor of Economics and Business Education at the University of Cologne.

Career History:

Prof. Pilz studied business education at the University of Goettingen from 1990 to 1995 and economics at the University of Edinburgh/Scotland in 1992/93. From 1996 to 1998, he was research assistant at the Chair of Economic Education at the TU Dresden and received his doctor's degree/PhD at the University of Konstanz in 1999. After finishing his initial teacher training in 2002, he started his teaching career at the Wirtschaftsschule (Business-College) Herrenhausen in Hannover and was simultaneously advisor for EU education projects at the district government of Hannover. In the years 2002 to 2004 he worked as research associate for the Institute of Business Education and Educational Management at The University of St. Gallen/Switzerland before becoming a full professor for general economic studies in pre vocational education at the Freiburg University of Education. Since 2009 he is a full professor at the University of Cologne.

***Ingrid Wilkens***

Dr. Ingrid Wilkens studied economics and sociology in Hamburg and Goettingen. She worked as research assistant at universities and research institutes, e.g. the Sociological Research Institute (SOFI), Goettingen, the Institute for Employment Research (IAB), Nuremberg, and the Institute for Social Work and Social Education (ISS), Frankfurt. In 2005, she was visiting fellow at the Social Policy Research Centre, Sydney (Australia). Last autumn, she started her position as Head of the Integration Research and Monitoring Division at the Hessian Ministry of Justice, for Integration and European Affairs.

Her main research concentrates on employment and education viewed against the background of social and structural change. She works with special focus on promoting social inclusion of disadvantaged groups.

