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The German dual vocational education and training system as 'good practice'?

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Abstract
The German Dual System has attracted some considerable attention in recent years, with a number of countries, above all in Southern Europe, trying to introduce similar concepts of structured apprenticeships leading to initial vocational qualifications. Quite manifestly, there is expectation among politicians in particular that such a system might help cope with integration problems of school leavers into the vocational education and training sector and support combating youth unemployment. Focusing on the two 'learning venues', however, seems short-sighted as the German vocational education and training system has more working principles than just the dual learning setting. In contrast to the British approach, the German system trusts in a clear orientation of workplace learning along the lines of an 'occupation' (Beruf). Besides, the German vocational education and training system as a whole is more complex than it seems, with a still weighty 'transition system' and full-time courses in vocational education and training alongside apprenticeships. My argument is that the aspect of 'good practice' has to be relativised both against the background of these structural issues and in the face of recent academic drift in the German education system.

Keywords
German Dual vocational education and training system, transfer of good practice, use of German Dual vocational education and training system for training in developing nations, vocational education and training

Introduction

The German Dual System is a major pathway into skilled employment and also a crucial element of workforce development for many companies. Being virtually an apprenticeship system its core element is qualifying young people in an 'occupation' (Deissinger, 1998, 2009, 2010; Deissinger and Breuing, 2014), although it also opens up formalised progression to further

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training (such as the 'Meister'). There are a number of historical and cultural reasons for calling it the 'centrepiece of vocational education and training in the Federal Republic' (Raggatt, 1988: 166), which can still be seen when looking at the statistics of vocational education and training (VET). This paper does not deal with this tradition in detail. However, referring to it is necessary since history provides a number of explanations why it is not advisable, without pointing out reservations and limitations, to transfer the German vocational training system simply to other countries, both in the industrial and in the developing world. The reason for this is that the character of the Dual System may be pinned down to five features which help us to understand that the Dual System is more complex than the term 'dual' might suggest at first sight.

I will then focus on the question whether this training system could be a 'model' for other countries or even 'good practice', when it comes to qualifications and integration into work. Besides the working principles, it has to be taken into account that most countries favour flexible training and retraining concepts that are modelled along the lines of the British approach that emerged in the 1980s (Jessup, 1991). The British approach was designed to tackle the problem of dwindling importance of company-based training, which lost sway against academic pathways and direct entry into employment. Also, there are major principal arguments which actually make it impossible to 'copy' the German system of initial vocational training. My argument will be embedded within descriptive information on statistics and on current challenges the German VET system is facing.

Some statistical facts

Training in the Dual System is currently offered in 329 training occupations. Apprentices come from different educational backgrounds although the majority now have an intermediate school qualification (which can be obtained in general education, but also in a full-time vocational school). Table 1 provides some basic figures on the German apprenticeship system.

Table 2 shows the decline apprenticeships (total numbers) have suffered over the last couple of years. The drop can also be seen as an impact of tertiarisation of education in Germany. More and more young people now get a Higher Education (HE) entrance qualification and go to a university or a university of applied sciences. Furthermore, this also reflects the problem of demographic change in the German population as fewer school leavers are 'available' to be recruited as apprentices and future skilled workers.

On the other hand, it needs to be said that the share of young people possessing an HE entry entitlement (called Abitur or Fachhochschulreife, respectively) in the Dual System now stands at an impressive 24% (beginners in 2012), which underlines the attractiveness of the Dual System both for employers and young people. The banking qualification (Bankkaufmann/Bankkauffrau) is a good example for aspirations of young people who opt for an apprenticeship in the commercial field, but also indicates that companies prefer these young people in these occupations to those with a lower level of school qualifications. Table 3 shows major differences between the 16 federal states. States with a more 'comprehensive school' policy tradition, such as Bremen, Hamburg, and Nordrhein-Westfalen have above-average shares of school leavers with a HE entry qualification, whereas Bavaria, with a still markedly differentiated secondary school system, only comes up with 13%. There are, of course, also large differences between occupations and training sectors.

The other side of the coin, of course, is the fact that school leavers with a migration

Table 1. The German apprenticeship system.

