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ABSTRACT

In the Federal Republic of Germany the most important form of training leading to a vocational qualification and the focus of all initial vocational training is the "dual system" of in-firm and in-school learning. Other forms of initial vocational training include apprenticeships, training in a firm, and vocational schools. Trainers employed by an industrial firm are typically salary earners in a technical occupation or a master craftsman. Two educational routes lead to the position of training manager: training to skilled worker level followed by advanced training or study at a technical college. In-firm training staff are normally recruited from within the firm. Vocational school teachers receive their training in two stages: a university course of at least 8 semesters and practical training of 6 to 12 months as well as 18 months of postgraduate preservice training as a probationary teacher. Problems arise from the fact that vocational school teachers now receive training at universities--training that is theoretical rather than practical. In the case of in-firm training, the weakness is that trainers are not professionals but are employees of the firm and do not teach more extensive and comprehensive skills and knowledge than the firm feels employees need. (YLB)

Trainers and teachers in vocational training in the Federal Republic of Germany

CEDEFOP

CEDEFOP

Report drawn up at the request of CEDEFOP, Berlin 1983

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INTRODUCTION

1. In July 1981, the Management Board of CEDEFOP undertook to conduct a study on the vocational situation and the improvement of the qualifications and skills of teachers and trainers.
The study aimed at defining the working hypotheses and the resultant initiatives required both at Community level and in the individual Member States in view of the development of the necessary initial and continuing training of teachers and trainers by means of which it would be possible for them to cope with the technological, economic and sociological challenges of their times.

2. The study spanned the period running from December 1981 through November 1982 in the course of which specialists in the matter in each Member State systematically compared their results with the views of groups of national experts.
Consistency of the study at the European level was facilitated by the use of a common network for the exchange of documentation and information and also by the joint comparison and discussion of the working hypotheses and the national results at meetings in Berlin.

The subsequent eight reports served as the basis for a synthesis prepared by Quaternaire Education - Paris.

The present monograph drawn up by B. Krais & M. Krebstakies - and available in French and English thus represents the German contribution to this European study.

The monographs on seven of the other EEC countries are also available from CEDEFOP in French and English and the language of the country concerned.

The study in question should be read together with the general synthesis report entitled "The training and vocational situation of trainers" prepared by Quaternaire Education - Paris and

likewise to be found at CEDEFOP in French and English.

Finally, an ongoing study on the training of trainers involved in alternance training designed to complete the present general study will be made available by CEDEFOP in the course of 1983.

3. CEDEFOP will examine the results of this project with the Commission of the European Communities and the other competent Community and national authorities. Already the following conclusions emerge from the national reports :

a) The average age of the trainers is 40, be they in vocational schools or in enterprises, and the present population trend points to a slowdown in their recruitment. The combination of these two factors brings out the importance which ought to be given to the continuing training of trainers and teachers and which should vary according to their kind and to the forms of vocational training. In any event, it should be guaranteed by the right to educational leave estimated at a minimum of two years for a career (or 15 days a year).

b) Such further training of teachers and trainers should focus of course on teaching methods and practices and above all enable them to keep pace with technological developments, heighten their sense of social awareness and become acquainted with the enterprises for which they train the young.

c) It therefore would be most desirable to encourage the organization of in-firm training courses for the teachers and the trainers of training centres which in turn would require the revision of the currently laws and regulations as these are frequently a real obstacle to the alternance of the training duties of the teachers and trainers and of the production requirements of the enterprise. The provision of similar courses in organizations essentially geared to meet social needs and so forth is also recommended.

d) The teachers and trainers must prepare young people to cope with the unforeseeable and to achieve mobility which thus calls for a recasting of the technical education and training system in order to provide young people in training with both a genuine

qualification and the ability to stand on their own two feet. The continuing training of teachers and trainers obviously must be organized and adapted accordingly.

e) To be able to fully and constantly assume their training duties the in-firm trainers should have the opportunity, as required, to undergo further training and in particular to work together whenever possible with vocational school teachers.

f) The improvement of the abilities and skills of teachers and trainers requires more however than the right to continuing training or the recurrent return to the enterprise to acquire further practical experience. As things now stand, vocational training institutions are all too often sheltered and static worlds. The advancement of teachers and trainers calls for a streamlining of the structures, the status and the operation of these institutions as a way of opening them to the outside world in order to provide them with a new vision of things and thus enable the continuing improvement of their staff.

If all this seems to be ambitious and exaggerated, it must be realized that the success of the vocational training systems is directly dependent on the quality of the men and women staffing them, as such, a close look at the existing situation in each Member State reveals an urgent need for prompt and thorough reform.

Bernard Pasquier
November 1982

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0. The principal features of vocational training in the Federal Republic of Germany

0.1 The structure of the education system in the Federal Republic

The education system in the Federal Republic has changed considerably in the last twenty years. There have been many major and minor reforms, largely in the ten years from 1965 to 1975, but a far more important factor has possibly been the explosive increase in the number of pupils and students, with all that it entails for the internal structure of schools and the organization of the education system as a whole. As legislative and administrative responsibility for educational policy and the organization of education lies entirely with the Federal Länder, many structural and curricular reforms have been confined to individual Länder, especially where they have concerned educationally controversial issues such as the introduction of comprehensive schools, with the result that reference has frequently been made to the "Federal Republic's eleven education systems" (there being eleven Länder). This should be borne in mind when the general structure of the education system in the Federal Republic is outlined below.[1]

A breakdown of the education system is shown in Chart 1.

After primary school, which all children attend, comes the parting of the ways: pupils go on to a grammar school (Gymnasium), middle-grade secondary school (Realschule) or lower-grade secondary school (Hauptschule).

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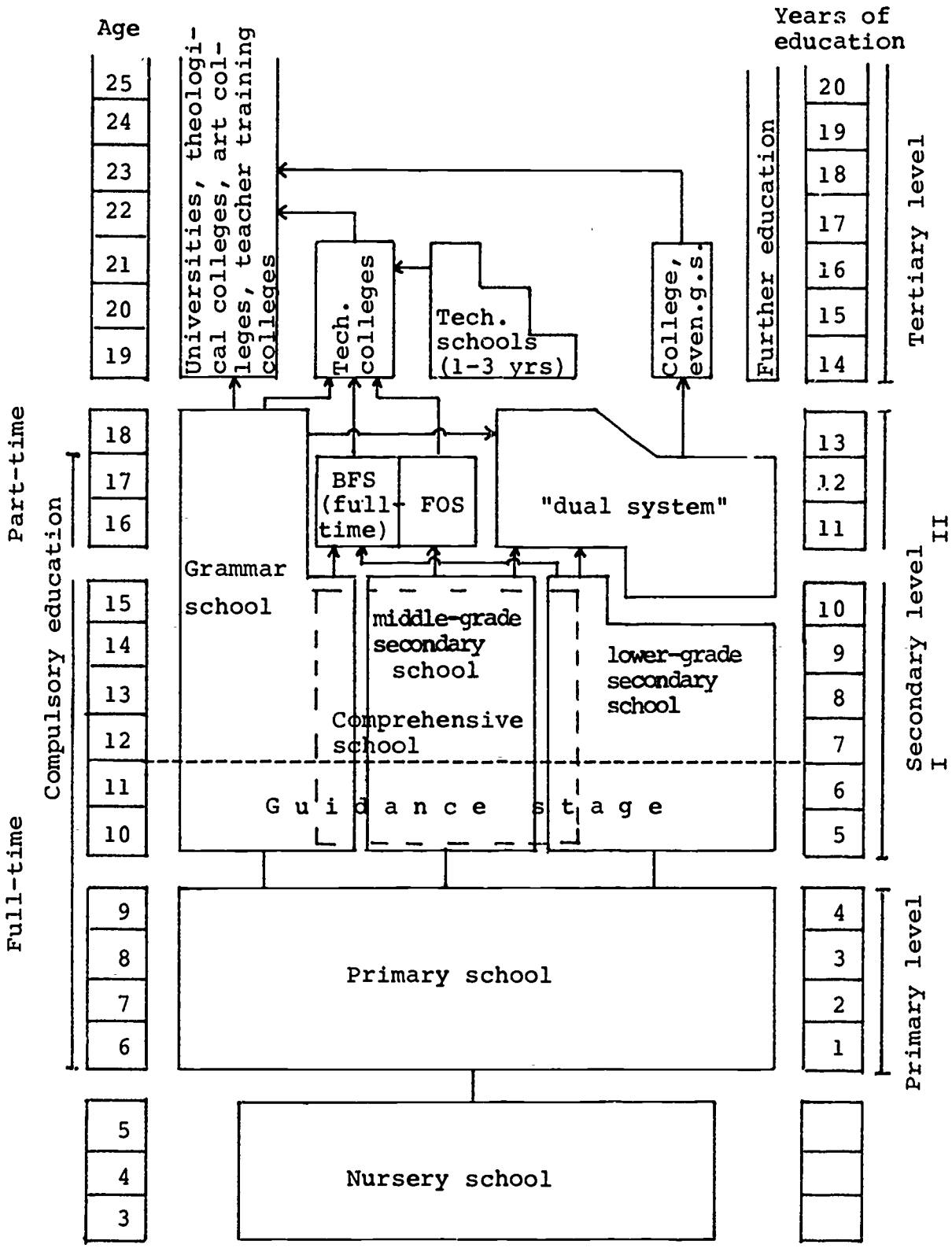
[1] A more detailed, yet concise description can be found in a 1979 publication of the Working Group for Education Research of the Max Planck Institute (which has also appeared in a revised English version with the title "Between Mass and Elite Education. The Current State and Recent Trends of Education in the Federal Republic of Germany", 1982/83, Suny Press, Albany, New York.

Chart 1: The structure of the education system in the Federal Republic of Germany (1980)



BFS = Berufsfachschule = specialized vocational training school

FOS = Fachoberschule = specialized higher-grade school

A grammar school (Gymnasium) education is completed after a total of thirteen years of schooling with the general university entrance certificate (Abitur). Specialized university entrance certificates are awarded by specialized grammar schools, among which those specializing in economics and domestic science have something of a tradition. Other grammar schools specialize in technical subjects and the social sciences. However, specialized grammar schools do not provide vocational training, merely giving access to an education at university level, since a specialized univeristy entrance certificate entitles the holder to attend a technical college or to study the subject concerned at a university. A distinction must be made between these types of grammar school and the specialized higher-grade schools (Fachoberschulen), which must be regarded as the continuation of the middle-grade secondary (Realschule)and usually offer a two-year course leading to the specialized university entrance certificate.

The middle-grade secondary schools(Realschule) enable their pupils to stay on to complete ten years of education, the curriculum being more demanding in scope and content than that of the lower-grade secondary schools. In contras to the university entrance certificate, the final certificate awarded by a Realschule or, more generally, any certificate awarded after a total of ten years of education is known as the "intermediate certificate of education".

Attendance of a lower-grade secondary (Hauptschule) is normally limited to five years and thus with the completion of compulsory education. The final certificate obtained at a"Hauptschule" is the lowest certificate of general education awarded in the Federal Republic. Some main school pupils, however, leave school without this certificate, while others go on to take a tenth year of education and so obtain the intermediate certificate of education, which at one time was awarded only by grammar schools and middle-grade schools. Lower-grade secondary schools accounted for some 70% of secondary level I pupils in 1960, but by 1980 the figure had fallen to a little over 40% - a trend which gave rise to the malicious description of main schools as "schools for the dregs". The decline of the "Hauptschule"has been most pronounced in the densely populated urban

areas, where, usually confined to just a few urban districts, three quarters of all main school pupils at a Hauptschule are often found to be the children of foreign workers.

Some Länder (e.g. Hesse and Berlin) have combined the three types of school mentioned above at secondary level I to form comprehensive schools (Gesamtschulen), which are designed, through internal differentiation, to be less selective and more attuned to giving encouragement to the individual than the traditional system with its three types of school. In the country as a whle, however, comprehensive schools are still insignificant in quantitative terms: in 1977 only 3.3% of secondary level I pupils attended comprehensive schools.

The most important form of training leading to a vocational qualification and the focus of all initial vocational training in the Federal Republic is the "dual system" of in-firm and in-school learning. In 1980 over 1.7 million young people were being trained by the dual system. In contrast, only about 450,000 were attending full-time vocational schools (including public health schools).[1]

Chart 1 shows that those being trained by the dual system come from all types of school and after all stages of general education: lower-grade secondary school pupils who have completed their compulsory education, middle-grade pupils who have obtained the final certificate (after a total of ten years of education) and grammar school pupils who have been awarded the final certificate (after thirteen years of education) or have left after the tenth year. Other young people first take a course at a full-time specialized vocational school, usually of one or two years, or even three years in the case of some occupations, and then change to the dual system of vocational training. The largest source in quan-

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[1] See Federal Minister for Education and Science, Berufsbildungsbericht (Vocational Training Report) 1982.

titative terms, however, is still the "Hauptschule" as can be seen from the detailed breakdown of transitions in Chart 2.

Chart 2 also reveals that some young people leave the dual system to go back to school, and specifically to the specialized vocational school, from where they may go on to technical colleges or universities. Those transferring directly from the dual system to a university are mostly former grammar school pupils, who take university courses after serving an apprenticeship. This course of action is particularly common in the case of commercial occupations.

Other people leave their training or jobs to attend an institution of "alternative education", i.e. evening grammar schools or colleges where the general university entrance certificate can be obtained. The approximate place occupied by these institutions in the Federal Republic's education system is shown in Chart 1, although it must be remembered that the portrayal of the tertiary level cannot accurately reflect the sequence of the various stages of education through which the individual passes. Anyone who leaves a "Realschule" or "Hauptschule" after the tenth year of his education, attends a specialized vocational school for a year, serves an apprenticeship, works in his occupation for, say, two years and finally attends a college will be about 25 when he begins at university. This "alternative" way of obtaining a university education is undoubtedly more laborious and difficult than the conventional route through the grammar school, but it has always had some significance. Even after the universities had felt the full impact of the expansion of post-secondary school education, which resulted in a massive increase in the number of students, 6% of all first-year students were still entering university by the "alternative" route.

This review of the education system in the Federal Republic would be incomplete without a reference to a number of other structural features, which are remarkable particularly when compared with other countries:

Schools providing a general education and universities are very largely the responsibility of the state, not of private institutions. On the whole, private schools play a minor role, and there are no private universities. Nor is there a more or less open division between state and church schools.

