

# **Quality control and employability: are the parameters of VET in Germany's Dual System facing severe challenges?**

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All around the world, employers' participation seems to be one of the crucial problem areas of vocational education and training (VET) development, especially when it comes to linking it to quality control and general standards of competence. One of the interesting questions to be addressed towards the German system thus may be why employers actually offer traineeships on such a highly standardised level, but also how current changes within the economic environment of VET may exert pressure on the Dual System in terms of more flexible training schemes. My major proposition is that dual training arrangements alone do neither necessarily solve quality problems in the delivery of VET nor improve VET links to the labour market. An essential strategy should be to further develop holistic training courses linked to apprenticeship models and embed both into a Dual System and a comprehensive system of quality control of VET.

## **Basic organisation of the VET system in Germany**

Dual apprenticeships in Germany exist in nearly all branches of the economy including the professions and parts of the civil service. In 1999, some 630,000 young people took up an apprenticeship (for figures see Bundesministerium für Bildung und Forschung 2000). All in all, more than 1.6 million young people - with a female share of 40% - are learning their trades through the Dual System. In contrast, in England and Wales, for example, the number of Modern Apprenticeship participants stood at just 119,000 in March 1998 (Ryan 2001).

Apprentices come from different educational backgrounds although most have an intermediate or lower secondary school certificate. In recent years, the number of grammar school leavers taking up DTS training has risen and now stands at 16.8% (Bundesministerium für Bildung und Forschung 2000).

The German Dual System is first of all an alternating training structure - which means that training takes place in a company providing the apprenticeship and in a compulsory vocational part-time school (which accounts for one to two days of the weekly training provision). Secondly, the German system is rooted in an 'occupation-orientated' or genuinely 'vocational' training culture; vocationalism in the German meaning of the term stands for integral qualifications based on uniform training schemes and highly standardised examination procedures (Benner 1977). This implies that training is indeed workplace-led and predominantly practical, by stressing the importance of work experience during the training period. At the same time, however, the system works in accordance with skill requirements defined 'around the workplace' (Deissinger 1998; Harney 1985).

Moreover, the Dual System is determined by the involvement of the federal and state administration which makes occupational standards and conditions of skilled

apprenticeship legally enforceable as well as marketable (Raggatt 1988). At the same time, the German 'training culture' (Brown and Evans 1994) is based on the notion that vocational training should not only be interpreted as a contractual duty but also as an educational process.

Finally, the fact that the state's function is actually restricted to securing quality standards in a predominantly formal manner makes the principle of consensus perceptively one of the long-standing parameters of dual training in Germany. This means that public and private as well as semi-private institutions have established various forms of cooperation within the system and, even more importantly, that the social partners normally take the initiative when it comes to defining a training ordinance (Benner 1984).

Apart from dual apprenticeship, the German VET system offers school-based, full-time courses for young people of which only a minority however lead to a work-related qualification. In the vocational full-time schools (some 300,000 pupils), 40% of students obtain a qualification outside the system of recognised skilled qualifications, but their number only amounts to less than 10% in relation to apprentices in the Dual System. Therefore it is correct to label the Dual System the core segment within German VET when it comes to delivering recognised labour-market relevant vocational qualifications. As a matter of fact, according to the Vocational Training Act, qualifications may be obtained in a vocational full-time school as well, but only some 33,000 students actually attend these schools in specific occupational areas. The overall acceptance of the DTS as the major route for non-academic training is also backed by the fact that the system of skilled occupations based on dual training is virtually an exclusive route, as there are no other options of company-based training available which would find acceptance on the labour market.

## **Apprenticeships in the Dual System of VET**

### **The vocational principle and schemes of VET**

The vocational or occupational aspect of training already mentioned is reflected through the structural features of the Dual System. It incorporates a specific quality of didactical as well as institutional arrangements which determine the 'application requirements' for qualified labour (Kutscha 1992, p 537):

- The idea of an 'occupation' refers to 'more or less complex combinations of special achievements' institutionally fixed and characterised by the use of related qualifications typical of the respective occupation. Therefore they are designed to fulfil the functional requirements of the division of labour (Zabeck 1991, p 559).
- Occupations are integrally structured; they consist of 'relatively job-independent but nonetheless job-relevant patterns of labour' whose branch and individual value is determined by being offered on the labour market as 'containing special qualities' (Beck et al 1980, p 20ff). This means that they are basically non-modular patterns of skills and knowledge.

