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Between school and company

Features of the historical development of vocational education and training in the Netherlands and Germany in a comparative perspective

Questions of Research

The architecture of vocational education systems differs substantially between the Member States of the European Union, even though significant social, economic and cultural similarities and intersections can be illustrated. Existing differences are of continued importance to the political aim of making Europe a more uniform place to live, work and pursue education. They tend to restrict the possibilities of integration yet could also offer specific opportunities for such policies. Therefore, determining which factors could explain differences in national vocational education systems is of prime importance. The answers could not only serve academic purposes but would also help in developing appropriate political strategies.

We know little about why vocational education in countries with similar economic and social backgrounds has evolved differently; there are few studies which address the historical development of national vocational education systems and even fewer dealing with the development in two or more countries from a historical or comparative perspective⁽¹⁾. The following descriptions should help in filling this gap. In this article we aim to describe and discuss the beginnings and subsequent development of vocational education systems in the Netherlands and Germany. Although these countries have national, economic, social and cultural similarities, they have differently structured vocational education and qualification systems.

The article begins with a synopsis of the current structure of vocational education in both countries. As the apparent differences presumably do not originate in different economic circumstances but in the development of the different vocational education systems, we focus on the respective states of

vocational education. Our common starting point for analysing the development that occurred over the years is the ancient European form of vocational education for crafts.

Finally, we examine the genesis of vocational education systems in both countries from a comparative perspective. For a deeper understanding of the dominant forms of vocational education to date (school-based versus company-based) we refer to the typical arguments used in examining vocational education in Europe, such as the role of intermediary instance, forms and times of industrial as well as economic characteristics. However, the comparison between the Netherlands and Germany indicates that the differences can only be understood on the basis of distinctive national patterns of thinking and perception of pedagogical problem areas such as social questions, tendencies towards over-schooling, and professional identity.

Current structure of vocational education and training in the Netherlands and Germany

Today in the Netherlands, there are two different routes by which vocational education and training can be undertaken. There is the full-time, college-based route that includes work placements and there is a part-time, work-based route that combines education with an apprenticeship in a company. Although the places and ways of learning are different, both routes are based on the same curriculum (see Frommberger, 1999; 2004).

Vocational education and training (VET) has traditionally taken place mainly in colleges, not companies, with most pupils continuing via a school-based route rather than a work-based route after finishing compulsory education. This is even the case for stu-

We currently know little about why vocational education has evolved very differently in countries with very similar economic and social backgrounds; there are few studies which address the historical development of national vocational education systems from a comparative perspective. This article is intended to fill this gap a little. It describes and discusses the beginnings and subsequent development of vocational education systems in the Netherlands and Germany, which have very differently structured vocational education systems. For a clearer understanding of this phenomenon, the central stages in the development of vocational training in the Netherlands and Germany are highlighted. The comparison between the Netherlands and Germany indicates that the dominant forms of vocational education in each case (school-based versus (inter)company-based) are attributable to additional distinctive national cultural factors and ways of thinking about pedagogical and social questions.

⁽¹⁾ The formulated desideratum marks the background for the initiative of Cedefop to support the exchange of information between scientists researching the history of national vo-



dents who gain higher certificates and who do not aim for A-Levels but for vocational education. The contrary is the case in Germany.

When writing about initial VET in Germany, it is normal to refer to the so-called 'dual system'. However, it is important to mention that the term dual system is not appropriate to the texture and precepts of German VET. Dual indicates simultaneous education and training at the workplace, in enterprises and public utilities and in special schools, but it does not mean that the two parts of the system are equivalent. Training at the workplace dominates the school-based part of VET.

Nowadays the dual system is still the most important pathway from school to working life for young people in Germany. In 1999 there were around 3.3 million students aged 16 to 20 in Germany. Nearly 29 % attended the Gymnasium or a full-time higher vocational school to get permission to study at a university or at an institution of applied science (Fachhochschule). More than 50 % chose the dual system to get a qualified vocational certificate. However, there is a third route from school to working life in Germany, and this way is mostly unknown in other countries. About 21 % of the students aged 16 to 20 attended a full-time vocational school (see Gebbeken and Reinisch, 2001, p. 287; Reinisch, 2001, p. 155). Students often choose this route because in some regions of Germany, and for some times, there is a lack of places in the dual system; they opt for full-time vocational school while they wait for a place in the dual system. A minority of students choose special forms of full-time vocational schools for professions such as nursing, kindergarten teacher or technical assistant in medicine or chemistry. These professions were never integrated into the dual system. In our opinion, the reason for this has its origins in gender: such professions are typically female professions (see Feller, 1997). Another important, and for those in other countries surprising, point is that nearly 20 % of students who have qualified to study at a university choose the dual system instead of the academic route to working life. Apprenticeship, i.e. the work-based route of the dual system, is the most attractive pathway from school to working life for the majority of young people in Germany and for companies too.