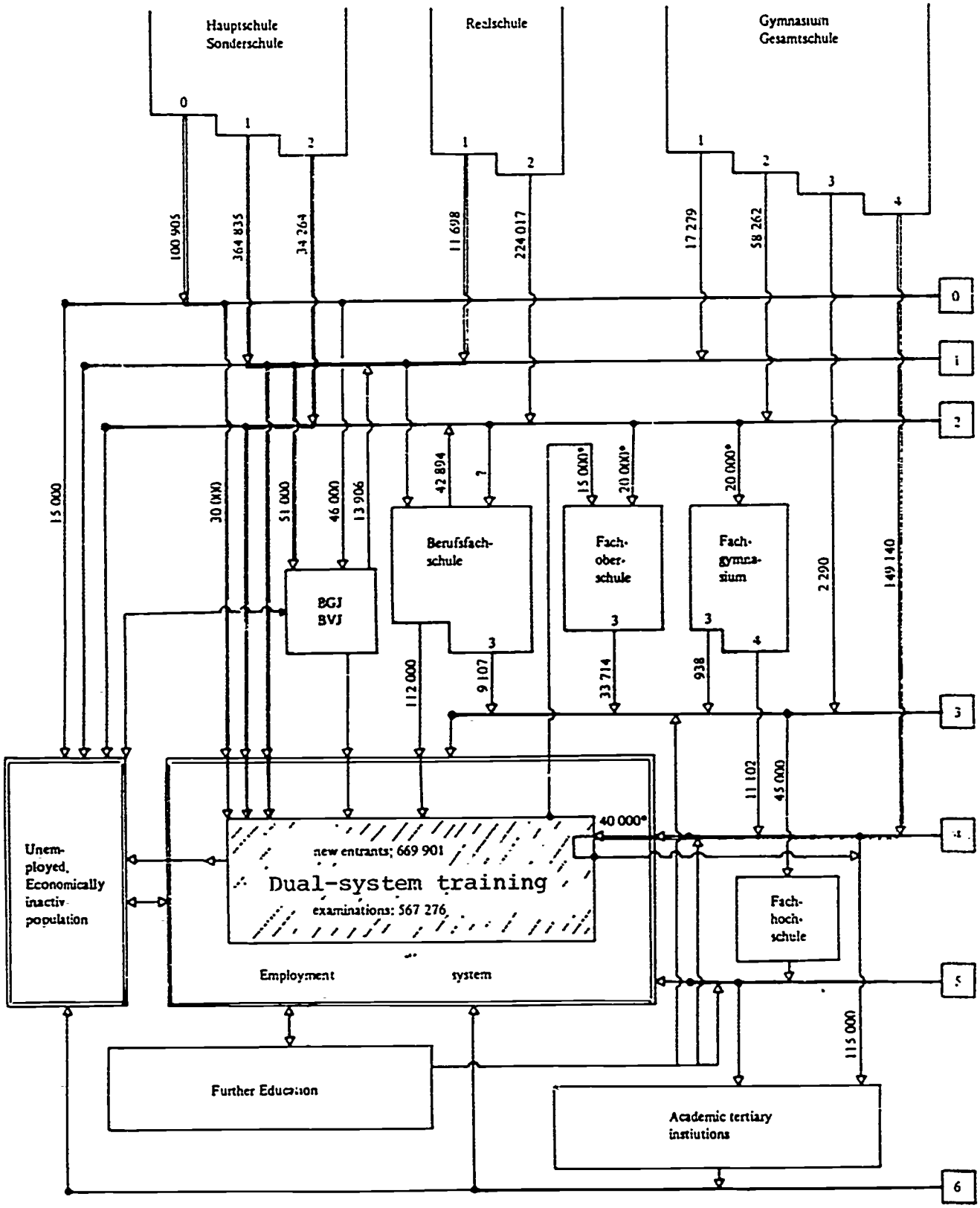
For the financing of the education system, this means that, with few exceptions, the direct costs of education are borne by the state. Neither schools nor universities charge fees. Most educational aids are provided by the state.

The Federal Republic's federalist Constitution excludes the possibility of the control of schools and universities by a central administration at Federal level, but not at Land level. The extent of central control varies from one Land to another. A major exception to the general rule on responsibility in the education system is vocational training by the dual system, in which there is a pluralist division of powers among the Federal authorities, the Länder, companies and their self-governing organizations, and employers' and employees' organizations.

Most primary and secondary schools are half-day schools. Neither school buildings nor staff are equipped for non-curricular needs such as school meals, leisure activities and boarding.

Chart 2:

Transitions within the Educational System and between Education and the Labour Market. 1980



0 – school leavers without Hauptschule certificate

1 – Hauptschule certificate

2 – Realschule certificate or equivalent

3 – Fachhochschulreife

– Abitur

5 – graduation from Fachhochschule

6 – graduation from academic tertiary institutions

• – estimated

BGJ – basic vocational year

BVJ – vocational preparation year

0.2 The "dual system" of vocational training

The significance of the dual system is revealed by an examination of the vocational training of the working population in Germany: of the 22 million gainfully employed in the Federal Republic in 1979, roughly 61% had been trained by the dual system, about 11% had received their training solely at a school or college, and some 28% did not have a vocational qualification.[1] As a comparison of the various age groups shows, the importance of the dual system for the vocational training of the working population in Germany has grown over the last few decades (see Chart 3). Despite the increase in the number of specialized vocational schools, an entirely in-school form of vocational training is a course for which comparatively few young people opt even now.

The dual form of vocational training is available for all sectors of the economy - the crafts, industry, commerce, the public service, the private services sector and agriculture, training being given in some 450 "recognized skilled occupations". As a rule, training in a recognized skilled occupation takes three to three and a half years, although in some occupations, e.g. that of retail trader, two years are considered sufficient. One of the main features of the dual system is its division into two legal spheres: on the one hand, the training contract gverned by private law, which is concluded by the young person and the firm providing him with on-the-job training and also forms the very basis of his training, on the other, the responsibility the authorities have to enable young people to attend a school for training in a recognized skilled occupation.

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[1] See L. Alex et al.: Qualifikation und Berufsverlauf, published by the Federal Institute for Vocational Training Research and the Institute for Labour Market and Occupational Research, Berlin 1981, p. 17.

Chart 3: The German labour force by type of vocational training and age[1] (1979)

Type of vocational training	15 - 25 years %	26 - 35 years %	36 - 45 years %	46 - 55 years %	56 - 65 years %	Total %
None	21	18	28	40	40	28
"Dual system" only	56	47	40	36	34	43
In-school training only	9	6	5	5	5	6
In-school training and "dual system"[3]	11	17	18	15	14	15
College or technical college only	2	10	6	4	6	6
College/technical college and "dual system"[3]	1	3	3	1	1	3
Total[2]	100	100	100	100	100	100

[1] As vocational training cannot as a rule be regarded as completed before the 25- to 30-year age bracket, younger trainees should be excluded from the comparison.

[2] Discrepancies in totals are due to figures being rounded up or down.

[3] The combination of various courses of vocational training which has an effect here can also be seen in Chart 2 in the shape of different means of access to the dual system and subsequent educational channels.

Source: L. Alex et al. 1981, p. 81

Roughly in line with this division of responsibilities, training is split into on-the-job training in the firm on three to four days of the week, and instruction at a vocational school to back up this practical training. In general trainees receive 8 to 12 hours of in-school instruction per week. The first stage, initial vocational training in a given "occupational field",[1] may take the form of a full-time in-school basic vocational training year[2] at a vocational school, i.e. a tenth year of school education on the completion of compulsory general education, or of training by the dual system, in which case the time spent at the vocational school is, at two or even two and a half days a week, normally longer than in the second and third years of training.

The task of the (part-time) vocational school consists in improving the general education of the young people concerned and teaching them the skills required for their chosen occupation, primarily on a theoretical basis. The 8 to 12 hours of instruction available are almost equally divided between general subjects (German, social studies, sport, religion) and occupation-related subjects (e.g. mathematics, technical drawing, physics, chemistry and electrical engineering in the case of training for occupations in the electrical engineering industry). In certain respects, however, the situation varies from one Land to another. The initially very strict division of tasks between the school and the firm, with the school responsible for the theoretical side of training, the firm for the practical side, has been overrun by developments in the last decade. On the one hand, some firms - mostly large companies with well developed

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[1] Related occupations requiring the same basic skills have been combined to form "occupational fields" in the last ten years, examples being metal-working, electrical engineering, building, economics and administration, textiles and clothing, health, etc.

[2] As distinct from the preparatory vocational training year, which has not been integrated into training by the dual system. The preparatory vocational training year is one of the many measures taken in recent years with a view to alleviating the problem of youth unemployment and the shortage of training places.

training departments - provide theoretical as well as practical instruction and job familiarization activities. On the other, the full-time in-school basic vocational training year includes elements of practical training, exercises in manual skills, etc.

Once they commit themselves to a course of vocational training, young people must attend a vocational school until they complete their training. Even young people who take a job on completion of their compulsory education without any further training are required to spend one day a week at a vocational school until they are 19 or 22 years of age (depending on the Land). In view of the sharp rise in youth unemployment in recent years and the difficulty many young people have in finding a firm willing to train them, these strict rules on the compulsory attendance of a vocational school have been relaxed in the case of young wage-and salary-earners.[1] In some Länder anyone who would not otherwise find a job can be exempted from compulsory vocational school attendance. A number of Länder exempt young wage- and salary-earners who have successfully completed a tenth year of full-time school education - in the form of a full-time in-school basic vocational training year or preparatory vocational training year or at a school providing a general education - from compulsory attendance of a vocational school.

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[1] i.e. young wage- and salary-earners who have not had vocational training

Excursus: The institutional framework

The in-firm part of vocational training by the dual system is principally governed by the Vocational Training Act, which was adopted by the Bundestag in 1969 after long and bitter wrangling. The Act chiefly concerns the responsibilities of the various institutions involved in vocational training - the Federal Government, the chambers of the crafts, industry, trade and commerce as self-governing bodies representing firms in the private sector, the Federal Institute for Vocational Training, and the employers - and generally defines the rights and obligations of the persons/firms providing the training and of those being trained. The Protection of Young Employees Act, as last amended in 1976, contains provisions which protect young people at work, stipulating, for example, maximum hours of work, the minimum length of holidays and working conditions. Under the Protection of Young Employees Act minors may not, for instance, be employed on piecework, start work before 7 a.m., etc. The 1972 Labour Management Act governs relations between the employer and his employees in the firm: as the body representing employees' interests, the works council has a right to a say in matters concerning on-the-job vocational training. Young people under the age of 18 have their own representatives, who are in a better position to protect their interests within the works council.

The Vocational Training Act of 1969 acknowledged something which had long been disputed: public responsibility for vocational training. In practice, however, this "public responsibility" is a complicated matter, effective only through the interplay of a number of independent instititutions and representative bodies. A simplified breakdown of this pluralistic division of powers is shown in Chart 4. A key role in the in-firm part of training is played by the Federal Institute for Vocational Training, which was set up under the Vocational Training Act of 1969. This institute not only undertakes research and documentation activities: it also plays a leading part in the development of the

curricular elements of (in-firm) vocational training. Although it is a Federal institute, financed from Federal resources and staffed by civil or public servants, the Federal Government or the relevant Federal Minister does not decide on its programme of work and research, its supreme decision-making body being the central committee, which consists of equal numbers of representatives of the Federal Government, Länder, employers and employees.

The content and organization of in-firm training are governed by training regulations, which relate to the various recognized skilled occupations and are issued by the Federal Government. This formal act by the Federal Government is preceded by a complicated process of coordination among ... Federal and Land authorities, employers and employees, with the Federal Institute for Vocational Training contributing the results of its research and conceptual ideas. The reorganization of vocational training of retail trade employees will serve to illustrate the procedure involved in the drafting of a training regulation:[1]

In 1976 the Federal Institute for Vocational Training set up the Working Group on the Retail Trade, comprising representatives of the General Association of the German Retail Trade, the German Industrial and Trade Association, the Union of Trade Employees, banks, insurance companies, the Union of German Salaried Employees, the Education and Science Union and the Association of Business School Teachers. Having heard the Working Group's views, the Federal Institute for Vocational Training began a study of the qualifications required for work in the retail trade. The results of this study were presented in 1979. The procedure for the actual preparation of a training regulation then began in 1981.

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[1] See Berufsbildungsbericht 1981, pp. 49 f.

Training regulations are statutory instruments and as such lay down binding qualitative standards for in-firm training and minimum requirements as to its content. They list the skills and knowledge young people should acquire during their vocational training, contain an outline training plan and stipulate examination requirements.

Within the limits defined by the training regulations, the organization and financing of the in-firm part of training by the dual system are left to the firms concerned. They must ensure that "the trainee is taught the skills and knowledge needed to achieve the aim of the training and provide the vocational training in a form commensurate with its purpose and in accordance with a schedule such that the aim of the training can be achieved within the stipulated training period" (section 6 of the Vocational Training Act). It is for the appropriate self-governing bodies, i.e. the craft chambers, the chambers of industry and trade, the chambers of agriculture and the various associations representing the liberal professions (medical associations, legal associations, etc.) to ensure that quality standards are maintained and that firms meet the minimum requirements governing their suitability to train young people. They keep registers of training contracts, places of training and trainers employed by firms. They also conduct intermediate and final examinations with a predominantly practical and technical slant and award certificates to successful candidates to show that they have completed their vocational training as skilled industrial workers, craftsmen or assistants in the commercial sector and the liberal professions. The examining boards of the chambers are composed of equal numbers of employers' and employees' representatives (see Chart 4), another aspect of "public responsibility" in vocational training.

Reponsibility for the in-school part of vocational training by the dual system, as for the vast majority of in-school courses of education, lies with the Education Ministers of the Länder. Almost all vocational schools are state schools and are jointly financed by the Länder and local authorities, the Länder generally bearing staff costs and the local authorities other costs. The Land or, where the executive is concerned, its Education Minister is competent for the whole process of setting standards, issuing directives, planning and guiding the school system and thus for the content of teaching, the setting of educational objectives, etc. Apart from the state vocational schools, there are a few (about 12) works vocational schools run not by the Länder and local authorities but by individual companies. These schools are similarly subject to state control, i.e. to the supervision of the Education Ministries of the Länder, albeit to a more limited extent, and are largely financed from public funds.

End of the excursus

Although most initiatives aimed at reforming vocational training by the dual system, particularly those which sought to increase state influence, came to a standstill in the 1970s, it can be said today that, since the adoption of the Vocational Training Act in 1969, vocational training has become more systematic and minimum standards have been raised. This can be chiefly ascribed to the drafting of new training regulations attuned to the Education Ministries' outline curricula, since these regulations set out a more systematic and binding breakdown of training than their predecessors, to the introduction of initial vocational training in occupational fields and to the specification in Federal Government orders or recommendations of the Federal Vocational Training Committee of requirements relating to the suitability of trainers and places of training. The harmonization of the quality of vocational training has also been helped by the

development of inter-company training centres, where additional on-the-job training is provided to make good the deficiencies in training due to the limited activities of, above all, small and craft firms.[1] In 1979, these establishments provided 59,704 workshop places and 25,703 instruction places.[2]

However, the term "vocational training by the dual system" still covers a broad spectrum of different training situations. The quality of training varies from one firm and one occupation to another. In craft firms the master craftsman and his assistant tend to involve the apprentice in all the jobs they do and to show him everything, from the simple to the difficult tasks he will have to perform in his occupation, thus providing him with a comprehensive vocational training, possibly supplemented by attendance of an inter-company training centre. Some large industrial firms provide systematically structured training, with training workshops, additional theoretical instruction and organized rotation among the firm's various departments, a form of training in which the young people concerned are not involved in the firm's production process until they have almost completed their training. And there are firms in which the trainee is employed from the outset in one-sided and relatively simple activities and, in the absence of skilled workers, receives scarcely any proper instruction. As a rule, training in a large firm is more systematic and more comprehensive than in a small or medium-sized firm. In large firms training is largely confined to training workshops, the apprentice subsequently being systematically employed in the various departments of relevance to him. Training in technical occupations in industry and in distribution and administration is more qualified and provides more systematic basic

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[1] Inter-company training centres of this kind are run by guilds, chambers of industry and trade, chambers of agriculture, associations of companies and also the Federal Post Office, the Federal Railways, the local authorities and the Länder.

[2] See Berufsbildungsbericht 1981, p. 114

knowledge than training in craft occupations and the occupations of assistants in the tertiary sector.