- Occupations exist not only as 'gainful' or 'grown-up employment' but as 'skilled occupations', ie they are the starting point as well as the target of the training process whose 'organisational picture' (Brater 1981, p 32) is standardised by state statutes and thus significantly removed from the limitations and functionalisation of individual firms.
- State-standardised 'skilled occupations' are the framework of a standardised training course of set duration in which the quantity and quality of the acquired skills and knowledge is supervised and validated through intermediate and final examinations as well as certified in a way acceptable to the market.

The conditions of skilled apprenticeship hence are closely linked with the prerequisite of homogeneous training schemes based on governmental training ordinances. The mandatory contents of a training ordinance are specified in the Vocational Training Act of 1969 (Deissinger 1996). The so-called 'principle of exclusiveness' makes sure that training ordinances represent the only way leading young people into skilled employment. The idea behind this strict principle is based on the conviction that the training course should pin companies down to the skill range of an occupation which is marketable beyond the training company itself (Beck et al 1980). The procedure which leads to training ordinances claims to be reality-based and tries to take account of newly developing job requirements stimulated by organisational and technological changes. Since the passing of the Vocational Training Act, some 250 recognised skilled occupations 'have been based on new 'training ordinances' following the vocational principle. They apply to 97% of all apprentices. At present the number of existing skilled occupations amounts to 356. Training ordinances set up the didactical pattern of the qualification process leading to an examination before a competent authority' (Benner 1977).

Three basic schemes may be distinguished:

- The vast majority of training schemes are designed as 'mono occupations' (type 1), not allowing for specialisation or differentiation of training time or training content. It is assumed that a broad basis of elementary vocational qualifications supports a maximum of flexibility and mobility between different workplaces and firms.
- A similar understanding is used in the training schemes within the metal and electrical sectors referred to as 'specialised basic occupations' (type 2) that were issued in the late eighties; specialisation takes place after an initial training period of normally one year which is common to a range of interrelated occupations.
- Even stage training courses (type 3) taking account of two qualification levels are based on the assumption that skills at each level must be uniform and marketable by representing an occupational standard, not just a bundle of specific competences.

The vocational or occupational principle (Berufsprinzip) is mirrored in the facets of the Dual System in so far as training schemes (which also determine the school

curricula) are specified along the lines of conventional patterns of consensus finding among social partners, which are assisted by an umbrella function of the federal educational administration represented by the Federal Institute of Vocational Training. However, only two thirds of the syllabus used in vocational part-time schools refer to vocational subjects, as general education is a natural component of the curriculum. The latter is also underlined by the fact that legal foundations for dual training stem from different backgrounds. Whereas part-time school attendance is enforced by the educational law, the Vocational Training Act is a specified labour or contractual law which has been amended by public regulations such as chamber supervision of training and prescriptions of quality control in terms of trainers' qualifications and training contents. As to the dual principle, it should be noted that cooperation between the learning venues has always been considered an issue of concern in the scientific community (Euler 1999). However, there are no institutionalised forms of cooperation on a large scale in the German system. It highly depends on local schools and companies in the way they coordinate their training beyond what is prescribed in the training ordinances.

### **Employer commitment within the Dual System**

The training market in Germany 'has the character of a suppliers' market' (Greinert 1994, p 80). Companies provide training opportunities on a totally voluntary basis but in structural terms they are by far the most important learning venues in the Dual System, as two thirds of the training time is spent at the workplace or in training workshops. Also, in terms of the financial burden, companies shoulder the lion's share of training costs. In 1999, companies invested nearly 40 billion Marks into the Dual System, while the contribution of the federal and state governments amounted to a comparatively low 5.4 billion Marks (Bundesministerium für Bildung und Forschung 2000, p 122). While the overall training quota in Germany is only 24.2% (1998), big companies train to a very large extent; 69.7% of companies with between 50 and 499 employees took part in the Dual System in 1998 and 93.8% of companies with 500+ employees entered the training boat. At the same time, however, it needs to be said that it is in the craft sector with its many small companies that training has a long-standing tradition, and that some 600,000 young people out of the total of 1.6 million trained in the Dual System get their training in a craft company under the supervision of a qualified master craftsperson.