	Numbers	Comments
Total number of apprentices 2012	1,429,977	No. of students in Higher Education now higher than that of apprentices
Number of new training contracts 2013	565,824	Supply was still lower than demand (91%)
Number of training occupations 2012	329	249 are trained for three years
Sector in the economy with majority of new training placements 2012	333,183	Industry and Commerce
Training quota	21%	Share of companies that are engaged in training
Most frequent educational background of apprentices 2012	231,048	Young people holding an intermediate school qualification
Average age of apprentices 2012	20	
Success rate of training 2012	94.7%	
Training occupation with highest share of school leavers with a Higher Education entry qualification 2012	71.9%	Banking clerk
Training occupation with highest share of school leavers with a lower school qualification 2012	71.8%	Shop assistant (food)

Source: BiBB (2014).

Table 2. Trainees in the Dual System 1992–2012, by training sectors.

Year	Total number	Industry/ trade	Crafts	Public service	Agriculture	Professions	Home economics	Maritime
1992	1,666,209	841,605	553,449	71,355	32,604	154,560	12,072	570
1993	1,629,312	786,513	567,744	73,512	29,685	158,862	12,633	366
1994	1,579,878	723,981	588,102	66,732	29,409	158,973	12,351	327
1995	1,579,338	702,867	615,351	56,721	31,257	160,350	12,486	309
1996	1,592,226	707,322	627,813	49,374	33,894	160,593	12,903	327
1997	1,622,679	736,284	630,903	47,613	37,413	156,588	13,536	342
1998	1,657,764	778,884	624,981	48,183	40,089	151,137	14,097	390
1999	1,698,330	833,016	616,872	47,457	40,386	146,598	13,638	363
2000	1,702,017	860,811	596,163	46,320	38,922	146,247	13,170	387
2001	1,684,688	876,141	564,480	45,453	37,530	147,585	13,107	372
2002	1,622,422	850,158	527,853	45,237	37,053	148,812	12,945	387
2003	1,581,630	838,368	502,365	43,338	38,292	145,731	13,137	396
2004	1,564,065	837,915	489,171	44,019	40,398	138,711	13,362	486
2005	1,553,436	848,217	477,183	43,365	41,313	130,419	12,300	639
2006	1,570,614	872,805	476,616	42,972	42,024	123,642	11,778	780
2007	1,594,773	910,320	475,065	38,994	42,894	114,870	11,667	963
2008	1,613,343	934,221	471,039	38,043	42,204	116,664	11,172	–
2009	1,571,457	909,072	455,568	37,980	41,028	117,015	10,794	–
2010	1,508,328	873,402	434,907	37,587	38,667	113,682	10,086	–
2011	1,460,658	850,689	414,207	37,998	36,624	111,861	9276	–
2012	1,429,977	841,062	400,131	35,967	34,764	109,854	8196	–

Source: BiBB (2014: 106).

Table 3. Trainees in the Dual System starting Training 2012, by Federal States and by level of school qualification.

Region	Final outcomes	Highest school qualification				
		None	Lower	Intermediate	HE entrance	No data
Baden-Württemberg	77,466	1578	24,501	34,695	16,401	294
Bayern	95,715	2106	40,293	40,698	12,384	231
Berlin	17,853	774	4830	6597	5625	24
Brandenburg	11,340	612	2934	4758	3036	0
Bremen	5967	114	1236	2529	2022	66
Hamburg	13,425	351	3309	4671	5073	24
Hessen	39,726	1194	11,763	16,086	10,572	114
Mecklenburg-Vorpommern	8289	528	2196	4032	1524	9
Niedersachsen	58,365	1263	15,786	28,458	12,231	630
Nordrhein-Westfalen	124,008	3642	31,914	44,340	42,312	1797
Rheinland-Pfalz	28,008	597	9747	11,730	5880	54
Saarland	7575	297	2589	2298	2373	18
Sachsen	18,516	672	4332	9723	3777	9
Sachsen-Anhalt	11,535	645	2757	6276	1848	9
Schleswig-Holstein	20,280	738	7284	8370	3852	36
Thüringen	10,932	405	2658	5787	2061	21
East	**78,465**	**3639**	**19,707**	**37,173**	**17,871**	**75**
West	**470,541**	**11,880**	**148,419**	**193,875**	**113,100**	**3267**
Federal Territory	**549,003**	**15,516**	**168,126**	**231,048**	**130,968**	**3345**