Although there are some 450 skilled occupations in which a training can be obtained, the concentration on a limited number of occupations is high. This has long been the case, and marked changes in the order of most popular occupations occur only in the very long term. This means that large numbers of workers with a similar basic vocational training are available to the economy at any given time. Chart 5 shows the skilled occupations attracting the highest numbers of trainees and reveals that concentration on a small number of occupations is more pronounced among girls than boys.

The previous education of young people taking up vocational training by the dual system also varies considerably. They include holders of university entrance certificates, former secondary school and special school pupils, while others have failed their final secondary school examinations, and many have already attended a (full-time) specialized vocational school.[1] In some occupations the previous education of two thirds or more of the trainees is higher than secondary school certificate standard and therefore higher than the level prescribed for compulsory general education, examples being the occupations of bookseller, bank clerk and other employees in the commercial sector, laboratory workers, assistants in the liberal professions and a number of technical occupations in industry. In contrast, secondary-

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[1] The differences in the previous education of trainees and therefore in the time spent in in-school courses of education makes it difficult to define a suitable standard against which to measure the relative importance of training by the dual system. Age is not an appropriate reference quantity since some young people are still at school while others of the same age are taking a vocational training course, and some have already completed their training when grammar-school-leavers are just beginning theirs. The relative importance of various training courses cannot in fact be correctly estimated until age 30, because it is only then that training with all its various stages can be regarded as complete. See the model calculation by Werner, 1981, and Alex et al., 1981.

Chart 5: Trainees in the 25 most popular skilled occupations, in order of popularity, by sector of the economy and by sex (1980)

	Female trainees	Sector	Total	%		Male trainees	Sector	Total	%
1	Shop assistant	IT	75,039	11.5	1	Car mechanic	C	93,526	8.8
2	Hairdresser	C	67,690	10.4	2	Electrical fitter	C	57,363	5.4
3	Food shop assistant	C	43,690	6.7	3	Fitter mechanic	IT	45,432	4.3
4	Office clerk	IT	41,712	6.4	4	Joiner	C	42,398	4.0
5	Clerk in industry	IT	35,990	5.5	5	Mason	C	39,121	3.7
6	Doctor's assistant	LP	35,662	5.5	6	Painter	C	38,130	3.6
7	Retail clerk	IT	27,004	4.1	7	Gas fitter and plumber	C	34,468	3.3
8	Bank clerk	IT	24,430	3.7	8	Wholesale and import/export clerk	IT	29,495	2.8
9	Dentist's assistant	LP	22,638	3.5	9	Baker	C	26,085	2.5
10	Wholesale and retail clerk	IT	20,840	3.2	10	Tool maker	IT	22,779	2.1
11	Office assistant	IT	19,183	2.9	11	Butcher	C	22,352	2.1
12	Assistant to accountant/economic adviser	LP	16,705	2.6	12	Fitter	C	22,297	2.1
13	Lawyer's and notary's assistant	LP	12,601	1.9	13	Clerk in industry	IT	21,995	2.1
14	Housekeeper	DS/A	12,119	1.9	14	Millwright	IT	21,562	2.0
15	Office clerk	C	11,547	1.8	15	Bank clerk	IT	21,320	2.0
16	Lawyer's assistant	LP	10,402	1.6	16	Central heating and ventilation engineer	C	18,824	1.8
17	Pharmacist's assistant	LP	9,509	1.5	17	Farmer	A	18,774	1.8
18	Garment maker	IT	9,270	1.4	18	Cook	IT	17,829	1.7
19	Catering assistant	IT	8,422	1.3	19	Retail clerk	IT	17,297	1.6
20	Administrative specialist	PS	8,276	1.3	20	Salesman	IT	17,197	1.6
21	Florist	IT	8,078	1.2	21	Electrical equipment installer	IT	14,878	1.4
22	Technical draughtswoman	IT	7,654	1.2	22	Farm machinery mechanic	C	13,776	1.3
23	Architectural draughtswoman	IT	7,366	1.1	23	Mechanic	IT	13,342	1.3
24	Gardener	A	5,112	0.8	24	Energy equipment electronics engineer	IT	13,035	1.2
25	Dressmaker	C	4,628	0.7	25	Carpenter	C	12,668	1.2
Total			545,567	83.6				695,943	65.6
All female trainees			652,244	100	All male trainees			1,060,472	100

[1] IT = industry and trade; C = crafts; LP = liberal professions; DS = domestic science; A = agriculture; PS = public service

Source: Federal Statistics Office, Fachserie 11, Reihe 3: Vocational Training, pp. 16 f.

school-leavers gravitate towards the textile, clothing and building sectors and (in the crafts) the occupations of baker, butcher, hairdresser and painter.[1] Overall, the level of trainees' previous education has clearly risen in recent years, a trend that is not without its problems since young people with a poor education stand less chance from the outset of obtaining a training in the more attractive, promising occupations and training firms. Life's prospects are therefore more than ever determined by performance at school and thus at a very early time of life.

It should also be noted that the occupations to which training by the dual system leads differ widely in terms of advancement and income prospects and associated security. Structural discrepancies between training and the eventual occupation are also apparent: many young people are trained in occupations and firms in which they cannot go on working when they have completed their training. Or employment as a semi-skilled or unskilled worker in a large firm is more attractive and offers greater job security than work in a skilled occupation. Craft firms generally provide a training to suit their own needs, and workers who have been trained by them are therefore often obliged to change their occupation when moving to another firm or another sector of industry and derive little benefit from their training in their new occupations.

Recent studies of the training and careers of the working population of the Federal Republic reveal the wide variety of occupational situations covered by training by the dual system:[2] about 16% of all the gainfully employed with a training to skilled worker level completed an additional course of vocational training (at a college, for example, or to become technicians or master craftsmen) and are no longer employed as skilled workers;

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[1] See Berufsbildungsbericht 1981, pp. 13 ff. and 57 ff.

[2] See Alex et al., 1981, and the studies of careers by Hofbauer/Kraft, 1974, and Hofbauer, 1977 and 1978.

some 20% of those with a training to skilled worker level have become salary-earners or civil servants without any additional vocational training. On the other hand, 11% of former skilled workers are now employed as unskilled or semi-skilled workers. An above-average proportion of this category received their training in small firms and, what is more, in occupations in the mining, textile and clothing and food sectors and as hairdressers. The attractive skilled worker occupations -attractive from the point of view of both the work itself and the opportunities of advancing to the level of master craftsmen, technician or engineer - are the industrial occupations in the metal-working and electrical sectors, e.g. tool-makers, installers of electrical equipment, precision instrument makers, etc.[1]

0.3 Other forms of initial vocational training

Besides vocational training in apprenticeship form (and college training, which will not be considered here), school courses play a particularly important part in the initial vocational training of young people, although far less significant in quantitative terms than the dual system. On the other hand, forms of training entirely confined to the firm, such as familiarization with a job over a shorter or longer period or the natural product of years of professional experience, are adjudged to be vocational training only in exceptional cases.

The vocational schools at which young people receive an initial vocational training are, above all, the specialized vocational schools and the schools in the public health sector. Specialized vocational schools (Berufsfachschulen) offer a full-time course lasting at least one year. Previous employment or vocational training is not an admission requirement. They train young people in occupational skills which can usually be learnt only at school

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[1] For further details on the figures quoted above, see Berufsbildungsbericht 1981, pp. 42 ff.

and in rare cases in a recognized skilled occupation, a training in which is otherwise obtained by the dual system. Specialized vocational schools are principally important for occupations in the commercial, domestic science and nursing fields, although in a few isolated cases training is also provided in industrial occupations, some specialized vocational schools, for example, offering three-year courses in watchmaking and the textile trades. Public health schools provide non-university medical training courses for nurses, masseurs, dieticians' assistants and medical laboratory assistants, for example. As a rule, admission to these facilities is restricted to those over the age of 18, i.e. those who have completed their compulsory general education. For all practical purposes, this means that the minimum requirement for almost all the occupations in this sector is an intermediate-level school certificate of general education or appropriate vocational preparation. The official statistics do not therefore include public health schools under the heading of initial vocational training, since by its very nature the training they provide is likely to be the first vocational training leading to the award of a recognized certificate that most young people opting for one of these occupations will receive.

The specialized vocational schools are accountable to the Education Ministries of the Länder. Where they are state schools, the staff are usually employed by the Land, but in some cases by the local authority or county (Kreis). The legal status of the public health schools is rather unclear. Few of them are either schools within the meaning of the legislation of the Länder governing education or private schools, and the Vocational Training Act also applies to them to only a very limited extent (see section 107 of the Act). Most are attached to hospitals and clinics (particularly university clinics), which means that training is the responsibility of local authorities, churches, charitable organizations, etc., all of which also run hospitals. In matters that exceed the powers of these bodies, therefore, the Land ministry responsible for public health is also responsible for such schools. In these circumstances, training in public

health schools is not regarded as training by the dual system, although here too training is broken down into a theoretical part in the school and a practical part in the firm (= hospital).

As in general education, there are few private schools devoted to vocational training in the Federal Republic, and even fewer can be considered "genuine" private schools in the sense that they derive most of their finance from private sources or pursue a profit-making objective. The legislation of the Länder on private education makes a distinction between (private) substitute schools which are generally entitled to public financing and at which a child may obtain his compulsory education and (private) supplementary schools. Substitute schools may as a rule award final certificates equivalent to those obtainable at state schools. Supplementary schools may not, and private specialized vocational schools are mostly supplementary schools. They are still most likely to provide a training in commercial skills or for technical assistants in the health sector.

The full-time vocational schools should play an important role in solving the problems connected with the training of young people who were born when the birth rate was high and have been reaching the vocational training age since about the mid-1970s. And indeed, the intake of specialized vocational schools offering courses of more than one year has risen significantly since 1970, although their share of the total each year has remained almost constant.[1] Furthermore, for many young people who attend a specialized vocational school the award of the school-leaving certificate does not signify the end of their inital vocational training. Many go on to the dual system after a two- or three-year course at a specialized vocational school: some 61% of those who had successfully completed a two-year course and almost a quarter of those with a three-year course behind them did so in 1979.[2]

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[1] For further details see Werner, 1981.

[2] See G. Westhoff, Ausbildung und Berufswege von Absolventen beruflicher Vollzeitschulen. Ergebnisse einer Repräsentativbefragung im Oktober 1979. Materialien und statistische Analysen zur beruflichen Bildung, No. 20, Berlin (West), Federal Institute for Vocational Training Research, 1980.

To complete the picture, it should be pointed out that, in view of the high rate of unemployment among young people and the shortage of training places, various introductory and preparatory vocational training courses have been created in recent years for young people whose educational background places them at a particular disadvantage. They are for the most young people who have attended secondary schools without obtaining the final certificate, but also include young foreigners with a very poor knowledge of German. The courses are held at state and private vocational schools, inter-company training centres and other educational establishments set up by public and private bodies and in some cases by firms in cooperation with and with the support of the Federal Employment Institution. However, as these schemes are designed to facilitate access to a course of vocational training rather than provide vocational training themselves, these methods of preparing young people and giving them an aptitude for an occupation will not be considered in the following.

1. The employment situation of training staff in vocational training

1.1. Trainers in the firm

1.1.1. Who does the training?

It is difficult to give a clear-cut definition of the category of people who act as trainers in firms. It can be assumed that the people given the task of training others differ considerably as to the powers allotted to them, the training they themselves have had, their functions and their position in the firm's hierarchy, and this both within a given firm and in comparison with other firms. This variety is also evident from the titles usually given to in-firm training personnel: training workshop manager, chief instructor, training officer, training engineer, instructor,

training manager, trainer, apprentices' foreman, training assistant and so on.[1] The legal basis for deciding who is a trainer is provided by the 1969 Vocational Training Act, the Crafts Code and the Regulations on the suitability of trainers[2] or, in the case of the crafts, the Regulations governing the requirements to be satisfied in master craftsman examinations. In fact, the chambers of trade, industry, etc. are also guided by the recommendations of the Federal Vocational Training Committee, which are in no way legally binding, and in this instance by the 1972 recommendation on the suitability of places of training. The Vocational Training Act makes an initial distinction between

- owners of firms who themselves do the training
- full-time trainers
- part-time trainers.

Where the owner of the firm does not himself train young people, he must instruct others to perform this specific task: full-time or part-time trainers (section 6(1), No. 2, of the Vocational Training Act). Section 33(2), No. 2, of the Act requires such persons to be registered with the appropriate body (chamber of industry and trade, chamber of crafts, etc.). It is not, how-ever, clear whether all the persons performing training functions in a training centre must be registered or whether the registration of one or two persons responsible for training is enough. Apart from the "trainee" and the "appointed trainer", the Federal Committee's 1972 recommendation on the suitability of places of training refers to the "skilled workers" who should be

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1 See W. Schulz, H. Tilch: Betriebliche Ausbilder und Lehrer für Fachpraxis - Wege und Abstimmungsprobleme der Qualifizierung, in: Berufsbildung in Wissenschaft und Praxis 4 (1975), No. 1, p. 23.

2 The first such regulation, and the most important because it pointed the way, is the Regulation of 20 April 1972 on the pedagogical suitability of persons for vocational training in trade and industry. This was followed by
- the Regulation of 5 April 1976 on the suitability of trainers in agriculture,
- the Regulation of 16 July 1976 on the suitability of trainers in the public service,
- the Regulation of 29 June 1978 on the suitability of trainers in domestic science.

employed at the place of training at a certain numerical ratio to the trainees. The recommendation thus expressly refers not only to the trainer who has been "appointed" and registered with the appropriate chamber but also to other qualified persons as being involved in the training process without - this at least is the implicit assumption - their being registered as "trainers" with the chamber. In fact, it is generally assumed that the number of people actually performing training functions is far larger than the number registered with the chambers.

In many small firms the owner himself does the training. According to the 1981 Vocational Training Report, owners of firms who are themselves responsibile for training within the meaning of the Vocational Training Act make up about one third of all trainers registered with the chambers of industry and trade. The figure varies considerably, however, from one group of occupations to another. For example, it is 50% in trade, the hotel and restaurant sector and the building industry but under 7% in electrical engineering and the iron and non-ferrous metals industry. Over 80% of trainers registered with the craft chambers are owners of firms, and as many as 90% of those registered with the chambers of agriculture are farm-owners. However, only a small proportion of trainers are full-time: according to the 1981 Vocational Training Report fewer than 10%. Here again the figure varies widely from one sector to another. For example, 80% of all registered trainers in the mining industry are full-time, as compared with 46% in the electrical engineering sector and 39% in the iron and non-ferrous metals industry. Full-time trainers are essentially confined to firms with over 500 employees and very largely to industry. In trade full-time trainers are the exception (2%).[1]

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[1] For further details on this and the figures quoted above see Berufsbildungsbericht 1981, pp. 89 f.

The legislation does not specify the pedagogical qualifications an employee needs to become a trainer. However, the Vocational Training Act, which applies to all sectors of the economy except the civil and public service, and the Crafts Code at least set out the vocational training certificates required. Under the Vocational Training Act a person is regarded as having the necessary professional aptitude

1. if he has passed the final examination in a subject area appropriate to the occupation in which a training is being provided, or
2. if he has attended a German college or a state or state-recognized German school of engineering or higher school of economics and passed the final examination in a subject area appropriate to the occupation in which a training is being provided and has been employed in his own occupation for an adequate period, or
3. if he has passed a recognized examination at a place of training or before an examining board in a subject area appropriate to the occupation in which a training is being provided and has been employed in his own occupation for an adequate period (section 76(1), Nos 1-13, of the Vocational Training Act.