The cost argument can be found among the most important reasons which companies report for not entering training. The panel survey published by the German Labour Office Research Unit sees the financial aspect of DTS training at nearly 38% , while 28.6% of companies say that training is too burdening and complicated for them, but only 12.5% complain about applicants' educational background or social skills. In a similar way, it would be wrong to assume that training under private conditions could be carried out in a homogeneous manner. In-company training differs by structure, quality and also quantity, depending on the situation on the labour market. As a matter of fact, two basic types of in-company VET may be distinguished.

Firstly, there is training that is part of the working process. This saves the enterprise money because no separate training infrastructure is needed. Secondly, there is training that is pursued in a more or less systematic way and mostly conducted out

of the workplace - ie in a specific training environment, such as a training workshop or training plant. This VET naturally becomes more costly for the firm (Greinert 1994, p 91).

In the case of high-quality technical training in large enterprises, such as metalworking and engineering, industrial training is based on a broad infrastructure that includes full-time trainers, sophisticated learning material, project work and theoretical lessons. This training is selective, as recruitment is based on aptitude tests and apprentices are expected to have passed high-quality school exams. Training of this type is highly standardised through clear-cut rotation schemes which channel the apprentice through the different departments and workshops of the company. In the case of commercial occupations, such as banking and insurance, training normally is also highly standardised once it is carried out in bigger enterprises such as the major banks. It differs from unsystematic training, because it stresses theoretical skills in the learning process and thus tries to bridge the gap between school and company, which is often seen as one of the deficit areas within the Dual System.

On the opposite side, in the craft sector, training appears to be closely attached to daily working routines and therefore has traditionally been labelled 'laissez-faire training' or 'training en passant'. As a matter of fact, in the sixties, the so-called 'apprenticeship issue' was triggered as an issue of public and political concern because critics of the Dual System claimed that most traineeships never reached a reasonable systematic or pedagogical level. Here training is certainly in danger of missing the comprehensive scope of the training occupation and of failing to provide systematic insight into the field of work, as the latter is basically left to the vocational school.

### **The functional contribution of the Chamber Organisation to quality control within the Dual System**

All apprenticeships have to be based on a training contract or apprenticeship indenture. It is the Vocational Training Act which makes general provisions with respect to the structure and duration of the training period, the time devoted to training every day, the apprentice's pay (subject to collective bargaining) as well as his or her rights and duties (Deissinger 1996). The essentials concerning the training relationship between the training company and the trainee or apprentice must be laid down in writing (Greinert 1994, pp 86f). The contract obliges the training employer, above all, to ensure that the necessary abilities and knowledge be imparted to the apprentice. This means that training has to be purposeful and organised in accordance with the formal training objective that consists of passing the examination before the chamber. The educational content of the indenture may be measured by the emphasis the Act places on the requirement of skilled training personnel as well as by the fact that there is an obligation of the training firm to see that the trainee is encouraged to develop his/her personality and that he/she is protected from physical or moral danger.

Therefore, all companies in Germany are legally bound to a system which prevents them from training young people simply in accordance with their economic or technological needs. The training log book, which the apprentice has to keep, must

be regularly checked and signed by the person - a trainer or master - who is in charge of instructing and monitoring the apprentice in the training firm. Weaknesses and abuses of in-company training can be lamented before the chamber from either side. Moreover, apprentices must not be treated as ordinary employees; they shall only be entrusted with work related to the purpose of their training and commensurate with their powers. Firms' duties also include the releasing of trainees from work both for attendance at the vocational school and for sitting examinations. On the other hand, apprentices must also comply with certain requirements concerning their behaviour, particularly their duty to attend the vocational school. Hence, the notion of DTS training is clearly reflected in the legal provisions governing the in-company part of the Dual System.

It was with the so-called Craft Protection Act in 1897 that the contours of the modern German DTS emerged. The regional craft chambers as well as the local guilds were installed as major agents of training which, in particular, meant that they were authorised to hold examinations for 'journeymen' and masters. The notion of the skilled craftsperson thus became rooted within a framework of self-government based on economic law. The Act also confined the technical qualification required for the training of apprentices to skilled 'journeymen' of at least 24 years of age who had either served a three-year apprenticeship or pursued their trades for at least five years as independent artisans. Indentures became general practice in the craft sector, as well as the three-year training period (Deissinger 1994). Only after the First World War, industrial employers' organisations began to work out training profiles for their branches and occupations. Their attempt to establish a mode of training apart from the craft sector was more apparently linked to the idea of systematised training schemes than to vocational traditions (Schütte 1992, pp 79ff).