Source: BiBB (2014: 152).

background and/or learning difficulties and/or bad marks, even when graduating from an intermediate secondary school, find it hard to get an apprenticeship place at all, let alone in the specific occupation they want to be trained in. This unsatisfactory situation has led to the existence of a still substantial sub-system in the German VET system, which is called 'Übergangssystem' (transition system): Here, young people who could not be taken as apprentices or have not entered other initial training courses in a vocational school receive vocational orientation and/or preparation. In some cases, they will then receive a kind of substitute for vocational training or the chance of being placed in a company for an internship. The major objective of the government, spending billions of Euros for this 'transition system', however, is to bring young people into an apprenticeship offered by a private company.

Figure 1 illustrates that school education is a major predictor for a successful uptake of an apprenticeship. In 2012, more than 70% of young people without school completion in Germany had to undertake some kind of 'repair-oriented' training or vocational preparation in the 'transition system', whereas school leavers graduating from an intermediate secondary school (year 10 qualification/Mittlerer Abschluss) could widely (more than 80%) participate either in the Dual System or full-time VET. In contrast, the traditional clientele, i.e. those with a nine-year-long school education in a lower secondary school (Hauptschule) were mostly (just above 50%) affected by fewer chances of embarking on an apprenticeship.

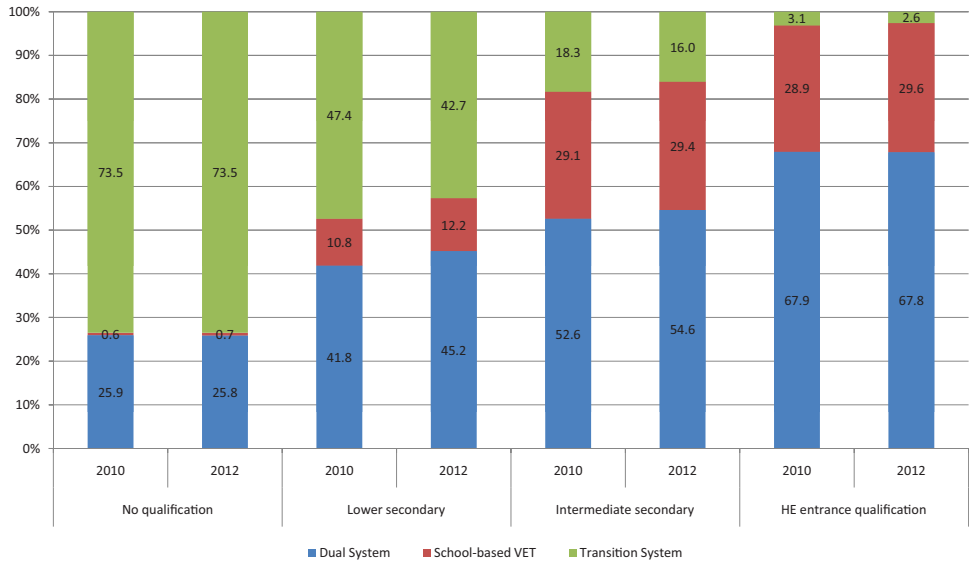

Figure 1. Training beginners in Germany according to VET sub-system and level of school-leaving qualification.
Sources: Autorengruppe Bildungsberichterstattung (2012), Tab.E1-3web; Autorengruppe Bildungsberichterstattung (2014), Tab. E1-3A.

Major characteristics of the German vocational training system

Training organisation and learning venues

Training in the Dual System takes place at two 'learning venues' (Deissinger, 2010; Greinert, 1994): the company that offers and funds the apprenticeship and the part-time vocational school (Berufsschule) where the apprentice receives theoretical instruction and is taught in general subjects, such as German, Mathematics or Social Studies, in addition to practical training within the firm. Table 4 depicts the various dimensions of this dual principle, which includes organisational, didactical and legal issues (Deissinger, 2010).