Three to four years of practical experience are usually considered adequate. In the crafts a master craftsman's certificate in an appropriate subject area is regarded as evidence of suitability. This possibility also exists in agriculture and domestic science. In the printing trade, which occupies a special position in having both the master craftsman's and master printer's certificate, aptitude can be demonstrated by possession of either the master craftsman's certificate or, in the case of master printers, of the "master trainer's certificate".

To be regarded as suitable to train assistants in the liberal professions, i.e. lawyers' assistants, doctors' assistants, pharmacists' assistants, economic advisers' assistants, accountants' assistants, etc., the trainer must himself be a lawyer, doctor, accountant, etc.

A more detailed definition of the meaning of "pedagogical suitability" is provided by the 1972 Regulation on the suitability of

trainers, which requires trainers, i.e. those engaged full-time in or responsible for training, to show that they have the knowledge specified in the Regulation, usually by taking an examination. This pedagogical knowledge can be broken down into the following four areas:

- basic vocational training questions
- planning and conduct of training
- young people in training
- legal bases.

The Regulation on the suitability of trainers governs only trade and industry, agriculture, domestic science and the civil service, i.e. the sectors for which appropriate regulations have been issued. In the crafts the "Regulation governing the requirements to be satisfied by all master craftsmen" is the legal basis for determining who is a suitable trainer. The requirements for the master craftsman's certificate include a section, Section IV (Examination of pedagogical knowledge), which is identical with the requirements laid down in the Regulation governing the suitability of trainers in trade and industry.

1.1.2 How many trainers are there?

In 1979 there were, according to the 1981 Vocational Training Report, 381,127 places of training in the sectors covered by the chambers of crafts and of industry and trade, i.e. excluding lawyers' and doctors' practices and other establishments in the liberal professions which train young people. Some 60% of these places of training are craft firms. On average each craft firm offering training has 2.9 apprentices and each place of training in trade and industry 5.0 apprentices. At present, there are about 600,000 trainers registered with the appropriate authorities.[1] The word "trainer" is used here in the widest sense,

[1] For further information on these figures see Berufsbildungsbericht 1981, pp. 11, 89.

i.e. owners of firms who themselves train young people and full- and part-time trainers. This is an estimated figure and should be treated with caution. At a rough estimate, there is one trainer per place of training in the case of craft firms and in the liberal professions, since anyone who satisfies the requirements to head a firm in the liberal professions or the crafts is usually suitable as a trainer. In a larger firm, however, these requirements may be satisfied by other employees (master craftsmen/college graduates) in addition to the owner. But there is no saying how many owners considered suitable to act as trainers and recorded as such in the statistics actually do any training in these sectors. The same applies to employees who have been instructed to act as trainers and have registered with the chambers of industry and trade, because it is quite conceivable that employees remain registered as trainers for fairly long periods after ceasing to perform this function. Conversely, firms may in fact be entrusting several employees with the task of training young people, but registering only a few of them with the chambers. Nevertheless, the estimated figure of around 600,000 trainers would appear to be more or less correct despite all the pointers to its unreliability, since it is the figure that is always quoted when the discussion turns to this subject.[1]

No information is available on the distribution of trainers and places of training among the various sectors of the economy, branches of industry or occupational fields. All that can be obtained is a very rough breakdown into areas covered by the chambers, which is reproduced in Chart 6.

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[1] According to information provided by the Federal Institute for Vocational Training Research, a separate count made during the careers study it is conducting jointly with the Insutitute for Labour Market and Vocational Research revealed a total of some 570,000 trainers, of whom almost 80,000 are full-time.

Chart 6: Places of training, trainees and trainers by sectors of the economy, 1980

Sector	Places of training	Trainers	Trainees Total	Trainees Female
Industry and trade	148,538	307,883	786,917	343,667
Crafts	243,153		702,331	157,241
Agriculture	30,566	35,087	46,791	11,766
Liberal professions	71,648		114,322	109,234
Sea shipping	150		984	8
Public service	7,241	18,905	53,816	22,784
Domestic science	4,193		7,555	7,544

Source: Federal Statistics Office, Fachserie 11, Reihe 3: Vocational Training 1980

The "Recommendation on the suitability of places of training" adopted by the Federal Vocational Training Committee in 1972 regards as appropriate a ratio of

- 16 trainers to 1 full-time trainer
- 3 trainees to 1 part-time trainer
- 3 trainees to 1 skilled worker.

In the absence of accurate data on the actual situation as a whole, reference will be made to various figures on selected sectors.

These figures originate from the study carried out in 1979 by Michelsen, who included industrial firms with training workshops in the metal-working industry in his survey, and from the study of company trainers conducted by the Federal Institute for Vocational Training Research.[1] The latter is the largest and most comprehensive study of trainers in the Federal Republic ever to have been undertaken. However, its limitations are that it is confined, first, to firms with 50 or more employees, second, predominantly to firms in the metal-working sector and, third, to certain regions.

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[1] U.A. Michelsen, Der Ausbilder in der Industrielehrwerkstatt, Trier, Spee-Verlag 1979;
K. Kutt et al., Ausbilder im Betrieb. Materialien und statistische Analysen zur beruflichen Bildung, No. 13, Berlin (West), Federal Institute for Vocational Training Research 1980

According to Michelsen's 1979 study, each full-time trainer in a training workshop is in charge of an average of 14 trainees: an average of 20 in large firms and a maximum of 10 in small and medium-sized firms. In 1980 Kutt et al. found the ratio in the commercial sector to be 1 : 24, with one full-time trainer for every 9.4 trainees in industry (metal-working). This undoubtedly reflects the more attractive side of training, metal-working firms generally being rated relatively high where training is concerned.

1.1.3 The legal position and duties of the company trainer

The relationship between a company trainer who is not the owner of a firm personally involved in training within the meaning of the Vocational Training Act, and his employer is governed, as is the case with other employees in the private sector, by a private-law contract and collective agreements. To this extent, the trainer's relationship with his employer is subject to the usual statutory and collectively agreed arrangements applicable to the sector in which he is employed and to any agreements reached by the employer and the works council concerning working conditions in the firm. No collective agreements relating specifically to the working conditions of trainers have yet been concluded. Nor have any specific standards that go beyond the provisions of the Vocational Training Act been adopted to govern trainers' activities.

The training regulations the Federal Government has issued for individual occupations give a mandatory outline of in-firm training, which roughly corresponds to that set out in the curricula for in-school instruction issued by the authorities of the Länder. The training regulations are thus extraneous (to the firm) outline conditions stipulating the structure of and guiding the trainer's activities. It is for the firm to draw up and implement a (more specific) firm-oriented training plan, taking the training regulation and the outline training plan it contains as a basis.

The rights and obligations of the trainer arising from the delegation to him of tasks which the Vocational Training Act initially assigns to the owner of the firm or employer are not, however, defined in any

greater detail in these provisions. A particular question that arises concerns the extent to which the company trainer is entitled to the legal institution of "pedagogical freedom" in his activities in the same way as teachers at state schools. In other words, provided he observes the law and the general directives issued by the institutions responsible for vocational training, to what extent may he perform his pedagogical duties on his own responsibility?

Whether he performs his training functions on a full-time or part-time basis, the trainer must respect the employer's right to issue instructions, i.e. the employer's right to make any arrangement he considers expedient, on condition that the provisions of laws, collective agreements, etc. do not expressly forbid it. This particularly concerns the nature and performance of work and when and where it is performed. As an employee, the trainer is thus bound by his employer's instructions in the performance of his duties. However, as the employer has delegated to the trainer tasks assigned to him by the Vocational Training Act, he has transferred his training obligations to the trainer. It might therefore be argued that the trainer must on his own responsibility fulfil obligations incumbent on the employer, "his own responsibility" relating in particular to the determination of the methods used in his training and educational activities. A trade union view of the trainer's "pedagogical freedom" states: "The transfer of obligations to the appointed trainer for him to fulfil on his own responsibility must be accompanied by he transfer of power to act and decide independently, within the limits of his tasks and duties, in the performance of statutority prescribed, pedagogically justified and systematic initial and advanced training activities."[1] In practice, controversy has always surrounded the question of where the employer's right to issue instructions ends and where the trainer's "own responsibility" begins and whether the trainer can, like the teacher, in principle claim the legal institution of "pedagogical freedom". A very few empirical studies - those by Kutt et al. in 1980 and Michelsen in 1979, referred to above - provide an insight

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[1] Union of Chemical, Paper and Ceramics Workers, Funktion und rechtliche Stellung des Ausbilders im Berufsausbildungsverhältnis, Hanover 1979, p. 11

into the distribution of responsibilities for training within firms. The statements they make primarily concern full-time trainers.

Kutt et al. make a distinction between the following managerial tasks in in-firm training:

1. establishing the firm's training plan
2. establishing the trainee rotation schedule
3. selecting training places
4. fixing the number of trainees
5. selecting trainees
6. planning the utilization of financial resources on training
7. selecting trainers

Most decisions on questions connected with the establishment of the firm's training plan and trainee promotion plans and the selection of training places (tasks 1 to 3) are, with minor exceptions, taken by the trainers or training managers, within the training sector at least. These tasks are directly related to training, and the training staff enjoy relative freedom in this respect. Trainers and training foremen are, however, less frequently called upon to perform such organizational and planning functions than training managers and are therefore less independent. Trainers in small firms, on the other hand, have far wider decision-making powers than their counterparts in large firms, the division into staff and line functions in training being generally less pronounced in smaller firms. This is principally due to the smaller number of training functions and the greater proximity of the training system to the firm's management.

Largely excluded from the training sector and thus from the sphere of the trainer's responsibility are the managerial functions (tasks 4 to 7) which are not directly related to the actual training activity, e.g. budgetary questions and the recruitment of trainees and trainers, although the training staff are allowed a limited say in such matters. For the most part, such functions must consequently be regarded as falling under the

heading of decisions on company policy, even though training departments - in large firms at least - have often achieved some organizational independence through the development of differentiated roles.

In the case of line functions, which essentially include both practical instruction in the workshop and at the workplace and the teaching of the theoretical aspects to trainees, a division of labour consisting in certain trainers being involved only in practical training in the training workshop or the firm, while others give only theoretical instruction, is not yet very pronounced. This is also confirmed by the study Pätzold made in 1977,[1] according to which most trainers teach both practice and theory in the firm. However, Michelsen's study in 1979 indicated a growing tendency towards a division of tasks into initial and advanced training in firms with more than five trainers per training workshop.

An examination of the tasks of trainers and training foremen on the one hand and training managers on the other reveals a clear difference in the focus of their activities. While trainers and training foremen are mostly involved with practical instruction, training managers are increasingly engaged in the teaching of theoretical skills (see Kutt et al., 1980, p. 69).

Training staff also appear to enjoy considerable freedom of action when reporting on the progress and appraising the performance of trainees in the course of their teaching of theory and practice. Thus, according to Kutt et al. in 1980, "no other function, apart from the teaching of practical and theoretical skills, is performed so independently by trainers" (p. 72). However, the study also reveals that performance is often

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[1] G. Pätzold, Der betriebliche Ausbilder im "dualen System" der Berufsausbildung, in: Die Deutsche Berufs- und Fachschule 73 (1977), No. 4, pp. 264-277

appraised by reference to predetermined criteria, i.e. with the aid of appraisal sheets used throughout the firm (Kutt et al., 1980; see Michelsen, 1980, p. 122).

Another essential task performed within the firm's training system is the guidance of trainees and their parents. Trainers in small firms are allowed more freedom in this area, while in large firms senior training personnel often attend such meetings.

In addition to the managerial and practical and theoretical teaching functions outlined above, training staff are also involved in the in-firm advanced training of employeees. An examination of the hierarchical positions of training staff engaged in such activities shows that many are training managers. The management of advanced training in the firm is, however, largely the responsibility of persons who are only partly involved with training tasks (Kutt et al. 1980, p. 85).

Many trainers also have vocational training duties outside the firm. Principal among these duties is membership of examination boards formed for the final examination of trainees, examinations under the regulations on the suitability of trainers or the examination of participants in courses of further and advanced training. According to figures assembled by Michelsen in 1979, over 40% of the training workshop trainers he questioned were members of a chamber of industry and trade examination board. This is particularly true of trainers in the larger firms. Trainers also act as lecturers in institutions for the initial and advanced vocational training of adults, and some - although the number is not known - have part-time teaching posts at vocational schools, i.e. the place of learning that complements in-firm training under the dual system.

1.1.4. Income and social status

In this respect a distinction must first be made between part-time and full-time trainers. Part-time trainers and skilled workers who perform training tasks on the instructions of their employer or superior are graded according to the work they perform on a full-time basis, i.e. the fitter is graded as a fitter, the graduate in commerce commensurate with his activities and position in the firm's accounting department, for example, and so on. They do not as a rule receive any additional compensation for their involvement in the training of young people. Exceptions are made, for instance, when they give regular instruction outside normal working hours.

Accurate information on the collectively agreed classification and the incomes of full-time trainers is not available. Collective agreements on trainers' salaries are extremely rare. References to trainers in collective agreements on the pay of master craftsmen and salaried employees are, however, now becoming more frequent. From the repeated demand voiced by the trade unions that all full-time trainers be classified as salaried employees or master craftsmen it can be concluded that many full-time trainers or employees responsible for training are wage-earners.

Only in the chemical, textile/clothing and trade/banking/ insurance sectors and the Post Office are full-time trainers explicitly mentioned in collective salary agreements. In the case of the textile/clothing and trade/banking/insurance sectors, however, this is not true of all districts for which collective agreements are concluded. With the exception of the Post Office, where trainers are civil servants, trainers are classified as salary-earners in these collective agreements. Subject to certain conditions, trainers in the clothing industry are included in Group T 3 of the collective salary agreement for salary-earners in commercial and technical occupations. This classifi-

cation depends, for example, on the trainer having a minimum number of trainees in his charge (15 in Bavaria, for instance) and on his having been properly trained (as in Berlin). In 1979 monthly salaries in Group T 3 were between DM1,576 and 2,525, depending on the district. In the chemical industry full-time trainers are salary-earners in Group K 6 orT 6.[1] In 1981 this gave full-time trainers in the West Berlin district a monthly salary of DM2,517 in their first year, rising to DM3,122 from the fourth year onwards in Group K 6 and DM2,783 in the first year, rising to DM3,361 from the fourth year onwards in Group T 6.

In the public service full-time trainers, who are salary-earners, are classified roughly between Group VII and Group IV b of the Federal Employees' Collective Salary Agreement (BAT), which in 1980 gave a 35-year-old married trainer with two children a monthly salary of about DM2,320 to 3,100. Federal Post Office trainers are always classified as civil servants and at present draw Group A 7, A 8 or A 9 salaries. Taking once again the 35-year-old married trainer with two children as an example, this meant a monthly income of some DM2,350 to 2,710 in 1980.[2]

This somewhat sparse information does at least give some idea of the range of collectively agreed incomes of full-time trainers: between DM1,500 in certain districts in the clothing industry and DM3,400 in the chemical industry. The salaries actually paid in the private sector, however, may well be higher, and some large firms are known to pay their trainers better than the average for the sector as a whole. One large firm in the metal-working industry, for example, has said that its full-time trainers

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1 K salary groups are for employees in commercial occupations, T salary groups for employees in technical occupations.