However, from the mid-twenties onwards, the newly established chambers of industry and commerce embarked on holding examinations for industrial workers, which until then had been the exclusive right of the craft chambers (Muth 1985). Despite its more modern character, industrial training factually copied the corporatist framework and the occupational orientation of training. At the same time the role of the state remained that of a sanctioning agent. The dominant feature of in-company training in Germany up to 1969, when the Vocational Training Act came into operation, can be seen in the sole responsibility of firms and chambers - clearly a tribute to classical apprenticeship as it had been revitalised in the late nineteenth century (Zabeck 1975).

The specific combination of traditional apprenticeship features, standardisation and state quality control becomes manifest in the Vocational Training Act which exposes the chambers as crucial agents of VET (Deissinger 1996).

### **Links of VET to the labour market**

The share of apprentices among employees in the German economy is around 5%. Hereby, the distribution among companies of different size is fairly similar, although smaller companies on average take a larger proportion of trainees in relation to their employees. In 1998, 52% of apprentices received their training in companies with up to 50 employees while 48% trained in firms with a workforce of more than 50 (Bundesministerium für Bildung und Forschung 2000, p 124). Some 50% of German companies possess the qualifications needed to take apprentices. This does not mean

that all these firms actually take part in the Dual System. In 1998, some 24% of all German companies offered apprenticeships to the market (Bundesministerium für Bildung und Forschung 2000, p 128). The inclination to establish training opportunities on the side of German companies declined in the nineties, although now, with the economy producing more steam, the situation on the training market – clearly dependent on the general constitution of the labour market – has improved against the late nineties.

Against the background of some 630,000 new training contracts in 1999, the number of unprovided young people (in the whole of Germany) went down by 18%, as against 1998. On 5 October 2000, the Federal Ministry of Education reported in a press release that the number of school-leavers still seeking a traineeship had decreased even by 20% against 1999 (Pressemitteilung no 156/2000, vom 5.10.2000). Nevertheless, the Ministry points out that the losses of training places produced in the nineties have not yet been compensated. And it should also be noted that for demographic reasons demand for training places is expected to rise up to 700,000 per year by the year 2005 (Bundesministerium für Bildung und Forschung 2000, p 10). Therefore the Federal Government has made it clear that it sees the situation still far from being satisfactory, as steps to cure the unstable situation on the training market in the new federal states still require apprenticeship subsidies and supra-plant training arrangements. As a matter of fact, the fragile economic framework in the east has made it necessary to pump public subsidies into training schemes which are not linked to the Dual System directly but have been created for the purpose of establishing alternative ways of vocational preparation and integration. It is apparent from this that Germany's VET system remains exposed to structural and regional frictions and under pressure from external developments.

While in the craft sector the number of new apprenticeships in 1999 fell slightly, it rose by 45.3% in the new IT occupations. As unemployment certainly produces particular strain for the training system, the problems at 'threshold two', from training into employment, have sharpened in recent years. Although the training system and the employment sector are bound by a strong professional or vocational link (Deissinger 1998; Konietzka and Lempert 1998; Maurice 1993), career opportunities in the nineties, even if grounded in skilled training, were clearly more exposed to labour market restraints than in former decades (Timmermann 1994, pp 81 ff). The Federal Labour Office reports that youth unemployment (under 25) rose from 8.5% in 1993 to 12.2% in 1997, although at February 2001 it was again at 10.1%. In general, however, unemployed people under 25 suffer unemployment for a shorter period than the average unemployed person. This does not compensate for the fact that, in 1997, 27% of apprentices in the old federal states and 39% in the new states became unemployed at the end of their training course (Bundesministerium für Bildung und Forschung 1999, pp 146-148).

Another important aspect illustrating the links between training and the labour market is the rate of take-over from apprenticeship into regular full-time employment within the training firm, which has always been considered one of the major advantages of German dual training. This rate naturally differs among the various sectors of the economy and is reported to be highest in primary industries such as mining and energy, as well as in the banking and insurance sector. Normally, take-over in bigger companies with more than 500 employees is higher than in small-sized enterprises with fewer than 10 employees (73.3% as against 41.9% in 1997 in the

old federal states). The average rate of take-over into salaried employment in the training company is 58% (Bundesministerium für Bildung und Forschung 2000, p 154). However, it should not be ignored that in the new federal states, take-over is lower than on average (just 46%). And there are also striking differences between the banking and insurance sector with more than 80%, and eg hotel and catering with a meagre 37%.