VET development in the Netherlands and Germany

The Netherlands

We have to look back in history to understand the dominance of school-based vocational education and training in the Netherlands. From 1798 - after the abolition of the guilds - until 1860 almost no systematic vocational education and training was provided, with no industrial schools for poor people (*industriescholen, werkscholen*) or night-schools to learn drawing (*avondteken-scholen*) (see Goudswaard, 1981, p. 91, p. 104). At that time, there were insufficient opportunities to qualify young people for the growing needs of industry and commerce. Only in some areas of the Netherlands was there still a tradition of apprenticeship, for instance in the area of Drenthe and West-Friesland (see Bruinwold Riedel, 1907; Santema and Maandag, 1991).

Because of the lack of qualified workers, from 1860 onwards increasing numbers of vocational full-time schools were founded. These ambachtscholen were typical technical full-time craft schools, providing a three-year course during the daytime for specific trades in wood and metal crafts. The foundation of technical craft schools depended on local private initiative, for instance by the Association for Manufacturing and Craft Industry (*Vereniging ter Bevordering van Fabrieks- en Handwerksnijverheid*) or the Society for Public Welfare (*Maatschappij tot Nut van 't Algemeen*). The number of schools expanded slowly but, in 1890, 18 technical craft schools in the Netherlands were established and from this time on these schools also received government subsidy. So this type of vocational school was an established part of the national educational provision.

Nevertheless there was also a debate on whether qualifying via apprenticeship or via full-time schools would be better. Some organisations, for instance the General Dutch Workers Association (*Algemeen Nederlands Werklieden Verbond*) pleaded for the adoption of the apprenticeship system. Others favoured full-time schools. Wolthuis (2001, p. 119) wrote about this discussion: 'The craft school had an advantage because they could show a successful practice... Directors and teachers of the present schools took an active part in the ... debates. The sup-

porting vocational education systems. A part of this initiative has been the First International Conference on The History of Vocational Education and Training in Europe in a Comparative Perspective, organised by the University of Florence, the European University Institute and the European Centre for the Development of Vocational Training (Cedefop), held on 11 and 12 October 2002 in Florence. This paper is a short version of that presented at the conference.



porters of the apprenticeship system were found partly in the circles of big industries and partly in circles of workers organisations. This indicates that the apprenticeship system was regarded as preparatory for jobs in the big industries, while the craft schools were oriented mainly towards small industries and crafts.' However, after 1895 the apprenticeship system was no longer a real alternative to craft schools in the Netherlands, but only an additional option in some areas and perhaps in some large factories. This relationship between full-time schools and apprenticeship came to characterise VET in the Netherlands in the 19th century and even more in the 20th. For most Dutch people it was accepted that the best way to qualify young people was in schools and not in companies.

After the First World War the Dutch state began to intervene in VET. In 1919 both the school-based system of VET and the apprenticeship system were regulated in a new law. The *Nijverheidsonderwijswet* was a law for VET in the handicraft and technical sector. The new term was industrial education (see Gelder, 1919). The new act on industrial education made a distinction between lower and middle industrial education. Lower industrial education was supposed to prepare for simple manual labour as a workman. Middle industrial education was supposed to prepare for supervisory labour as a foreman or a surveyor. The new act was the result of an increasing number of young people opting for vocational education and training, with the number of students and schools expanding rapidly. The amount of state subsidy increased rapidly as well. The state aimed for more control of, and more coherence within, lower and middle technical daytime education. In consequence, from this time on there was systematic state intervention in vocational education and training.

Commercial trade education and training took place almost wholly in schools - middle and higher commercial schools - that were part of the national general system of education or higher education and not part of the new act in 1919 (see Hoksbergen, 1975). Control of agricultural education remained with the ministry of agriculture and was also not part of the new act.

After the Second World War, rapid industrialisation meant that skilled workers were

needed. The number of schools and students expanded rapidly again. From 1949 until 1974, the length of compulsory education was raised from 7 to 10 years. More and more young people opted for a second phase in secondary education and for middle or higher vocational education and training, too.