2 The calculation is based in each case on basic remuneration plus local allowances. To this would have to be added varying allowances, bonuses, the employer's contribution to unemployment insurance, etc., which have been ignored here. The same is true of trainers' incomes in the private sector.

received monthly salaries of about DM4,300 in 1981. According to information provided by experts, the monthly salaries of trainers in industry in Berlin are between DM2,000 and 4,000, once again a considerable range. This is largely due to the extensive differences in the economic position of the various branches of the economy and districts covered by collective agreements. Trainers' incomes are therefore determined less by their activities as trainers than by the firm and branch in which they are employed.

1.1.5. Summary: the "typical" trainer

As the statistical information on trainers is far from adequate, the attempt will be made, using the various data and impressions gained from certain empirical studies, fragmentary statistics and statements by experts to describe the "typical" full-time trainer. This produces the following approximate picture:

The "typical" trainer is employed by an industrial firm with a workforce of more than 1,000. He works in the training workshop. He trains young people in an industrial/technical occupation and is a salary-earner in a technical occupation or a master craftsman. His regular monthly income is around DM3,500. He went to a secondary school, then became an apprentice and was employed as a skilled worker for a time. Before becoming a trainer, he attended an engineering school or took his master craftsman's examination, but despite this he is still relatively young, between 35 and 40 years of age. He has not therefore long been a trainer, perhaps four or five years. And our "typical" trainer is, of course, a man.

1.2. Vocational school teachers

1.2.1. What teachers are there?

Again, a distinction must first be made between full-time and part-time teachers. Many vocational school teachers are only part-time, and at the public health schools part-time teachers account for over 90% of all staff. However, when the number of hours per week taught by full-time and part-time teachers is considered, it becomes clear that full-time staff are responsible for by far the greater part of the teaching workload at all the types of school of interest here (see Chart 7). Compared with schools providing a general education, where less than 5% of the lessons each week are given by part-time teachers,[1] part-time staff at vocational or specialized vocational schools play quite an important part in the in-school vocational training of young people, accounting for 15% to 18% of all instruction given.

Chart 7: Lessons taught weekly at vocational schools, 1980

Type of school	Lessons taught by full-time teachers	Lessons taught by part-time teachers
Vocational schools	744,542	131,092 ≈ 15%
Specialized vocational schools	407,042	90,147 ≈ 18%
Public health schools	5,574	3,785 ≈ 40%

Source: Federal Statistics Office, Fachserie 11, Reihe 2: Vocational School System 1980, pp. 39 and 45

It is not only the number of part-time teachers at vocational and specialized vocational schools that is important: in the "minor"

[1] See Federal Statistics Office, Fachserie 11, Reihe 1: General School Education 1980, pp. 39 and 45.

occupations[1] theoretical instruction would be impossible without them. For such occupations special classes with larger catchment areas (at school district, Land and, for some occupations, even Federal level) are formed, and trainees receive their vocational school instruction there for several consecutive weeks every year.

Full-time teachers at vocational schools in the Federal Republic are relatively young, about half being under the age of 40 and fewer than a fifth over 50.[2] However, their colleagues at schools providing a general education are on average slightly younger: in 1978 over 60% were under the age of 40 and only about 15% over 50. This age structure is a clear reflection of the massive expansion of the school system in the last decade. The differences between vocational school teachers and teachers at general schools also reveal the differences in the period of training and access to the various teacher training courses (a shorter period for teachers at primary and secondary schools). This will be discussed in greater detail in Chapter 2 of this study.

As regards the sex of teachers, a distinction needs to be made by type of school (see Chart 8). The vocational school is a male domain, some 80% of all full-time vocational school teachers being men, while women teachers have almost caught up at specialized vocational schools in view of the large number of "women's" subjects taught (commercial, domestic science and socio-pedagogical occupations), and at public health schools the ratio of male to female teachers has been reversed, 80% of all full-time teachers being women. In all types of school, between 80 and 90% of the part-time staff are women. However, few of those employed on a part-time basis (at the most 12%) have teaching as their principal occupation.

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[1] e.g. the occupations of optician, brewer and maltster, roofer, piano maker, goldsmith, chimney sweep, animal keeper, surveyor and dental technician.

[2] See the Federal Minister for Education and Science, Grund-und Strukturdaten 1980/81, p. 74.

Chart 8: Persons with teaching as their principal occupation and working as full-time or part-time teachers in 1980, by type of school

Type of school	Full-time teachers Male	Female	Part-time teachers Male	Female
Vocational schools	29,791	6,195	474	1,991
Specialized vocational schools	11,083	7,867	273	2,321
Public health schools	470	1,750	49	246

Source: Federal Statistics Office, Fachserie 11, Reihe 2, Vocational School System 1980, pp. 47, 55

Teachers at state schools in the Federal Republic are generally established civil servants. But whereas teachers at state schools providing a general education are almost all civil servants, the staff of vocational schools include some teachers who are not. The staff of vocational schools in any case include a far wider range of teachers than schools providing a general education. A count made by the Conference of Education Ministers in 1971 revealed at least 34 different official titles in vocational education and at least 80 different careers, the distinction in the latter case depending not only on official titles but also on the area of activity, training and remuneration.[1] Since then some standardization[2] has been achieved although the Länder continue to use different titles for the same types of teacher in some cases. There are today three basic types of teacher at vocational schools: the technical teacher, the commercial teacher and the practical teacher.

The technical teacher (Gewerbelehrer) teaches industrial/technical subjects at vocational and specialized vocational schools and in the basic vocational training year, e.g. at schools which focus on metal-working, electrical engineering, building, textiles and clothing, chemical engineering, etc. He receives his training at a university, where he studies for at least eight smesters, and during post-graduate pre-service training at a school. (Further details will be given in Chapter 2.) He is a civil servant and begins his career as a Studienrat (secondary school teacher), thus having the same professional status as a grammar school teacher.

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1 See W. Matzke, Fragen einer Harmonisierung der Lehrerbildung im Bereich beruflicher Schulen, in: Die deutsche Berufs- und Fachschule, 1972, pp. 422-434.

2 See the Outline Agreement reached by the Conference of Education Ministers on the training and examination of candidate teachers principally for secondary level II - qualification to teach subjects in vocational schools - of 5 October 1972 and the Outline Regulation adopted by the Conference on 6 July 1973 on the training and examination of practical teachers in vocational schools.

The commercial teacher (Handelslehrer) teaches commercial subjects at vocational and specialized vocational schools and in the basic vocational training year. He is therefore involved with young people who want to be salesmen, office clerks, administrative specialists, book sellers, forwarding clerks, assistants to economic advisers and accountants and so on. Like the technical teacher, he has studied at a university for at least eight semesters and has then as a rule spent 18 months in post-graduate pre-service training at a school, after which he begins his career as a Studienrat.

Where the practical teacher (Lehrer für Fachpraxis) is concerned, matters are more complicated. Not all the Länder of the Federal Republic have practical teachers (Berlin does not, for example), and those which do have different rules on access to this occupation and different conditions governing the employment of this type of teacher. The practical teacher works primarily in full-time schools, i.e. schools where young people can take the basic vocational training year on a full-time basis, in specialized vocational schools and in in-school schemes designed to prepare young people and give them an aptitude for an occupation. A subsidiary role is played by practical teachers at part-time vocational schools, where they are to some extent involved in preparing and carrying out experiments and exercises as part of or in addition to the theoretical instruction given. Under the Outline Regulation adopted by the Conference of Education Ministers practical teachers should have the following education:

- a certificate of education at intermediate level;
- a certificate as evidence of the successful completion of at least three semesters at a technical college (technician's examination) or a master craftsman's certificate;
- at least two years of employment to complete his vocational training;
- 18 months of training as a practical teacher in a form similar to the post-graduate pre-service training of the Studienrat.

The systems adopted by the Länder depart from these recommendations. For instance, not all insist on the certificate of

general education at intermediate level or on the 18 months of training.

1.2.2. How many teachers are there at vocational schools?

In 1980 there were some 62,510 full-time and 66,900 part-time teachers at vocational schools in the Federal Republic. Chart 9 shows the various types of school providing initial vocational training, the number of full-time and part-time teachers and the number of pupils in 1980. As with trainers, the only figures on teachers available are very general. Even a national breakdown of the total into the general categories of technical teacher, commercial teacher and practical teacher or by the subjects taught by teachers is impossible. Furthermore, Chart 9 again reveals the dominance of training by the dual system: by far the most young people beginning a course of vocational training in 1980 attended a part-time vocational school, i.e. they obtained their vocational training by the dual system (excluding those who were unemployed or young wage-earners or young salary-earners).

Before we look more closely at the position of teachers, some indication should be given of the situation pupils face at vocational schools. For a very long time vocational schools suffered from an acute shortage of teachers, and the situation has only begun to improve in recent years. Even so, the target teacher:pupil ratios have not yet been achieved: while the General Education Plan called for a ratio of 44:1 at vocational schools by 1980, it was still 55:1 at part-time vocational schools in 1979. On the other hand, the ratio of 15 pupils to one teacher in specialized vocational schools set as the target for 1979 was achieved.[1] It should be noted, however, that the figures for the various regions differ substantially from the national average: in 1979 the lowest ratio for part-time vo-

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[1] See Permanent Conference of Education Ministers, Dokumentation No. 67: Schüler-Klassen-Lehrer 1977 bis 1979, p. X.

cational schools was 38:1 (Hamburg), the highest 69:1 (Lower Saxony).[1] At present a national average of some 10% of planned instruction at vocational schools still has to be cancelled for lack of teachers (for trends in the numbers of teachers and pupils at vocational schools see Diagrams 1 and 2). Teacher:pupil ratios by subjects taught at vocational schools are known only at Land level, not for the country as a whole. As an example, Chart 10 shows the figures for the Land of Baden-Württemberg.

Chart 9: Vocational training schools, 1980

Type of school	State schools	Private schools	Pupils	Teachers	
				Full-time	Part-time
Vocational schools					
Full-time*	1,077	48	108,623	5,333	2,796
Part-time	1,351	51	1,848,447	32,560	18,996
For the disabled**	62	109	12,584	558	808
Specialized vocational schools	2,271	530	352,029	21,544	16,411
Public health schools	846	852	96,660	2,515	27,889

* This heading covers vocational schools at which young people take the basic vocational training year on a full-time basis or a year of training to prepare them or give them an aptitude for an occupation. Aptitude training is designed for young people who, on the completion of their compulsory general education, do not become apprentices, attend a full-time school for further general education or vocational training or take the basic vocational training year.

** Vocational schools for the disabled are designed to assist physically, mentally or emotionally handicapped or socially endangered young people. Many are full-time schools. However, most disabled young people attend vocational schools.

Source: Federal Statistics Office, Fachserie 11, Reihe 2: Vocational School System 1980

[1] loc. cit., p. 70

Diagram 1: Trends in the numbers of pupils and teachers at vocational schools since 1970

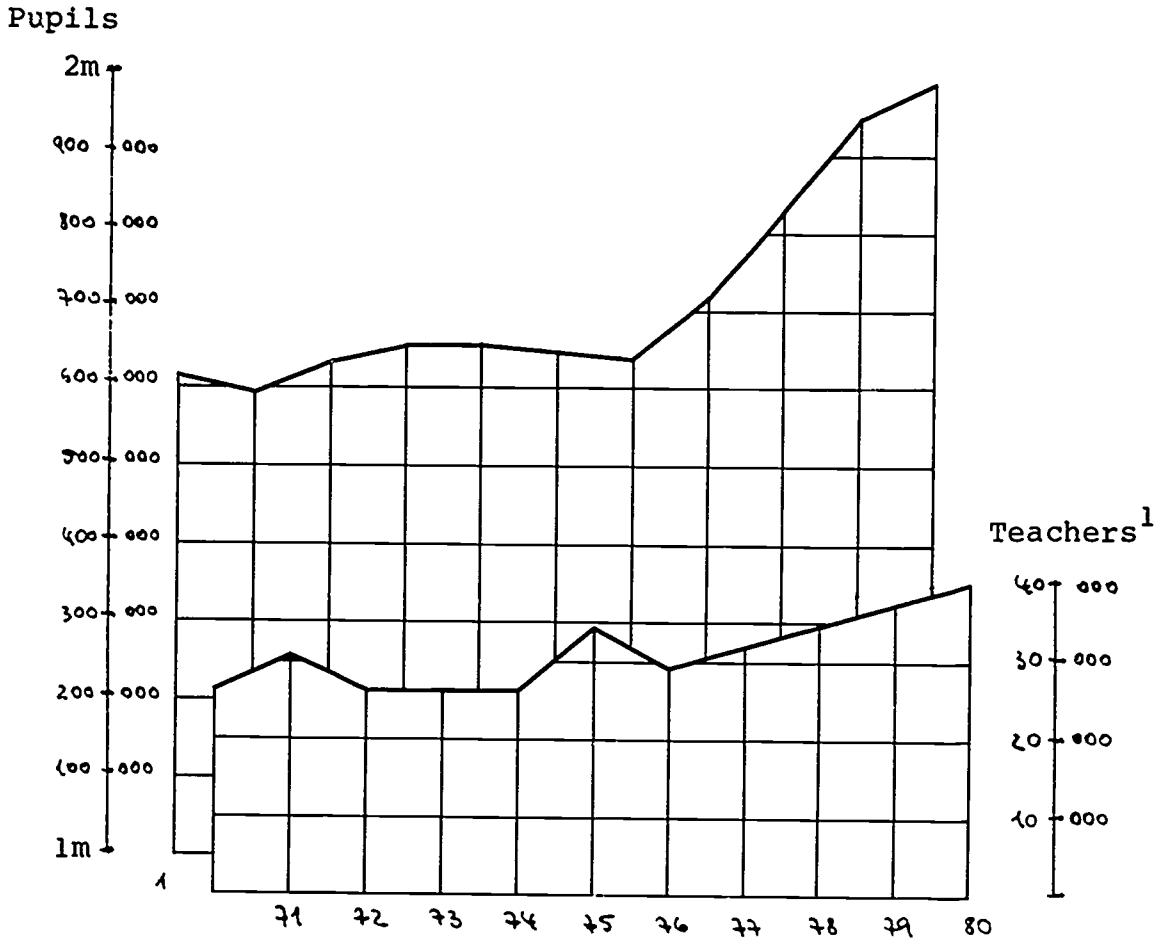
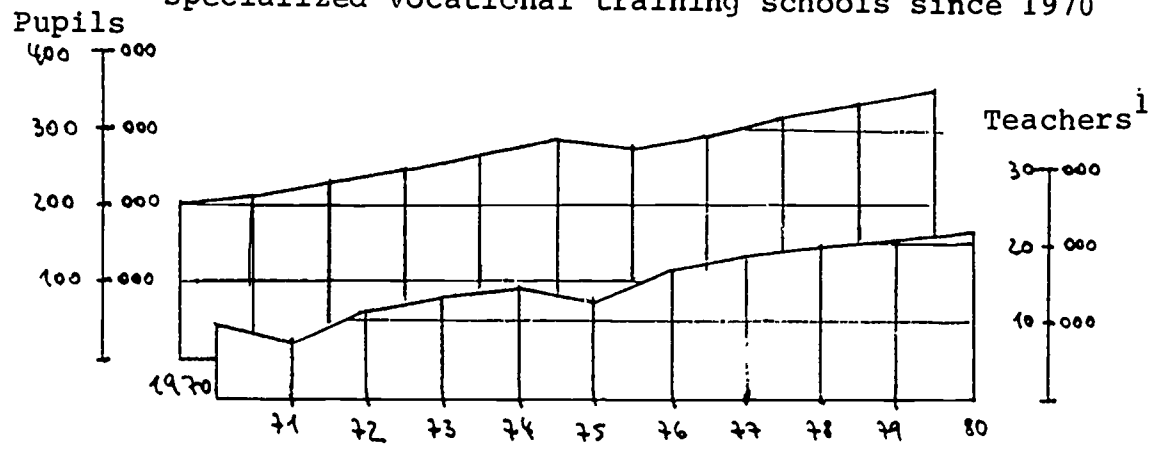


Diagram 2: Trends in the numbers of pupils and teachers at specialized vocational training schools since 1970



[1] Full- and part-time teachers with teaching as their principal occupation

1.2.3. The legal position and duties of teachers at vocational schools

As mentioned above, teachers at state schools are usually civil servants, although a small number are salary-earners. As civil servants, teachers enjoy conditions of employment markedly different from those of employees in the private sector and also of wage- and salary-earners in the public service. The special features of the civil servant's status are summarized in the Basic Law, where it states that his "status, service and loyalty are governed by public law" and that "the law of the public service shall be regulated with due regard to the traditional principles of the professional civil service" (Article 33(4) and (5) of the Basic Law). These provisions have implications both for the civil servant's legal position and for his social and economic situation: the relationship between employer and employee is based on an act of state and is governed by law, not by collective agreements. This also applies to civil servants' remuneration, which is fixed by the legislator. Civil servants' salaries were originally regarded not as remuneration for work but as maintenance payments to assure them of an "adequate" standard of living. Their incomes are today de facto linked to the rates negotiated for wage- and salary-earners in the public service. A consequence of the maintenance principle is still to be found in the fact that civil servants receive their remuneration at the beginning of the month rather than at the end, as is the case with wage- and salaray-earners. A civil servant is appointed for life and his contractual relationship cannot therefore be terminated. In addition, the employer is responsible for civil servants' retirement pensions. Here again the civil servant's social situation differs from that of all other members of the working population: while the latter join with their employers in paying for their retirement pensions, the state bears the full cost of civil servants' pensions. On the whole, civil servants enjoy greater social protection than other employed persons.