Against this background, it is obvious that unemployment rates naturally differ from branch to branch as there is no guarantee to actually enter employment successfully after training. Because training of course is an economic and financial issue for any company, it may be said that once young people take the hurdle into apprenticeship they have good employment prospects, since the training market undoubtedly functions as a 'pre-selection market' for future employees.

Despite all of these frictions, the German economy seems prepared to absorb qualified labour to a large extent. According to a recent survey carried out for the Institute of the German Economy, apprenticeship leavers will have the best opportunities to find a job among all graduates - both academic and non-academic. 42% of German companies are actually intending to augment their apprenticed labour force, while 38% expect to fill up their labour stock with academically qualified personnel. And it seems to be a positive signal from the training market that while new training contracts in general rose by 2% in the East and 3% in the West, IT traineeships jumped up by 45%. At the same time, the stock of young people who could not get an apprenticeship has never been so low since 1993.

At the same time, however, it is expected that every year some 100,000 young people will leave general education without a formal qualification (Beckers 1998, p 16) and their situation appears to be influenced by at least three structural factors.

Firstly, with the emergence of the new technologies and the disappearance of old-established training occupations, the lower segment of skilled practical work has been shrinking in quantitative terms. In a 'globalising' economic environment, this means that income and career opportunities for young people with minor or no general or vocational qualifications are bound to decrease, although the craft sector has recently reported, for the first time in many years, an oversupply of training places, even in the East of Germany.

However, the new occupational profiles, designed and decreed in the past fifteen years, have proven too demanding for the 'weaker' learners. Consequently, companies become more and more selective as they act in a training market where the supply of training places fails to meet the demand quite regularly.

Regional diversity, which has always led to imbalances in Germany's training statistics, seems to aggravate the situation, as young people looking for an apprenticeship placement in the East of Germany (the new federal states) have to find their way into a labour and training market which is tighter and less accessible than in the Western states.

Against this background, reforming the system by modifying and extending the range of formal training opportunities appears at first glance a reasonable strategy to avoid youth unemployment due to the partial failure of the VET system. However,

whereas upgrading the system by offering new exacting training schemes has been enforced in the past two decades, the lower end of the qualification ladder has been neglected. One of the more recent innovations has been carried out in the Information Technology (IT) occupations, which now cover a so far neglected segment of the labour market. It can be assumed that these occupations, among others, will most definitely exclude substantial numbers of young people who fail to reach a certain educational standard. Companies nowadays expect a broad general education alongside computer literacy, and they want to build a specific occupational knowledge on this. According to an analysis carried out by the Federal Institute of Vocational Training, only 50% of companies actually want to hire graduates from the tertiary sector. This proves that the new occupations are being taken on by industry. Nevertheless, this could lead to an even more socially segmented training market. At the same time, school-based forms of work preparation seem to gain importance as a 'catch-all' for unsuccessful school leavers. It may thus be argued that the 'crisis' of the Dual System appears first and foremost to be conditioned by volatile labour markets and other external factors, rather than by qualitative problems or structural inflexibility of the system itself.

## **Apprenticeships and modularisation**

Beyond all of these quantitative considerations, skepticism in the German VET debate has for some time become centred around the question of whether modular principles are generally compatible with the organisational features of the Dual System as well as with the didactical pattern and pedagogical understanding underlying training arrangements (Deissinger 1998; Deissinger 1999). The question is: how should Germany's vocational training system react with respect to the problem of integrating the slow learners or those belonging to the 'problem' groups? At the same time, dual training is expected to be brought up to date in terms of new training contents and training methods to ensure quality standards and the matching of training and work. From an institutional and didactical point of view, three ways are conceivable:

- fragmentation
- sequentiation/differentiation
- stage training courses/supplementation.