The system as a whole does not follow strict regulation from one institution. Therefore, vocational training is only partly a genuine educational task because, at the same time, it represents a function within the economic system as it is the company which provides training placements. The function of the vocational school is normally restricted to up to two days a week. There is general compulsion for apprentices to attend the vocational school up to the age of 18, and a duty on the side of the training company is to release young people for lessons at school as well as for sitting examinations. Teachers and trainers within this system draw their qualifications from different backgrounds. While the personnel responsible for apprenticeship training in firms mostly are recruited from skilled workers and clerks, vocational teachers normally need a Master degree from a university (Deissinger and Seifried, 2010).

Institutional responsibilities

Within the Dual System, the state's role is clearly defined but extends to both 'learning

Table 4. Dual VET system learning venues.

Learning venues	Berufsschule (vocational school)	Ausbildungsbetrieb (training and apprenticeship facility)
Legal status	• Public	• Private
Supervision	• School administration	• 'Competent authorities' (chamber system)
Legal basis	• Education law (federal state)	• Vocational training law (central state)
Young person's status	• Student	• Apprentice
Training personnel	• Vocational teachers	• Master workers, trainers
Didactical instrument	• Vocational syllabus	• Training ordinance
Form of learning	• Classroom instruction	• Workplace or workshop instruction
Contents of learning	• Theoretical	• Practical
Kind of award	• School certificate	• Chamber award

venues'. The 16 State Education Acts (Schulgesetze) set up the frame, among other things, for curricula and compulsion. The federal states work out syllabuses for vocational and general subjects for each occupation. The so-called 'training ordinances' (Ausbildungsordnungen) which underlie these curricula outline the didactical programme for in-company training to which companies have to adhere, although flexibility ensures that different technologies and organisational factors are considered. When it comes to working time and working conditions, the Youth Employment Protection Act (Jugendarbeitsschutzgesetz) obliges employers to release young people to attend the vocational school during normal working hours.

Some observers call the Dual System 'the most comprehensive and detailed regulatory system for apprenticeship training in the Western world' (Raggatt, 1988: 175). This is true if one looks at the Vocational Training Act (VTA) as a federal act which governs training at the workplace (Deissinger, 1996). This means that, for constitutional reasons, it does not interfere with the federal states' responsibility for vocational education in schools. By referring to the constitutional aspect it also becomes evident that the VTA is essentially a specified labour law. To call the German training system a 'bureaucratic horror by liberal standards' (Goodhart, 1994: 29) may sound exaggerated, but there certainly is a grain of truth in it as the legal dimension forms an essential part of public responsibility within the Dual System. The VTA, which underwent a modest revision only in 2005, clearly emphasises the notion implanted in the German 'training culture' (Brown and Evans, 1994) that vocational training ought to be treated as a contractual duty as well as an educational process and makes sure that training follows more or less common standards.

Three regulation patterns stick out when we look at this Act which has always been considered to be a compromise between economic interests and social and pedagogical objectives:

(1) The first one concerns the mandatory training contract which underlies any apprenticeship.[1]
(2) The second aspect refers to skill requirements of trainers, which were formalised in 1972 on the basis of the VTA.
(3) The third one defines the notion and quality of the 'skilled occupation' (Ausbildungsberuf), which is a pattern according to which an apprentice should be instructed in order to prepare a young person efficiently for a skilled job in industry or commerce.

Training has to be organised in accordance with the formal training objective which is the passing of the final examination before the chamber. As to trainers' qualifications, the VTA demands personal and technical skills from persons involved in the training of apprentices. Since 1972, mandatory trainer qualifications have been introduced through a special government decree, and there is now a modernised curriculum for corresponding courses which are normally offered by the 'competent authorities', mostly the chambers. This regulation also covers the master craftsman qualification. The courses organised by the craft chambers and the chambers of industry and commerce for this purpose have emerged as a permanent offer in their further training activities, by which they render an important service to member companies.