Chart 10: Pupils, classes and teachers at vocational training schools in Baden-Württemberg in 1979

	Vocational schools						
	Commercial	Technical	Domestic science/ agricultural	Special vocational schools	Basic vocational training year[1]	Specialized vocational schools	Public health schools[2]
Pupils	70,412	169,524	27,255	3,120	5,370	81,079	14,975
Full-time teachers	1,441	3,198	367	96	122	4,846	626
Part-time teachers	125	90	93	10	2	510	-
Pupils per class[3]	23.8	23.7	22.1 (10.0)	13.1 (8.7)	24.4 (11.7)	23.2 (20.9)	20.5 (20.6)
Teacher's weekly lessons[3] per pupil	0.470	0.393	0.390 (1.4)	0.679 (1.363)	0.842 (3.429)	1.393 (0.944)	

[1] Basic vocational training year entirely in-school and by the dual system

[2] This heading covers public health schools and private technical schools under the supervision of the Baden-Württemberg Ministry of Employment, Health and Social Affairs.

[3] The figures in parentheses concern private schools.

Source: Statistics Office of the Land of Baden-Württemberg, Das Bildungswesen 1980, pp. 56 ff.

The civil servant's legal position has certain special features in that the "traditional principles of the professional civil service" (which date back to the time before the Weimar Republic and may therefore be regarded as an expression of thinking on public law at the time of the authoritarian German Empire[1]) may result in his being restricted in the exercise of the basic rights guaranteed by the Constitution. Restrictions of basic rights admittedly pose a problem not only for civil servants (and, to a lesser extent, public service employees) but also for employees in the private sector. However, as basic rights principally define, to judge by their historical origins, the relationship between the citizen and the state, contracts of employment in the private sector are mainly governed by the principle that basic rights do not govern relationships with third parties, i.e. restrictions of basic rights in the private sector are a political rather than a constitutional problem. The restriction of civil servants' basic rights has become a burning issue in recent years chiefly with regard to the extent and limits of their political allegiance and their right to strike. The interpretation of basic rights in both cases is politically and constitutionally controversial, and teachers have been particularly concerned in both respects.

Every fully trained teacher - meaning primarily teachers with a university education - enjoys "pedagogical freedom" in his teaching activities, a principle which both modifies and supplements his position under civil service law. This principle entitles him, subject to the law and the general directives of the education authority, to act on his own responsibility when teaching, educating and assessing performance and is enshrined in the legislation of almost all the Länder.

On the whole, the terms "teaching, educating and assessing performance" comprehensively describe the tasks of teachers at vocational schools. The relationship between in-school instruction and in-firm training, which distinguishes the teaching and learn-

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[1] See Berliner Recht für Schule und Lehrer, published by Gewerkschaft Erziehung und Wissenschaft, Landesverband Berlin im DGB, 1981, Vol. 1, cols. 210-9.

ing process of vocational schools from that of schools providing a general education, does, however, give rise to a number of problems, which will be discussed below.

As already stated in Chapter 0, it is the task of the vocational school to improve the pupil's general education and to teach him the theoretical skills he will need for an occupation. From this it follows that vocational school teachers - and this is particularly true of commercial and technical teachers, i.e. those enjoying the status of Studienrat - largely teach with the aid of books, blackboards and chalk and do not give practical instruction. They are teachers of theory. However, the trainee's learning process involves not only the teacher of theory but also the company trainer and the practical teacher, both of whom are teachers (in the widest sense) who give practical instruction, i.e. demonstrate, show, explain with the aid of an actual workpiece, guide young people in the use of materials and tools, etc. Although most practical teachers are involved in full-time in-school training - the basic vocational training year and specialized vocational schools - some teach at part-time vocational schools. In Lower Saxony the practical teacher's duties are defined as follows:

"The activities of the practical teacher comprise

(a) independent practical instruction in the subject concerned;

(b) the demonstration of technical processes under the guidance of the teacher reponsible for theoretical instruction in the subject concerned and

(c) the supervision, care and maintenance of machines, tools, equipment and other facilitities in the laboratories and workshops; preparations for experiments; ensuring the safety of equipment; making teaching aids for instructional purposes; laboratory and workshop administration."[1]

To some extent, there has been a natural tendency, especially in large school complexes, for practical teachers to stand in for teachers of theory, to take certain lessons, etc.[2]

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[1] Decree of the Lower Saxon Minister for Education of 2 February 1972

[2] See Materialien und Ergebnisse des Workshops "Lehrer für Theorie und Praxis in berufsbildenden Schulen" an der Universität Bremen vom 15.-17.3.1979, in: F. Rauner et al. (ed.), Berufliche Bildung, Brunswick/Wiesbaden, Vieweg 1980.

This division of labour and the very substantial difference in the pay of Studienrat teachers and practical teachers are a constant source of complaint in vocational schools. Practical teachers enjoy only limited "pedagogical freedom", i.e. when they give practical instruction independently, not when they are working "under the guidance of the teacher responsible for theoretical instruction". The absence of responsibility for their pedagogical activities is also used to justify the far higher number of lessons practical teachers must teach: 30 to 40 per week compared with the Studienrat's 23 to 26.

As a result of this controversial division of labour between different categories of teachers, training young people becomes a twice divided process: the duality that consists in the usually loose combination of the firm and the school is joined by the duality of theory and practice in school instruction.[1] Pupils seem to prefer the more graphic instruction of the practical teacher, which involves them more closely in the activity concerned, at least in terms of the process of obtaining technical skills. This contrasts with the different values attached to the activities of the various categories of teachers as reflected by their remuneration and grading.

1.2.4. Incomes and social status

The grading and remuneration of vocational school teachers (as of other teachers) is, with few exceptions, the same throughout the country. The exceptions principally concern practical teachers, the arrangements for whom vary from one Land to another. In West Berlin most special-subject teachers, teachers of short-hand and typing, for example, are civil servants and graded in Group A 10, whereas practical teachers of technical subjects are state employees in Group V b of the Federal Employees' Collective Salary Agreement (BAT). In Lower Saxony and Baden-Württemberg practical or technical teachers are civil servants and are graded in Group

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[1] For further details see F. Rauner et al., 1980.

A 10 at the beginning of their careers. Baden-Württemberg also has technical teachers who are state employees in BAT Groups II a, IV b and V b.

A nation-wide review of the remuneration and salary structure of vocational school teachers is not available. The information on Baden-Württemberg will therefore be taken to illustrate the structure of teaching posts at vocational schools (see These figures have been obtained from the 1981/82 budget of the Land of Baden-Württemberg. It should be noted that they cover the teaching staff of all vocational schools, not only the schools providing initial vocational training that are of primary interest here. However, teachers at vocational schools and specialized vocational schools and those involved in the basic vocational training year account for roughly three quarters of all teachers at state vocational schools in Baden-Württemberg. Teachers at public health schools are not included in the following table, since it is confined to teachers employed by the Education Ministry. At all vocational schools in Baden-Württemberg teachers with the status of Studienrat and Oberstudienrat (the latter having served five years at Studienrat level) form the largest group: over 60% of the staff at commercial and domestic science/socio-pedagogical/agricultural schools and 50% of technical school staff are in Groups A 13 and A 14, while only about 5 to 7% of teachers of commerce, domestic science etc. and some 12% of technical school staff are graded in the lower salary groups, A 9 and A 10 and BAT Groups IV and V. In the case of probationary teachers (those who have just completed the second stage of their practical, in-school training and have not yet been appointed civil servants for life), the discrepancy between the remuneration structures of technical and other vocational schools is even more pronounced: at schools of commerce and domestic science etc. only about 5% and 20%, respectively, of new teachers are graded in A 10 and A 9 as against almost 60% of new technical school teachers.

Chart 11: The remuneration structure of teachers at vocational schools in Baden-Württemberg in 1980

Position	Commercial schools		Technical schools		Domestic science/ socio-ped./agri-cultural schools	
	Total	%	Total	%	Total	%
Civil servants	3,883		5,880		2,086	
Headmasters, A 16		1.7		1.7		1.8
Heads of department, A 15		15.2		9.9		4.8
Oberstudienräte, A 14		29.3		18.3		20.4
Studienräte, A 13		32.7		33.9		45.1
Senior technical teachers, A 12		0.8		2.9		0.1
Senior technical teachers, A 11		0.8		6.5		0.5
Technical teachers, A 10		3.5		11.9		5.7
Special-subject teachers, A 9		-		-		0.4
Probationary teachers	534		962		308	
A 13		10.9		5.9		8.9
A 10		0.6		8.1		2.5
A 9		-		-		0.7
BAT employees	201		63		154	
Teachers of science, IIa/Ib		1.7		0.4		-
Teachers of music, art, sport, IIb		0.6		0.1		0.2
Teachers of science, III/IIa		0.1		-		4.6
Teachers of science, IVa/III		0.2		-		-
Teachers of science, IVa		-		-		-
Technical teachers, teachers of art, music, IVb/IVa		0.1		-		0.2
Teachers of sport, Vb/IVb		1.3		0.3		0.9
Teachers of sport, Vc/Vb		0.3		0.1		0.2
Total[1]	4,618	100	6,905	100	2,548	100

[1] Discrepancies in totals are due to figures being rounded up or down.

Source: Budget of the Land of Baden-Württemberg for 1981 and 1982, Vol. II, pp. 188 ff.

To illustrate the approximate gross monthly incomes of teachers in the various salary groups, we take below the example of a 40-year-old married man with two children. It should be borne in mind that A 13 is the starting level for teachers who have been appointed civil servants after their second period of training as probationary teachers. As a rule, they are promoted after some years, and it can be assumed that many teachers now 40 years old are in a higher remuneration group.

The gross monthly salary of a 40-year-old married teacher with two children in 1980 was approximately as follows:[1]

Salary group	DM	Salary group	DM
Civil servants		Employees	
A 16	5,230	BAT IIa/Ib	4,230
A 15	4,750	IIb	3,990
A 14	4,340	III/IIa	3,860
A 13	4,030	IVa/III	3,590
A 12	3,630	IVa	3,250
A 11	3,340	IVb/IVa	3,250
A 10	3,060	Vb/IVb	2,950
A 9	2,780	Vc/Vb	2,780

Technical teachers and graduate commercial teachers are today civil servants in the Studienrat career bracket and so have the same status as grammar school teachers. This equality with the highest-graded category of teachers, achieved by standardizing the admission requirements and raising training to university level, is the outcome of a process of professionalization that

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[1] The amounts shown are composed of basic salaries plus local allowances. The calculation of civil servants' salaries is based on Seniority Level 9. As with information on incomes previously given, no account has been taken here of bonuses, employers' contributions to insurance funds, etc. It should be remembered, however, that employees have to deduct from their salaries social security contributions amounting to approximately one fifth of gross income. Civil servants do not make these contributions and therefore have a higher proportion of of their gross salaries at their disposal than employees.

was only completed in the 1970s.[1] The problems raised by the relationship between these and practical teachers and simply by the need to have practical teachers and to increase their number are an indication, however, that professionalization of the occupation of technical teacher has been achieved at the cost of creating a hierarchy within the vocational school teacher category.

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[1] See W. Lempert, Der Gewerbelehrer, Stuttgart, Enke 1962, and W.-D. Greinert, H.A. Hesse, Zur Professionalisierung des Gewerbelehrerberufs, in: Die berufsbildende Schule 26 (1974), pp. 621-625, 684-695.

2. The training and careers of teachers and trainers in vocational training

2.1. The training and careers of company trainers

2.1.1. The initial and advanced training of trainers

Some details of the training of company trainers have already been given during the discussion of the criteria for determining the suitability of trainers. Although it was not uncommon at one time for skilled workers - without the added qualification of technician or master craftsman - to be entrusted with training duties, most full-time trainers now appear to be master craftsmen, technicians and, increasingly, engineers.[1] It can therefore be said that most trainers in industry have the qualifications and certificates of education generally regarded as minimum requirements.

Two educational routes lead to the position of training manager: either, like the trainer, he has had training to skilled worker level followed by advanced training to technican or master craftsman level or he has studied at a technical college (formerly a school of engineering in most cases) or a college. Among college graduates the graduate engineer dominates, followed by technical teachers, graduates in commerce and economics graduates.

A similar educational route, though usually with higher school-leaving certificates, is followed by trainers in the commercial sector. Many training managers in this sector have attended a technical college or college. Those who have studied at a college have generally graduated in commerce or economics and more rarely as commercial teachers.

In-firm training staff are usually recruited from within the firm, and in the large firms studied by Pätzold in 1977, 56 of

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[1] See Kutt et al., 1980, Michelsen, 1979, Pätzold, 1977, and Wollschläger, 1975.

the 93 trainers concerned had even served their apprenticeship to skilled worker level in the firm in which they later became trainers.[1] As a rule, firms recruit trainers externally only when they extend the range of subjects in which they provide training and are unable to find suitable skilled workers among their employees. This is also true of training managers, many of whom begin as training foremen.[2]

The vocational training and qualifications of training personnel in agriculture evidently continue to present a problem. This is a direct result of the particular economic structure of this sector: most young people training in agriculture are trained on their parents' farms, but few parents have the necessary training qualifications.[3]

This outline of trainers' education and careers reveals that trainers in the industrial and commercial sectors have almost always had the same training as they are themselves now providing. This is true both of the nature and formal level of their training and of the subject area in which they have received that training: trainers train young people in occupations in which they themselves were trained and were employed. They therefore have personal experience not only of the occupation in which they are providing a training but also of the educational background of their charges. Furthermore, as most are relatively young, their own training and employment is not so far removed from the training and employment in which the young people in their charge will be involved. There are various reports, however, that train-

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[1] Pätzold, 1977, p. 267

[2] See R. Arnold, R. Weis, Rekrutierung des betrieblichen Bildungspersonals, in: R. Arnold, R. Weis, T. Hülshoff, Rekrutierung und Qualifikation des betrieblichen Bildungspersonals, Heidelberg 1981, p. 10.