### **Fragmentation concept**

The first approach could be to dissolve occupational patterns by establishing a modular system with variable access opportunities and flexible levels of qualification standards. England and Scotland, with their respective certification systems, have established a competence approach linked to modularisable qualifications defined by employers and assessed in the workplace (Deissinger 1999; Hodgson and Spours 1997; Pilz 1999; Steedman 1998). This system has been designed to substitute traditional qualifications that were criticised as obsolete and also to bring the spheres of general and vocational education together. As it has provoked criticism ranging from the general reproach of quality regression to the contention that these qualifications work according to behaviouristic principles (Hyland 1995), there is serious doubt whether a modular approach of this radical kind could pay tribute to

the quality standards underlying the Dual System mentioned above or form a serious alternative to traditional apprenticeship (Deissinger 1998, pp 205 ff).

### **Sequentiation/differentiation concept**

On the other hand, implanting modules within courses of training as didactical elements need not necessarily result in the dumping of occupational skill formation (Euler 1998, pp 96 ff; Kloas 1997). It will be crucial, however, that even modularised profiles become accepted in the labour market in the long run. This clearly requires combining the notion of quality control with a strong will to keep the number of occupations comparatively low. The advantageous effects of such a 'mild' strategy could be that the modernisation of training content would become easier by inserting revised modules into schemes, and that retraining could be more immediately linked to initial VET in the Dual System. This option would in the first place contribute to adapting the training system to technological developments, but could also help companies to train young people according to firm-specific needs. Therefore, it would pay tribute to specialisation and modernisation requirements. The IT schemes are a recent example of this approach to modularisation; here, the training contract can be specified in terms of an optional module in year three of the training course. This comes close to the so-called 'Satellite Model' developed by the German Chamber Association. It is the view of the chambers that there ought to be 'three freedoms' for companies when settling the training contract: (i) reducing the training length to a minimum of two years; (ii) inserting both optional and additional modules into the training process which remain based on fundamental skills for everybody learning this occupation; (iii) and bringing more flexibility to examination procedures (Deutscher Industrie - und Handelstag 1999). The problem is that these 'freedoms' imply that training in a specific occupation could become 'individualised' to an extent that rates the needs of companies higher than the 'vocational' quality of the training scheme.

### **Stage training courses/supplementation concept**

A third way to bring more flexibility into the Dual System could be to increase the number of formal levels at which vocational qualifications are obtained. Providing more flexibility by paying more attention to the educational achievements of young people seems, at least at first glance, more agreeable among interest groups involved in German vocational training policy than a plain modular approach. One future reform option could therefore be to supplement the current uniform training schemes by offering an extra set of formal qualifications for the more potent learners (Pahl and Rach 1999). At the other end of the qualification ladder, differentiation could lead to special training courses for weaker learners, including new stage-structured training schemes. The social partners are currently debating the topic of shorter training times. By stressing the standards of training and the quality aspect, the German trade unions and the crafts combine in their efforts to preserve the traditional occupation-based pattern within the Dual System. Whereas trade unions have always feared that low-standard training would automatically lead to new wage structures (Kuda 1996, p 18), the crafts expect that the occupational principle could be at peril if, for example, the 'small journeyman certificate' was introduced (Beckers 1988). In the industrial sector, however, two-year training courses would be welcome although demand here is not universal (Zedler 1996). The General Secretary of the Federal Institute of Vocational Training has made it clear that differentiation should not mean giving up the totality of a skilled occupation (Pütz 1997). Also, one

of the most recent statements of the Federal Minister of Education and Research underlines that less exacting occupations ought to require three-year courses and would therefore not establish a 'second class' Dual System.

There is neither a clear nor a final perspective for the features of new training schemes – be it for the sake of weaker learners or employers' flexibility demands. It will certainly depend on the extent to which modular principles penetrate into the German system. The three options indicate that modularisation can adopt different forms. Therefore it seems feasible to alter vocational courses along the lines of a differentiation model (option 2). However, while optional supplementary modules linked to different stages of training would also be compatible with the occupational principle (option 3), a fragmentation concept (option 1) use in the British systems would certainly break a long-standing tradition of VET (Deissinger 1999, pp 199 ff; Pilz 1999). Hence any reform option will have to be measured against its potential effects on the principle of occupational or vocational orientation and its social function (Adler and Lennartz 2000; Kutscha 1998, p 259), as it must be harmonised with the traditional notion of quality control and marketability of qualifications (Berger et al 2000). More clearly, however, any reform will also have to prove whether it will cause employers to offer training in any stratum of the training system.

## References

Adler T and Lennartz D (2000) Flexibilisierung von Ausbildungsordnungen. Aktuelle ordnungspolitische Konzepte zur Nutzung von Modularisierungsansätzen. Berufsbildung in Wissenschaft und Praxis, vol 29, no 3, pp 13-17.