Commitment of industry and employers

Against this background, the Dual System is a setting for VET, where private (the companies), semi-private (above all the chambers) and public interests and responsibilities (the government), including the trade unions, merge. The regional chambers represent the most central element among those functions that help to secure that vocational training is clearly 'occupation-led' and not 'company-based' in the first place. The contribution of the 'competent authorities' is based on the principle of self-government (Zabeck, 1975). Training contracts, too, must be registered with the chamber. They also are in charge of holding examinations for journeymen, skilled industrial workers, commercial clerks and master craftsmen or master industrial workers, as well as for trainers and thus hold up 'occupational standards' in a most varied way.

This principle of self-government goes back to the ancient guild system. As it never wholly disappeared in the process of industrialisation, it has basically survived as a cultural pattern. The Craft Act of 1897 contributed to the foundations of the corporatist framework still typical of the Dual System (Deissinger, 1996) as it led to a revival of the guild system and stipulated chambers as self-governing organisations for the craft sector. Therefore, in Germany, there is a 'long-standing and highly regulated participation of business/industry in training' in the initial training sector, which is certainly 'an outstanding feature of the German system' (Noah and Eckstein, 1988: 62).

Training occupations

The VTA specifies the contents of a 'training ordinance' (Benner, 1977; Deissinger, 2009): It must contain (1) the name of the skilled occupation; (2) the duration of the training period, which 'shall not normally be more than three or less than two years'; (3) the skills to be provided by the company in the course of training; (4) a specification of the syllabus 'to be followed for the purpose of imparting the relevant abilities and knowledge' and finally (5) the examination standards. The so-called principle of exclusiveness makes sure that 'training ordinances' represent the only way which leads young people into skilled employment in one of the 'recognised skilled occupations'. The notion behind this principle is based on the conviction that such a course of training pins companies down to the skill range of an occupation marketable beyond the training company itself. Besides the benefits of marketable and transferable skills the major advantages of this 'vocational concept' (Deissinger, 1998), deeply rooted in the tradition of guild apprenticeship, may be seen in the implications for the trainee himself. It severs the close connection between specific workplaces and companies, respectively, and the process of skill formation which can be a severe restriction with respect to the mobility of employees. Many authors conclude from this that the Dual System

'yields general skills that transfer better from one field to another than vocational skills learnt at school' (Hamilton and Lempert, 1996: 437f). Studies on full-time VET come to the conclusion that companies prefer training apprentices to taking graduates from two- or three-year full-time courses from a vocational school, e.g. a vocational college (Berufskolleg), which offers school leavers from middle schools an alternative or preparatory pathway to the Dual System, although their major function now is to equip young people with a HE entry qualification (Deissinger, 2007; Deissinger et al., 2013).

Can the Dual System be a model for other countries?

Recently, the German Dual System has attracted some considerable attention since a number of countries, above all in Southern Europe, are trying to introduce similar concepts of structured apprenticeships leading to initial vocational qualifications. Quite manifestly, there is an expectation among politicians in particular that such a system might help cope with integration problems of school leavers into the VET sector and support combating youth unemployment. However, looking at what has been said about the features of the German Dual System it has to be added that even a vocational training system which strongly resembled the pattern of German apprenticeship would probably function in a different way and imply different consequences due to cultural and historical reasons once transplanted into another country. This has been proved by various studies concerned with the implementation of the Dual System in developing countries. Although it is considered to offer one of the best available solutions to the problem of skill formation, there remains substantial scepticism as to transferring or copying the features of the German 'training culture' into other socio-cultural contexts (Euler, 2013; Schaack, 1997). At the same time, there can be no doubt that the Dual System is far from perfect, especially as it is highly dependent on a functioning economy and a sound labour market. The so-called transition system is a good example for a selective perception of the structures of German VET. It remains a problem that many school leavers (see above) are not able to take up an apprenticeship – though the causes are manifold. Academisation seems to even enforce this effect, since companies have developed a highly selective attitude when it comes to hiring apprentices. This could lead to a new quality in the relationship between demand for and supply of training places in the Dual System as more school leavers from grammar schools and vocational high schools might prefer taking up a course of study at a university or university of applied sciences in the future (Euler, 2014). Besides, the German HE system is becoming more and more varied. A good example is the (formerly so-called) vocational academy, which now is labelled 'Dual University' (Duale Hochschule), which has successfully copied the Dual System and transposed it to a higher level (Deissinger, 2000).