[3] See H. Priew, Berufsbildung im Agrarbereich. Interpretation der Bundesübersicht 1972, in: Ausbildung und Beratung in der Landwirtschaft, 1973, No. 5, p. 96.

ers regard the on average higher level of school education achieved by young people as a problem: the average trainer these days attended (secondary) school for only eight or nine years, while the young people with whom he is dealing were at school for nine or ten years, and it is not uncommon, even in the industrial sector, for them to have university-entrance qualifications. In mathematics and science in particular, many trainees have thus had a more systematic education than the trainer, which is obviously noticeable in pedagogical interaction.

Specific rules on a process of qualification in preparation for work as a trainer are only to be found in the regulations on the suitability of trainers, which set out binding minimum pedagogical standards required of full- and part-time company trainers but do not contain any provisions as to technical qualifications, apart from insisting on a vocational training in subjects appropriate to the training requirements of the young people concerned. In the at times extremely fierce debate on the suitability and qualifications of trainers that has been in progress since the late 1960s, the question of trainers' technical qualifications has not attracted a great deal of attention. In contrast, great importance has been attached to ways of improving the pedagogical qualifications of company trainers. The emphasis thus placed has also been reflected by the legal rulings on trainers' qualifications. With the introduction of the regulation on the suitability of trainers evidence of pedagogical skills has become mandatory.

This evidence can be provided in various ways. Either the company trainer must pass an examination conforming to the regulation on the suitability of trainers before the appropriate authority (chamber of industry and trade, chamber of crafts, etc.) or the examination to become a master craftsman, or the relevant chamber recognizes his pedagogical aptitude without further examination. However, this principle of "anyone who has not yet had any complaints about the training he has provided may continue to work

as a trainer" applies only to those who had been training young people for some time before 1974. A further exemption from examinations is in force for a limited period, i.e. until the end of 1984.

A specific type of training is not precribed as preparation for the trainer's examination. The most common forms and schemes, which have increased in number many times over since the early 1970s, include courses organized specifically for this purpose by various bodies, chief among them the chambers of industry and trade and to a lesser degree employers' and industrial associations, advanced vocational training organizations, technical schools, technical colleges, etc., a form of instruction that is also preferred by the participants themselves. To define the minimum pedagogical standards which the regulation on the suitability of trainers requires trainers to satisfy, the Federal Vocational Training Committee drew up a "Recommended outline curriculum for the training of trainers" in 1972 and "Model regulations for the conduct of examinations to provide evidence of trainers' pedagogical skills" in 1972/73. The Federal Committee's outline curriculum is compared with the training plans of two large West German companies in Chart 12.

In the last decade the Federal Minister for Education and Science has provided financial support for pilot projects in the pedagogical training of full- and part-time trainers, some of which the Federal Institute for Vocational Training has monitored and/or assisted with curricular and organizational advice, to ensure that trainers acquire the appropriate skills. Government-assisted pilot courses are also available for trainers who take charge of special groups, e.g. the educationally subnormal and young foreigners. Some state grants are available for the initial and advanced training of in-firm trainers. For example, assistance may be given under the Employment Promotion Act (sections 41 ff.) to participants in schemes for the initial and advanced training of training personnel. The Länder of Hamburg and West Berlin pay grants to firms which incur expense through the training of trainers. In the Rhinland-Palatinate the organizers

Chart 12: Curricula for the "theoretical" training of trainers (total number of hours of training)

Subject / Models[1]	I	II	III
Basic questions relating to vocational education/training	18	-	20
Planning and conduct of training/study of work/planning, organization and conduct of training	137[2]	94	100
The young person in training/study of management/study of young people, incl. accident prevention	31	72	60
Legal bases/labour and social legislation	6	88	20
German/economics	50	42	-
Elocution/confidence in attitude and expression	6	30	-
Teaching of the chosen subject	-	-	-
Knowledge of the chosen subject	-	282	-
Sport, games evenings with trainees	26	-	-
Total number of hours	350[3]	672[4]	200

1 The models correspond to the following curricula:
Model I: Trainers' course of the Daimler-Benz company (first used in 1968); see Contact 9/1969, No. 1, pp. 39 ff.
Model II: Trainers' course of a large West German firm (first used in 1970)
Model III: Target curriculum pursuant to the Recommendation for an outline curriculum of the Federal Committee for Vocational Training

2 Also includes attendance of in-firm instruction and vocational schools to learn teaching methods, trial teaching and teaching exercises

3 Also includes the participants' free time for study and time taken up by examinations.

4 Includes time for visits to firms and time taken up by examinations.

of training schemes for trainers can obtain contributions towards the cost of courses.

It cannot, however, be said with any certainty how many trainers have so far provided evidence of having the required pedagogical skills. The 1981 Vocational Training Report quotes a figure of 70,000 trainers as not yet having the prescribed aptitude in this respect. After the end of 1984, however, as mentioned above, it will no longer be possible for a person to perform the duties of a trainer without this aptitude or without providing evidence of the necessary ability. Accurate figures showing the past trend in the number of examinations taken and of trainers recognized as suitable are given in the following

Chart 13: Trend in the number of examinations taken and trainers recognized pursuant to the Regulation on the suitability of trainers (AEVO) in the sector covered by the chambers of industry and trade, 1973 to 1980

	Examinations taken under the AEVO	Exemptions under sections 6 and 7	Total
1973	9,643	48,590	58,233
1974	25,747	59,044	84,791
1975	14,300	32,500	46,800
1976	17,500	32,300	49,800
1977	18,200	21,000	39,200
1978	14,100	7,900	22,000
1979	14,400	6,600	21,000
	113,890	207,934	321,824

Source: Deutscher Industrie- und Handelstag (ed.), Berufsbildung 1974/75 ff., Bonn 1975 ff.

Kutt's 1980 study reveals that far more training managers gain official recognition than trainers. It would probably not be wrong to assume that the higher levels of general education and vocational training which training managers have had make it

[1] Berufsbildungbericht 1981, p. 90

easier for them to gain exemption from the examination.[1] According to Kutt et al. in 1980, twice as many industrial trainers took the aptitude examination as industrial training managers.[2]

There is considerable controversy over the effectiveness of the statutory measures in improving the pedagogical abilities of trainers. Trainers and training managers who have been questioned on this point do not attach too much importance to the action so far taken to ensure training personnel have the skills required by the Regulation on the suitability of trainers.[3] Among trainers, as among teachers, there appears to be a widespread feeling that pedagogical abilities cannot be learned: you either have a "natural pedagogical gift" or you do not, and if you do not, there is not much you can do about it. And yet those trainers who do attend courses of advanced pedagogical training regularly state that they expect to derive practical benefit for their in-firm training activities, and most consider it necessary for future trainers to take pedagogical courses.[4]

It is worth noting that hitherto trainers' technical qualifications appear to have posed few problems in their advanced training: according to the 1981 Vocational Training Report interest in pedagogical subjects (about 80%) outweighed interest in purely technical training (about 20%) during advanced training

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1 Kutt, 1980, p. 829

2 Kutt et al., 1980, p. 109

3 See M. Boerger, K. Paschen, Effizienz der Ausbilder - Ausbildung aus der Sicht der Ausbildungsleiter, in: Beruf und Bildung 1977, No. 5, and Michelsen, 1979, pp. 211 ff.

4 See, for example, C. Hanisch, U. McDonald-Schlichting, Angaben von Ausbildern (Lehrgangsteilnehmern) zum eigenen Qualifikationsweg und zu Vorstellungen einer Qualifizierung künftiger Ausbilder, in: C. Hanisch et al., Pädagogische Ausbildung der Ausbilder, Schriften zur Berufsbildungsforschung, Vol 42, Hanover 1976, pp. 124 f.

courses.[1] It is by no means unlikely that some full-time trainers at least, especially those who have been involved in training for some time, are no longer familiar with developments in their original occupations, a factor to which the 1981 Vocational Training Report also refers. In 1977 Pätzold even went so far as to describe the "trainer's alienation from the development of occupational practice" as a characteristic of the full-time trainer since firms did little to keep him up to date with changes in the firm or occupations. Above all, the practice adopted by some large firms of rotating trainers between the training workshop and the various departments of the firm seems to be very rare.[2]

2.1.2. The trainer's activities and social advancement

It is clear from the above that the occupation of trainer is not one which is taken up from the outset, from the beginning of a career. Becoming a full-time trainer means, with very exceptions, a change of occupation. The decision to make the change usually follows a fairly long period in another occupation and therefore comes relatively late compared with other teaching occupations. There is nothing in the trainer's vocational training to guide him towards educational activities. The man who is later to become a trainer sets out on his career as a skilled worker, clerical assistant, etc. It is not until he trains further to become a master craftsman or foreman that the question of becoming a trainer arises.

But why does anyone become a trainer? There is little definitive information on the motives and interests of those who work as trainers. Pätzold in 1977 and Michelsen in 1979 both report that the trainers they questioned in industrial training workshops

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[1] Berufsbildungsbericht 1981, p. 90

[2] Pätzold, 1977, p. 272

said inclination and interest had above all prompted them to choose the occupation, although mention was also made of social security and promotion. There is no saying, however, to what extent the people concerned actually wanted or even planned to become trainers and how many have in fact been "shunted on to the sidelines" in the firm's hierarchy. The literature refers to both possibilities: in industry the position of trainer is evidently considered to be an attractive one in many cases, skilled workers at least seeing it as bringing not only social advancement in itself but also further promotion prospects. This is especially true of younger trainers in the training workshops of large firms.[1] In smaller firms the post of trainer often seems to mark the end of a career.[2]

Certain aspects of the trainer's job do in fact make it seem attractive. First and foremost, it frequently marks the change from wage-earning to salary-earning, a change which many skilled workers who have obtained additional qualifications outside the firm manage to make only by assuming training responsibilities. It is therefore understandable that, as Pätzold wrote in 1977, "the status of trainer as a technical salary-earner is regarded by trainers as reward in itself for their efforts to acquire additional qualifications."[3] Compared with the wage-earner, the technical salary-earner has greater social security and a regular income, is subject to less pressure and is exposed to less dirt, noise, physical stress, etc. He is more likely than the wage-earner to continue to receive a higher income even in his later years. The decision to change to a training post may therefore also be influenced by the more favourable trend in salary-earners' incomes throughout their careers. This may also be a consideration when a skilled worker has to accept an initial reduction in income on becoming a trainer, since younger, ef-

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1 Pätzold, 1977; Michelsen, 1979

2 Michelsen, 1979

3 Pätzold, 1977, p. 268

ficient skilled workers are likely to earn more than trainers because of the rates of pay usual in production.

In the commercial sector the post of trainer seems to be less attractive. For one thing, there is no question of changing from wage- to salary-earning since would-be trainers are already salary-earners. For another, the opportunities for advancement in training are closely linked to the firm's commercial activities and therefore more closely to line than to staff functions, among which the trainer's activities must be counted. Furthermore, there are no facilities like the training workshops in industry where training can be detached from actual processes in the firm and so assume an identity of its own. This might well be not the least reason for the very small number of full-time trainers to be found in the commercial sector, and what few there are often have the feeling that they are in a dead-end and that their work is not held in high regard. Even part-time commercial trainers see the job as temporary, perhaps as a chance of showing their worth for other positions at executive level.

There is some evidence to suggest that in neither the industrial nor the commercial sector is training always a life-long occupation, and the question then is what positions and occupations are open to trainers in their subsequent careers. Where does a trainer go when he stops being a trainer? Does he stay with the same firm or does he go to another? Does he take up another teaching post or does he again change his occupation? There is as yet no answer to these questions, only indications that they have seldom assumed problematic proportions. This may be partly due to the considerable drop in the average age of training personnel in the last ten years or so: full-time company trainers have not been in the job very long, and the older ones often have the chance of promotion within the firm's training system. It will be several years before a pattern in trainers' subsequent careers emerges.

2.2. The training and careers of teachers at vocational schools

Vocational school teachers of the Studienrat type (civil servants of the administrative class) receive their training in two stages:

- a university course of at least eight semesters and practical training of 6 to 12 months,
- as a rule, 18 months of post-graduate pre-service training as a probationary teacher in the seminar for potential Studienräte and at the training school.

To be admitted to the university course, the candidate must have matriculated, which he normally does by passing the final examinations at a grammar school or technical grammar school.

The courses of study leading to a post as teacher in a vocational school are as varied as the range of in-school vocational training itself. They can, however, be broken down into four general subject areas: commercial, industrial/technical, domestic science/social services and agriculture. As the various universities and colleges have adopted widely differing systems of courses for vocational school teachers,[1] the information given here on the actual form taken by such courses must remain very general. Under the "Outline Agreement on the training and examination of candidate teachers principally for secondary level II - qualification to teach subjects in vocational schools" adopted by the Conference of Education Ministers in 1973 and assuming a student attends 20 hours of lectures and seminars a week, his studies will be structured as follows:[2]

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[1] See the detailed description in W. Georg/U. Lauterbach, Studiengänge für das Lehramt an beruflichen Schulen in der Bundesrepublik Deutschland, Weinheim/Basle, Beltz 1979.

[2] See H. Schild, "Zehnkämpfer" im dualen System. Vom "Gewerbelehrer" zum "Sekundarstufenlehrer" an beruflichen Schulen, in: abi-Berufswahlmagazin 3 (1979), No. 12, p. 16.

Chart 14: University courses for vocational school teachers

Semester	1st state examination		
8 7 6 5	Vocational subject area abt. 40 SWS	2nd subject abt. 20 SWS	Pedagogical studies abt. 20 SWS
Preliminary examination (usually after 4th semester)			
4 3 2 1	Vocational subject area abt. 40 SWS	2nd subject abt. 20 SWS	Pedagogical studies abt. 20 SWS

SWS = Semesterwochenstunden (hours of lectures and seminars per week)

Vocational subject areas in the industrial/technical sector include the following subjects: metal-working, electrical engineering, building, design, printing, textile and clothing technology, bio-engineering, chemical engineering, nutrition and domestic science. The second subject may be selected from the whole range of general subjects: sport, social studies, German, foreign languages, science, etc.

The period of practical training can be taken before the university course begins or during the university vacations in firms whose activities correspond to the chosen vocational subject area. The successful completion of an appropriate course of vocational training is regarded as evidence of practical training in the subject area concerned.

The training of both technical and commercial teachers is closely linked to degree courses in the same subjects, i.e. the training of graduates in engineering and commerce. At some universities in fact the course for commercial teachers is a degree course. The importance attached to the subject area and the pedagogical side of teacher training does, however, vary from one university to another. This general orientation of teacher training towards the subject area, thus aligining it with the occupation of the engineer and graduate in commerce, is one cause of the criticism that instruction in vocational schools is "top-heavy".

While systematic, university training has largely been available to potential commercial teachers since the beginning of the century, technical teachers had to wait until the 1960s. For many years, teachers at industrial/technical vocational schools were trained, like primary school teachers, to become executive-class civil servants and attended vocational teacher training institutions or similar non-university education centres.[1] As a rule, technical teachers of the older type had completed an apprenticeship. Owing to the considerable shortage of vocational school teachers up until the 1970s, a wide range of opportunities - differing from one Land to another - existed for transfers from other occupations, for example primary school teaching, some academic posts and employment as foremen or master craftsmen, with special short-term teacher training courses to prepare the way for the new teaching post. In the 1970s various universities introduced continuation courses for technical college graduates,[2] but most of these have now been abandoned because the shortage of vocational school teachers has been largely overcome and the normal teacher training courses have become fully established, producing graduates in larger numbers.