Beck U, Brater M and Daheim H (1980) Soziologie der Arbeit und der Berufe. Grundlagen, Problemfelder, Forschungsergebnisse, Rowohlt, Reinbek.

Beckers H (1998) Der Kleine Gesellenbrief - Was steckt dahinter? Wirtschaft und Berufserziehung, vol 50, no 6, pp 16-18.

Benner H (1977) Der Ausbildungsberuf als berufspädagogisches und bildungsökonomisches Problem, Schroedel, Hannover.

Benner H (1984) Zum Problem der Entwicklung betrieblicher Ausbildungsordnungen und ihrer Abstimmung mit schulischen Rahmenlehrplänen. In W Georg (ed) Schule und Berufsausbildung. Bielefeld: W Bertelsmann, pp 175-187.

Berger K, Brandes H and Walden G (2000) Chancen der dualen Berufsausbildung. In Berufliche Entwicklungsperspektiven aus betrieblicher Sicht und Berufserwartungen von Jugendlichen. Bielefeld: W Bertelsmann.

Brater M (1981) Thesen zur Berufskonstruktion. Berufsbildung in Wissenschaft und Praxis, vol 10, no 5, pp 32-36.

Brown A and Evans K (1994) Changing the training culture: lessons from Anglo-German comparisons of vocational education and training. British Journal of Education and Work, vol 7, pp 5-15.

Bundesministerium für Bildung und Forschung (2000). Berufsbildungsbericht 2000, BMBF, Bonn.

Bundesministerium für Bildung und Forschung (1999) Berufsbildungsbericht 1999, BMBF, Bonn.

Deissinger T (1994) The evolution of the modern vocational training systems in England and Germany: a comparative view. *Journal of Comparative Education*, vol 24, pp 17-36.

Deissinger T (1996) Germany's Vocational Training Act: its function as an instrument of quality control within a tradition-based vocational training system. *Oxford Review of Education*, vol 22, pp 317-336.

Deissinger T (1998) Beruflichkeit als 'organisierendes Prinzip' der deutschen Berufsausbildung, Eusl, Markt Schwaben.

Deissinger T (1999) Beruflichkeit als Zusammenhang. Ein Vergleich mit England. In K Harney and H E Tenorth (eds) *Beruf und Berufsbildung. Situation, Reformperspektiven, Gestaltungsmöglichkeiten* (40, Beiheft zur Zeitschrift für Pädagogik). Weinheim: Beltz, pp 189-207.

Deutscher Industrie-und Handelstag (ed) (1999) *Leitlinien Ausbildungsreform. Wege zu einer modernen Beruflichkeit*, DIHT, Bonn.

Euler D (1998) *Modernisierung des dualen Systems - Problembereiche, Reformvorschläge, Konsens- und Dissenslinien*, Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung, Bonn.

Euler D (1999) *Lernortkooperation in der beruflichen Bildung - Stand und Perspektiven aus Sicht wirtschaftspädagogischer Forschung*. In K Harney and H E Tenorth (eds) *Beruf und Berufsbildung. Situation, Reformperspektiven, Gestaltungsmöglichkeiten* (40, Beiheft zur Zeitschrift für Pädagogik). Weinheim: Beltz, pp 249-272.

Greinert W D (1994) *The German system of vocational training. History, Organization, Prospects*. Baden-Baden: Nomos.

Harney K (1985) *Der Beruf als Umwelt des Betriebs. Vergleichende, historische und systematische Aspekte einer Differenz*. In Verbände der Lehrer an beruflichen Schulen (eds) *Die Relevanz neuer Technologien für die Berufsausbildung*. In Krefeld: Nordrhein-Westfalen, pp 118-130.

Hodgson A and Spours K (1997) *Modularization and the 14-19 Qualifications System*. In A Hodgson and K Spours (eds) *Dearing and beyond. Qualifications, frameworks and systems*. London: Kogan Page, pp 105-120.

Hyland T (1995) *Behaviourism and the meaning of competence*. In P Hodgkinson and M Issitt (eds) *The challenge of competence: professionalism through vocational education and training*. London: Cassell, pp 44-57.

Kloas P W (1997) Modularisierung in der beruflichen Bildung. Modebegriff, Streitthema oder konstruktiver Ansatz zur Lösung von Zukunftsproblemen? Bielefeld: W Bertelsmann.