As early as 1995/96, the European Commission, in its White Paper (European Commission, 1995), had distinguished apprenticeship training as one of the most favourable ways of coping with the qualification problem. However, such a perspective must not be restricted to a policy which aims at simply 'moving young people out of classrooms into workplaces' (Hamilton and Lempert, 1996: 450). It should imply a quality dimension. The 'best solution' for Europe – if anything like this does exist at all – ought to be based on the question whether the different national modes of delivery in vocational training open up stable career opportunities for young people. Taking into account the structural changes which have become ubiquitous in all our economies, the

Commission also wants to promote the competence approach associated with the idea of personal training portfolios which would offer a maximum of flexibility and openness and would not primarily be linked to specific curricula or specific training arrangements. It is with respect to these flexible forms of learning that the European VET policy context stands for more equality between general and vocational education and for a universal system of learning which should allow for accreditation of prior learning as well as enable people to aspire for competences linked to specific purposes or learning environments. Vocational competences should no longer be attached to formalised course environments and 'diplomas'.

Such ideas highly resemble the training philosophy underlying the system of (former) NVQs and SVQs in the United Kingdom (Jessup, 1991). The cultural imprints for the kind of initial vocational training typical for the German system, as a crucial pillar of workforce development in many companies, become clear once one compares the 'Germanic' model (also strong in Austria and the German-speaking cantons of Switzerland) with 'Anglo-Saxon' solutions for the problem of skill formation (Deissinger, 2013). Beyond the institutional peculiarity of both general and technical education in a vocational school besides learning in the workplace, the understanding of vocational pathways (Harris and Deissinger, 2003) and the value given to VET in general appear to be unique in the international context. Research relevant to the subject claims that the systems of modularised training and the related competence approaches in England or Australia do not have a lot in common with apprenticeship along the lines of the German Dual System (Deissinger and Hellwig, 2005; Hellwig, 2008). Moreover, whereas Germany still clings to its traditional pattern of skilled craftsmanship, in Britain there has been what may be called 'the fragmentation of a cultural institution', also leading to a more 'restrictive' than 'expansive' understanding of apprenticeships, although this model has experienced a kind of revival emerging from labour market programmes of the 1980s and 1990s (Dolphin and Lanning, 2011; Fuller and Unwin, 2011; Snell, 1996). It remains to be seen whether the outcome of ongoing activities to re-introduce and strengthen apprenticeship schemes will result in a satisfactory combination of 'the old' and 'the new type' of vocational learning that also pays tribute to the aspect of quality control.

From a more principal point of view and looking at Germany's experiences with its Dual System, vocational training options ought to be measured along their allocating function as well as their career-inducing effects. At least when it comes to the quality dimension of vocational training the Dual System could be a model for other nations as it relies on general and broad profiles of occupational competence, which are not exposed to market principles unrestrictedly. However, implementing a system which really looks at qualifications markedly from a non-economic perspective, once again requires a structural environment of consensus as well as co-operation between various social groups. This is just the pattern the German Dual System has provided for some 100 years. In the present social and political context, however, this success story could partly discontinue as academic pathways are becoming stronger and with them the kind of 'meritocracy' which traditionally characterises Anglo-Saxon education systems around the world, i.e. above all the growth of students embarking on HE courses. Therefore, the challenge to strengthen the Dual System has now received a new dimension as modern educational policy and economic rationality have to be balanced in an intelligent way.

With a still weighty 'transition system' and full-time courses in VET alongside apprenticeships, it is also the aspect of

'good practice' that needs to be relativised both against the background of structural problems and new challenges for the German Dual System, especially in the face of recent academic drift within the German education system.

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Note

1. A major part of the Vocational Training Act's stipulations refers to the prerequisites and contents of the training indenture. They touch the objective, the structure and duration of the training period; the time devoted to training every day; the apprentice's pay (which is subject to collective bargaining) as well as his or her rights and duties within the training firm. Apprenticeship indentures constitute the special legal status of the trainee. They oblige the 'training employer' to ensure that the 'necessary abilities and knowledge' shall be imparted to the apprentice (BMBF, 2005).

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