Even today, however, a comparatively high proportion of the students attending courses of study leading to teaching posts in vocational schools have not gained admission to the university by the normal method of first attending a grammar school. A relatively high number of university-trained vocational school teachers complete a course of vocational training before studying and thus satisfy the requirement of evidence of practical training. On average, they are consequently rather older than their colleagues in schools providing a general education when they

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1 Baden-Württemberg still has a vocational teacher training college in Stuttgart, offering seven-semester courses in economics, nutrition and domestic science. However, it is shortly to be merged with the University of Hohenheim.

2 See, for example, the study by R. Brechmacher et al., Berufspädagogen in Studium und Beruf. Untersuchung am Beispiel der berufspädaogischen Aufbaustudiengänge für Fachhochschulabsolventen an der Gesamthochschule Kassel, Frankfurt/New York, Campus 1980.

first become teachers. In many cases, they are thus closer to their later pupils in terms of social background and prior occupational experience than university-level teacher training might seem to indicate. But this greater social proximity to the world of vocational school pupils does not in itself make commercial or technical teachers who have obtained their university training in this way "ideal" for their pupils: it seems that the identity problems connected with social advancement not infrequently result in overadjustment to the "new" values of the academic environment and in social conservatism.[1]

From the very wide range of channels leading to the teaching profession until the 1970s it can be concluded that the teachers now working at vocational schools, and particularly those teaching industrial/technical subjects, form a heterogeneous group in terms of education and careers. A breakdown of teachers by type of training does not exist, however. Nor is there any information on the number of teachers who have become civil servants in the administrative class during their professional careers without having had the eight semesters of university training which are now required. With the classification of the individual teacher as civil servants in the administrative class (A 13 and above), the differences that may exist in not only formal but also actual education requirements are veiled by the uniformity of the remuneration category.

The most important aspects of the training of practical trainers have been discussed in point 1.2.3. It should merely be stressed once again that, as was to some extent the case with technical teachers in the past, some teachers in this category still enter the teaching profession from employment in the private sector, as master craftsmen or technicians, for example. Thus, while training as a technical teacher is increasingly becoming the first vo-

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[1] See U. Büchner, Der Gewerbelehrer und die industrielle Arbeit, Weinheim/Basle, Beltz 1980, particularly pp. 238 ff.

cational training a young person receives, the occupation of "practical teacher" is one which can only be taken up after employment in another occupation. The direct route from school to school is still barred in this case.

It can be said of all categories of vocational school teachers, however, that "once a teacher, always a teacher". A decisive factor in this is undoubtedly the social security, regular income, etc. which go with the status of civil servant and, to a lesser extent, with that of public service employee. Nonetheless, some teachers also take classes at evening schools or inter-company training workshops or give the theoretical instruction that many large firms provide for their trainees to supplement the instruction their receive in vocational schools.

The Education Ministries of the Länder regularly hold courses for the further training of their teachers. It has not been possible to obtain any information on the frequency with which vocational school teachers attend such courses, the importance attached to advanced training in the subject matter as opposed to teaching methods, etc. However, various discussions with vocational school teachers and Education Ministry officials did reveal that keeping teachers up to date with developments in the occupations in which training is provided, technological innovations and the situation faced by young people is regarded as a problem. Teachers are able to grasp these aspects of the training situation, which have more to do with the practical side of occupations and the lives of their pupils, only if they themselves maintain contact with the firms, visiting them from time to time and even taking practical courses in them. Some teachers do in fact repeatedly renew these contacts, but it is almost always they who take the initiative in this respect.

3. Vocational training problems and the position of trainers and teachers

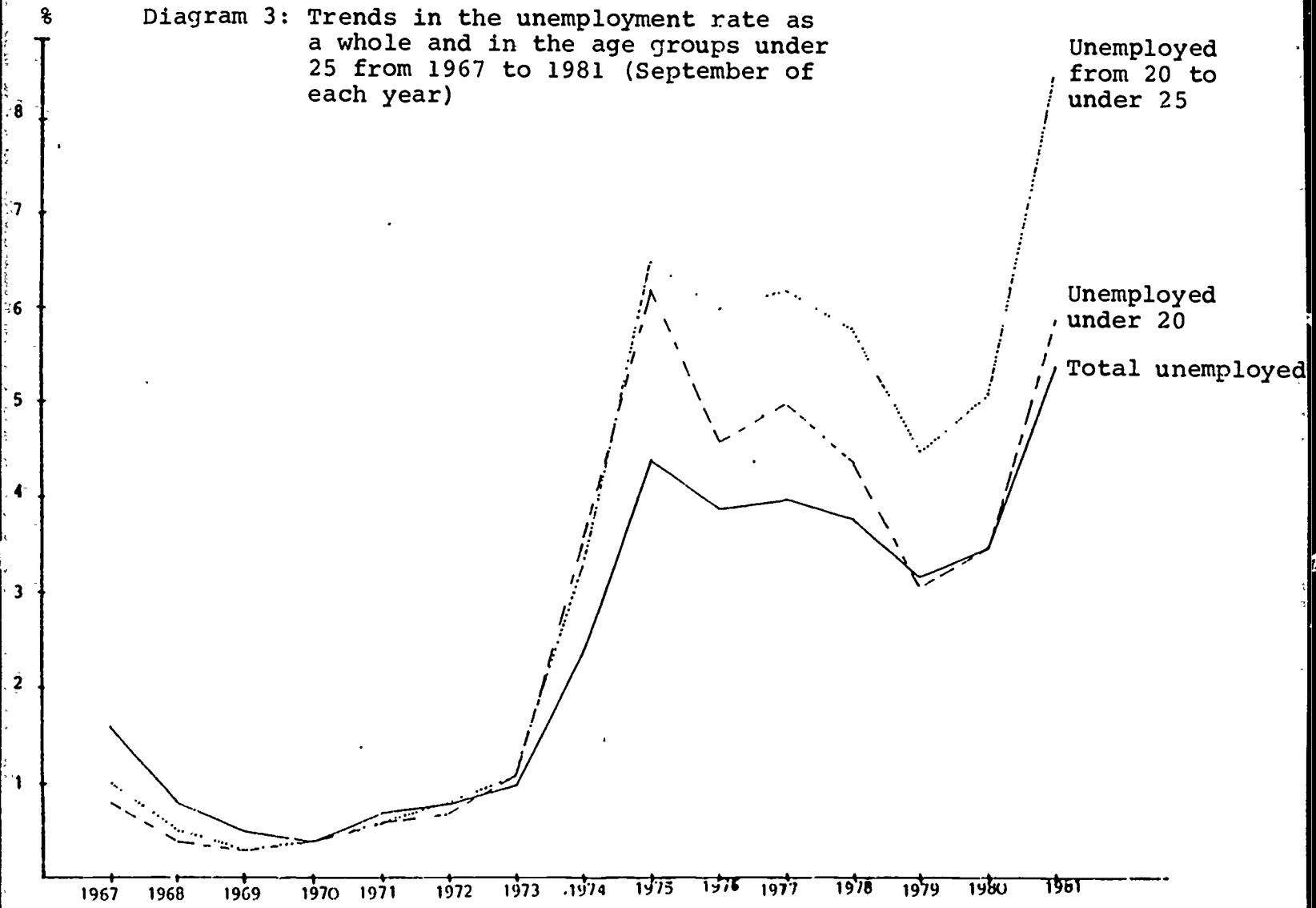
In the early 1970s the expansion and reform of the education system, including vocational training, was a major public issue. However, from the outset - the prelude being the wrangling over the 1969 Vocational Training Act - the proposals which the politicians responsible for education put forward for the reform of vocational training by the dual system were the subject of political controversy, and it became extremely difficult to make changes in this area. The "reform party" was principally anxious to

- improve the quality of vocational training across the whole spectrum of training situations,
- systematize and modernize the content of training courses,
- reduce the number of young people left without vocational training to fewer than 10% in any year.

The situation has changed radically since the mid-1970s, with the coincidence of the economic crisis and a tremendous increase in the number of young people reaching the age at which they require training. In 1975 the rate of unemployment among young people under 20 exceeded 6% for the first time (see Diagram 3).[1] Although it has fallen again since then, it is still higher than the unemployment rate as a whole. The structural imbalances in vocational training by the dual system have become more pronounced. Firms which once provided proper, expensive training have cut down on the range offered, and many smaller firms have stopped training altogether. Craft firms, on the other hand, have increased their share from year to year: while 38% of all train-

[1] This figure has its limitations: on the one hand, the number of unemployed young people not registered with the employment offices is relatively high in this age group. On the other, unemployed young people who are interested only in a training place and are not prepared to accept a job instead are not regarded as unemployed.

Diagram 3: Trends in the unemployment rate as a whole and in the age groups under 25 from 1967 to 1981 (September of each year)



Source: Federal Employment Institution, Amtliche Nachrichten

ees had a training contract in 1975, the figure had risen to 41% by 1979. The Federal Government calculates that in 1979 a total of about 11% of young people in each age group went without any kind of vocational training, although the figure may have been as high as almost 20% in certain regions.[1] The latest figures show that the situation is continuing to deteriorate: in 1981 627,010 young applicants for training places were registered with the employment offices, but only 605,352 training contracts were signed, 6.9% fewer than the previous year. Over 21,650 young people who had registered as wanting a training place thus failed to find one.[2] Furthermore, the limited prospects have resulted in many young people resigning and not taking the trouble to register with the employment office as seeking training. In this situation, political efforts are concentrated not on improving the quality of vocational training and ensuring that almost all young people receive such training but on reducing youth unemployment and the shortage of training places, the slogan being: better any training place than none at all, and better any job than looking for a training place that does not exist anyway.

The problems and deficiencies of vocational training by the dual system that arise from the training and occupational position of trainees have thus largely paled into insignificance. When we read today contributions to the debate on the situation in vocational training and the position of trainers and vocational school teachers in the period from 1965 to 1970, we cannot fail to be surprised at how little the aspects that troubled trainees have changed since then and in particular at the complete acceptance today of developments generally regarded as problematic and still in their infancy at that time.[3] This only goes to

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[1] Berufsbildungsbericht 1981, pp. 11, 20

[2] Berufsbildungsbericht 1982

[3] See, for example, W. Lempert, Gewerbelehrerbildung und Schulreform, Heidelberg, Quelle & Meyer 1969.

show, however, that fundamental problems confronting trainees are directly related to the structure of the dual system and specifically to its clear division, at least as young people see it in their everyday vocational training, into two areas of competence and legislation.

Where the vocational school is concerned, the separation of in-firm from in-school, practical from theoretical training led to the general acceptance of the university training of vocational school teachers that they had originally wanted for reasons of status. As explained above, vocational school teachers are today Studienräte, or fully qualified graduate teachers, and have thus achieved their goal of equality with grammar school teachers, which in itself is quite proper and appropriate. The university training of vocational school teachers means, however, that this equality has been achieved at the price of growing unfamiliarity with the practical aspects of occupations and the world in which their pupils live. The problems raised by this development are further aggravated by the virtual impossibility nowadays of becoming a vocational school teacher by other means: through a technical college or by advancing from specialist teacher, practical teacher, workshop teacher (or whatever title may be used) to Studienrat level. When the division of tasks between schools and firms is considered, it may at first seem strange that problems should arise from the fact that vocational school teachers now receive their training at universities and that this training should therefore be theoretical rather than practical. The school's task after all is primarily to teach theoretical knowledge and general educational skills and to ensure that pupils receive a political education and are informed of the opportunities and rights they have as employees and citizens. A teacher with a sound training in his subject and pedagogical skills, it might be thought, should be capable of performing this task well, even though he has not himself had the experience of in-firm training and/or work outside the school. Problems might possibly be expected to arise from a lack of coordination between training regulations and school curricula, i.e. a lack of coordination at the level of educational administration. These

problems do indeed exist, and they give rise to frustration in both pupils and teachers and the feeling that there is no sense in what is being taught. However, the "top-heaviness" of teaching by university-trained vocational school teachers in fact poses problems at both the practical/ technical and the pedagogical/didactic level: the "denigration" of vocational school teachers with Studienrat status by teachers on the practical side and the increasing numbers of university-trained teachers would seem to indicate that, since it does not include practical elements, the teaching of theoretical knowledge does not match up to the practical requirements of employment. It is surely difficult even for a skilled worker to take appropriate action in his job if his training has not included explicitly and specifically interrelated elements of theory and practice. It would also appear that the practical teachers, with their lower pay and less favourable conditions of employment, are more successful in this respect than the Studienräte. Pupils usually regard the practical teacher as the expert who knows something about the occupation they are learning and is able to pass on his knowledge to them.

The university training of vocational school teachers also causes pedagogical/didactic problems. How is a teacher to base his teaching on the everyday working lives and the experience of his pupils if he knows nothing of how they live? How in these circumstances is he to guide them in their thoughts on their practical activities and to help them to understand both the requirements of their occupations and the world in which they live?

In the case of in-firm training, the weakness of the dual system tends to be that even full-time trainers are not professionals. They are employees of the firm providing the training, and their socio-economic status, their conditions of employment and their pay depend on the situation in the branch of industry concerned and in the firm itself. Their professional identity is primarily based on the occupation which they perform and in which they train others. Only full-time trainers who have been doing the job for some considerable time put their training activities first.

In these circumstances, it is difficult for a trainer to side with his trainees against the firm by, for example, teaching them more extensive and more comprehensive knowledge and skills than the firm feels its future employees need. Although the training regulations lay down minimum requirements for in-firm training, they are no more than minimum requirements. More comprehensive training is not only in the interests of the trainee, giving him greater independence from the specific circumstances of the firm where he receives his training, but would also counter the claim by critics of the dual system that in-firm training is not sufficiently future-oriented.

If full-time trainers worked on a more professional basis and if all trainers were more independent in their activities, they would have some protection in the performance of their training duties against the restriction of vocational training to the firm's own specific needs. During the debate on the reform of vocational training it was repeatedly said that trainers should have greater autonomy and that this should be reflected by a change in their legal position. The authors of the "Manifesto on the reform of vocational training" (1973), a group of academics with an interest in education who put forward a comparatively far-reaching proposal for the transfer of reponsibility for vocational training to the state, believed that:

> "The legal position of trainers must be changed to enable them to do their work regardless of the biased interests or the instructions of employers. All trainers in non-productive places of learning (including firms' teaching workshops) must be registered with the regional (autonomous, but yet to be established - B.K.) vocational training board. Consideration must be given to the proposal that they should be employed as public servants by the regional vocational training board.
>
> Trainers in productive sectors must be registered with the regional vocational training board, while remaining employees of the firm. Through their obligation to register and the supervision of their activities they will thus be sufficiently exposed to the influence of the central office and therefore of the autonomous board."

Although this transfer of responsibility for vocational training to the state - with in-firm training retained - and the implications it would have for the legal position of trainers and the financing of in-firm training are not being discussed at present in view of the political and economic situation in the Federal Republic, the proposals made in this regard over ten years ago should not be forgotten. The dual system has undeniable advantages, but it also has weaknesses and deficiencies due to its structure. Young people who experience its weaknesses and defects rather than its strengths face a very uncertain future.

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