Konietzka D and Lempert W (1998) Mythos und Realität der Krise der beruflichen Bildung. Der Stellenwert der Berufsausbildung in den Lebensverläufen verschiedener Geburtskohorten, Zeitschrift für Berufs- und Wirtschaftspädagogik, vol 94, pp 321-339.

Kuda E (1996) Steigerung der Attraktivität dualer Ausbildung durch, praxisorientierte Kurzausbildungsgänge?, Berufsbildung in Wissenschaft und Praxis, vol 25, no 1, pp 16-21.

Kutscha G (1992) Entberuflichung und Neue Beruflichkeit - Thesen und Aspekte zur Modernisierung der Berufsbildung und ihrer Theorie. Zeitschrift für Berufs- und Wirtschaftspädagogik, vol 88, pp 535-548.

Kutscha G (1998) Regulierte Pluralität - Entwicklungspfade aus der Sackgasse des Dualen Systems. Die berufsbildende Schule, vol 50, pp 256-260.

Maurice M (1993). The link between the firm and the educational system in vocational training: the cases of France, Germany, and Japan. In University of Laval and International Labour Office, Department of Industrial Relations (eds) Vocational training: international perspectives. Quebec: Laval, pp 43-69.

Muth W (1985) Die historische Entwicklung der Lehrabschlussprüfungen bei den Industrie- und Handelskammern. Wirtschaft und Berufserziehung, vol 37, pp 328-336.

Pahl J-P and Rach G (1999) Zusatzqualifikationen - Wegbereiter zur Dynamisierung der Berufsbildung. Die berufsbildende Schule, vol 51, pp 356-361.

Pilz M (1999) Modulare Strukturen in der beruflichen Bildung - eine Alternative für Deutschland? Eine explorative Studie am Beispiel des schottischen Modulsystems, Eusl, Markt Schwaben.

Pütz H (1997) Modularisierung - das falsche Thema, ungenügend bearbeitet, zur ungeeigneten Zeit', in Modularisierung in der beruflichen Bildung. In P W Kloas (ed) Modebegriff, Streitthema oder konstruktiver Ansatz zur Lösung von Zukunftsproblemen? Bielefeld: W Bertelsmann, pp 63-75.

Raggatt P (1988) Quality control in the Dual System of West Germany. Oxford Review of Education, vol 14, pp 163-186.

Rosenkranz G (2000). Green Card oder Red Card. Der Spiegel, no 15 (4 April), p 78.

Ryan P (2001). Apprenticeship in Britain: tradition and innovation. In T Deissinger (ed) Berufliche Bildung als Orientierungs- und Anpassungsproblem. Analysen zur

Berufsbildungsreform und zur Vorbildfunktion internationaler berufsbildungspolitischer Entwicklungsperspektiven. Baden-Baden: Nomos.

Schütte F (1992) Berufserziehung zwischen Revolution und Nationalsozialismus. Ein Beitrag zur Bildungs- und Sozialgeschichte der Weimarer Republik, Deutscher Studien Verlag, Weinheim.

Steedman H (1998) A decade of skill formation in Britain and Germany. *Journal of Education and Work*, vol 11, no 1, pp 77-94.

Timmermann D (1994) Die Rückentwicklung der Arbeitsmarktchancen und -risiken von Fachkräften: Rückblick und Ausblick'. In S Liesering, K Schober and M Tessaring (eds) *Die Zukunft der dualen Berufsausbildung*. Nürnberg: Bundesanstalt für Arbeit, pp 81-109.

Zabeck J (1975) Die Bedeutung des Selbstverwaltungsprinzips für die Effizienz der betrieblichen Ausbildung. Untersuchung im Auftrage des Ministers für Wirtschaft, Mittelstand und Verkehr des Landes Nordrhein-Westfalen, Mannheim.

Zabeck J (1991) Ethische Dimensionen der Wirtschaftserziehung. *Zeitschrift für Berufs- und Wirtschaftspädagogik*, vol 87, pp 533-562.

Zedler R (1996) Differenzierung innerhalb der Berufsausbildung: Förderung von Lernschwachen. In W Schlaffke and R Weiss (eds) *Das duale System der Berufsausbildung - Leistung, Qualität und Reformbedarf*. Köln: Deutscher Instituts-Verlag, pp 171-190.

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