In 1963 the new Act on Secondary Education (or Mammoth Act) was adopted. It was implemented in 1968. With this act all schools of general education and initial VET (in the first and second phase of secondary education) were placed in one legal framework; this would have been inconceivable in Germany. Although there was a strong need for skilled workers, most VET took place in schools. The 1963 act distinguished between vocational education and training, general secondary education and preparatory academic education. VET students could choose between lower, middle and higher pathways. In lower VET, which occupied first secondary education, there were pathways oriented to technical education, household and industrial education, agricultural and horticultural education (still under the competence of the Ministry of Agriculture) and also commercial education and economic and administrative education. The former technical craft school became the lower technical school (LTS), extended lower industrial education became middle VET and the former middle industrial education became higher VET. It might be said that VET at that time tried to find its own position by generalisation, on the one hand, but also by differentiation and extension of the courses on the other (see Frommberger, 1999, p.162).

The apprenticeship system was not part of this new secondary education act but was covered in special legislation brought into effect with the act for school-based VET in 1966. With this act the craft school became an obligatory part of the system. Now, there was a system of VET in the Netherlands - with systematic state intervention - for school-based as well as work-based routes. But, again, most students voted for the school-based route.

From the beginning of the 1970s, and particularly in the 1980s, two topics dominated public discussion on VET. First criticism of the effects of generalisation grew. The school-based route of VET - so the argument went - prepared students insufficiently for the de-



mands of work. The second topic was youth unemployment. During the 1980s unemployment rose quickly and more and more young people decided to stay longer at school. Some official committees pleaded for improvement in the relationship between education and training and the labour market. The committees recommended a dual system (the catchword was dualisation, see Commissie Dualisering 1993) by giving the apprenticeship system a higher reputation or by introducing a larger practical component in middle and higher VET. A real type of dualism was established by the new act on VET in 1996 as result of the work of these committees. There are now two VET routes with the same (formal) value: the school-based route and the work-based route.

Germany

To explain, or better to understand, the dominance of work-based education and training in Germany, we have to look back to the history of the dual system. It was established in the last two decades of the 19th century and the first two decades of the 20th century (see Greinert, 1995), but the tradition of apprenticeship is much older. The guilds of craftsmen and tradesmen established this type of VET in the 14th and 15th centuries in most European countries but they largely lost their social and economic importance at the beginning of the 19th century (see for England and Wales: Deissinger 1992; for France: Schriewer 1986; Oerter and Hörner, 1995 and for the Netherlands: Frommberger, 1999). In Germany the guilds or corporations continue to exist to the present time. These corporations fixed apprenticeship regulations without the involvement of other communities of interest throughout the 19th Century and, even today, they have a strong influence over German VET.

The public authorities of the German countries - Prussia, Bavaria, Saxony and so on - were not engaged in the vocational training of craftsmen, clerks and workmen until the 1870s. They concentrated their financial and legal engagement on the institutions of compulsory education and of higher education. Universities and colleges for architecture, engineering and later on for commerce and business administration were founded mostly for the needs of the growing bureaucracy. Technical and commercial full-time schools were founded on private initiative for the qualification of low and mid-

dle management in trade, industry and banking. Some part-time schools for apprentices and journeymen were similarly established by private initiative, with the main aim of teaching young working men during the week, mostly on Sunday or in the evening after their work time. The subjects taught were reading and writing, basic arithmetic and technical drawing, especially for young craftsmen, and book-keeping, for young clerks. These schools of further education were called Fortbildungsschule or Sonntagsschule and they are the predecessors of the *Berufsschule*, the German name for the part-time vocational school for apprentices.

The dual system combines part-time education in the *Berufsschule* with an apprenticeship in an enterprise or in public utilities. But the main reason for the public authorities to add the Fortbildungsschule, the private school of further education, to the apprenticeship by legal acts at the end of the 19th century was not to intensify the vocational qualification of the apprentices. The political movement of the working class grew strongly in the period of industrialisation in Germany in the second half of the 19th century and many young workers and apprentices joined trade unions and the socialist party. The leading members of the upper and middle classes looked for a way to influence the minds and the political opinions of the young workers and identified an educational gap between the end of compulsory education and the start of military service. The first attempt to fill this gap was to establish the Fortbildungsschule and, later on, the *Berufsschule* as a compulsory part of education for all young workers of both sexes. The second attempt was by modifying the curriculum. Subjects focused on vocational or professional branches of knowledge in combination with civics and, currently, civics is still a part of the curriculum of the *Berufsschule*.

Another remarkable shift in the texture of the dual system took place in the first two decades of the 20th century: apprenticeship was established in manufacturing. The German employers' associations of the metalwork, electrical, chemical and other industries created a new type of skilled-worker, known in German as *Facharbeiter*. They copied the traditional form of craftsmen's apprenticeship, but changed the way of teaching and learning. They established a



more systematic and didactic aspect of vocational training beyond the workplace in a separate room called the *Lehrwerkstatt*.

After that time there was no important change of the texture of the German dual system until 1968 when a law on apprenticeship came into force. This law, the *Berufsbildungsgesetz*, regulates the rights and duties of apprentices and employers up to the present day. It gives employers' associations and trade unions, together with the public authorities, the right to construct vocational training curricula within enterprises; nowadays this covers nearly 400 professions. These curricula have an obligating character for both partners in the apprentice contract. The employers' associations and the trade unions also have an important influence on the process of constructing the curricula for vocational schools as a part of the dual system, but these curricula came into force through a legal act of the public authorities of the German countries and not through the federal government.

The German system of initial VET has many 'dualities' within the dual system, not just the duality of training at the workplace and education in vocational schools. Nevertheless, the dominance of the work-based route in German initial VET is accepted by enterprises, young people, the government, politicians and the trade unions.

Assumptions explaining the different development of VET in Germany and the Netherlands

Having described the main features of the historical development of VET in Germany and the Netherlands it is possible to set out factors that may offer a better understanding of the differences.

To sum up:

□ In the Netherlands VET was predominantly based at school. It was a theoretical and general preparation for work but also for going on to higher education. In this traditional Dutch view, work and learning in companies - the work-based route - was not 'functional'. VET in schools was functional.

□ In Germany VET predominantly took place in the dual system. Most students, who wanted to be qualified, opted for this type of VET, the 'hot smell of companies' being

preferred to VET far away from real demands.

In our opinion the main questions which have to be answered are the following:

(a) why did so many companies in Germany, not only handicraft companies but also bigger industrial companies, agree to push and finance VET to such an extent? Why did so many companies in Germany agree to qualify on the basis of standardised curricula with a high level of general and vocationally-oriented (and not only company-oriented) qualifications? And why did this not happen in the Netherlands?

(b) what were the reasons that the school-based route of VET was 'functional' for the companies in the Netherlands? Why did this not happen in Germany?

Some assumptions can be made on the first question:

(a) in Germany there was no abolition of the guilds of the scale that occurred in the Netherlands. The Netherlands were occupied by the French who enforced this abolition strictly. With such a strength 'of effective intermediation between citizen and state' (Schriewer, 1986) in the German context it was possible to plead for an organised VET in so many companies;

(b) in the 20th century this kind of VET in Germany was adopted by major industries. It was 'functional' to qualify on the basis of broad and standardised qualifications. Skilled workers and companies could deal with each other since both knew what to expect from each other. In the Netherlands such a formalised process of creating curricula for training in companies never took place;

(c) last but not least, this concept of 'occupation' was combined with a pedagogical argument: in German philosophy it was a good way for adolescents to go into a company to get to know 'real life'. In the Dutch philosophy it was considered to be better to go to school as long as possible.

Some assumptions can be made on the second question:

(a) in the Netherlands, governmental intervention to subsidise and regulate VET was late but strong. The economy needed skilled



workers, so more schools were quickly established. Companies became used to state intervention, because employers did not have to pay for VET;

(b) increasingly it was 'functional' for the employers to recruit young people after their VET in full-time craft schools;

(c) there was a different 'philosophy' of VET: young people will benefit most from staying as long as possible in school instead of joining the world of work too early.

Finally, we want to emphasise three aspects. First, we have to look back into the histo-

ry of VET if we want to discover which factors could explain the differences in national vocational education systems. Second, analysing the history of one or more national VET systems concerns not only economic, social and technical development but also cultural factors, especially national mentalities or ways of thinking on education, labour and training. Furthermore, we have to intensify research into the history of VET, because we need additional studies dealing not only with the historical development of one national VET system but also with development in two or more countries in a comparative perspective.

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Key words

History of vocational education and training; German system of initial VET; Dutch system of VET; comparative research in VET systems