

**COST A11 Action:
Vocational Education and Training: Flexibility, Transferability and Mobility**

**General Education and Initial Vocational Training in Germany
The “Flexicurity Route” of Modernization under Aspects of
Flexibility, Transferability and Mobility**

A Contribution to COST A11, Working Group 1: VET policy

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1. Introduction and Overview: Modernization of Initial Vocational Training between System Flexibility and Social Security – The “Route of Flexicurity” in Vocational Training Policy

Main point of the working paper presented here is to outline the reform path of initial vocational training (policy) in Germany. Flexibility on the one hand and economic and social security on the other are two sides of the same coin of that what is called “soziale Marktwirtschaft” in the Federal Republic of Germany. Dependent on the major macroeconomic developments across the world, the social market system and, as a integrated part of it, the Dual VET System is in change. The route of modernization the Dual System can be characterized as “flexicurity”.

Flexibility seems to be the key word in all countries of the EU since the nineties, when listening at the political debates and looking at labour market dynamics (NIJHOF et al 1999, p. 4). In order to understand, to describe and to anticipate the future structure of VET systems NIJHOF et al used a systems’ concept; and they stipulated the forms of system flexibility as flexibility of delivery, curricular flexibility and flexibility of pathways (NIJHOF et al 1999, p.18). This is helpful to classify and to specify the different functions of flexibility related to the Dual VET System and its contexts. Moreover, the flexibility of the decision-making-structure behind the scenes of learning venues, training regulations and pathways in vocational career development is of most important relevance when we discuss the needs for modernization of the Dual VET System in Germany.

As the German system of initial and further vocational training is part of the federal education system as a whole it is useful to start with some general remarks on that system and the access to higher education with its impact on the vocational training system as the less attractive alternative. Then I shall have a closer look at the Dual System. Until now this system is based on the principles of dualism, vocationalism and corporatism. These principles are characterized by a relative high standard of built-in flexibility combined with tradition-based forms of security against the risks of modernization.

It will be the main task of VET policy to balance flexibility and security considering both the impact of global economy on and the political responsibility for country’s skill formation development. In terms of Federal Government’s Report on Vocational Education and Training for the year 2000 this means primarily to provide “education and training for all” (BUNDESMINISTERIUM FÜR BILDUNG UND FORSCHUNG 2000, p. 1). The Report continues: “An efficiently-structured, modern vocational system that offers access to other areas of education and training must provide the basis for individual career opportunities, for greater innovation and competitiveness, and must serve to shape the employment world to the requirements of the future. Vocational education and training is about education, personality development, and about keeping a location attractive to investors and at the same time promoting employment”.

It is this route of “flexicurity” that has been the advantage of the German VET system until now. However, this advantage was not due to “duality” of whatever kind. The Dual System functions as well as it does because it is not bound to a simple arrangement of two learning sites or to a rigid dualistic model, in which the state would intervene if the market failed, but rather has to access to a complex mechanism of a mixed regulating system. This worked in the past. But there are new requirements for flexibility, transferability and mobility to overcome the problems of the next decade. Plurality and cooperation of learning venues, broadening the apprenticeship occupations and flexibilization of the vocational qualification structure, and last but not least opening the traditional decision-making structures in vocational training policy towards new alliances and networks on the national, regional and local level are necessary and must be proved if the Dual System shall alive as a learning system for the future and in the future.

2. Development of the German Educational System – Continuity in Change: Separation between General and Vocational Education – Paradox Effects of Reform Activities

The earliest post-war developments in the Federal Republic consisted of a progression from somewhat bewildering diversity towards a degree of standardization. In accordance with the policy of “restoration” the education system, when viewed as a whole, did not differ greatly from that of the Weimar Republic. (As to the landmarks of post-war education policy in West Germany see HEARNDEN 1976). The general framework was characterized by the following structure elements up to the 1960s:

- The school system for general education and the system of vocational training were separated in their concepts as well as their institutions. In other words: The school system was subject to public responsibility dominated by the state whereas initial and further vocational training inside the companies were the exclusive matter of industry and crafts. After four years of comprehensive schooling at the Volksschule (primary elementary school) for all 6-10 year-olds there was a division into three different types of school: The vast majority of the school population stayed at the Volksschule (elementary secondary school). The Realschule (secondary medium school) was mainly for the middle class. And the Gymnasium (grammar school) was primarily for upper class children. Movement between these types was rare, and the transition to vocational training was basically set for school-leavers from Volksschule and Realschule.
- While being trained by the companies themselves the apprentices were taught part-time at compulsory vocational schools (Berufsschule) under state control. This concept of simultaneous training and education within the company and at vocational school has formed the base of vocational training up to now, and has been known as the Dual System since the sixties.

It was typical for the traditional school system that the transition from primary school to the secondary schools was highly selective. Due to the low permeability between the different pathways the educational and vocational careers were determined at the age of ten generally on the basis of the individual class background. In the fifties, for example, only 5 % of the students in higher education had a working class background while more than 50 % of the West German population was considered working class. Consequently, the educational system was basically operating as a central institution for the distribution of social positions.

What has changed up to now? How does the educational system look today?
(KUTSCHA 1994)

First of all I need to point out that there has never been a single uniform system in West Germany. Germany is a Federal Republic. After unification with the former GDR the Federal Republic nowadays consists of sixteen Bundesländer. The concept of federalism - as laid down in the German constitution (Grundgesetz) - is based on a division of power between the federal legislative and executive bodies and those of the Länder. The Länder autonomously look after their obligations and are provided with the financial resources to do so. The federal constitution determines the education system to be exclusively under authority of the Länder. This independence in matters of education and culture has consequently led to different laws and regulations throughout the country as far as school system is concerned. This does not apply to in-plant training under the Dual System of vocational education and training which is, by constitution, part of industrial and economic law of the Federal Republic. As a result, the Dual System operates in a complicated legal position: The federal state controls the in-plant and industry-wide training on the basis of the Vocational Training Act (since 1969) while the Länder are responsible for the vocational schools.

Although the Länder are independent in educational matters there are some basic principles that have constituted the backbone of educational reform since the end of the sixties coordinated by the Standing Conference of Ministers of Education and Cultural Affairs:

- Public responsibility for the whole system of education and training, which means: state responsibility for youth even includes those in training outside state institutions.
- Equality of educational opportunities, which means: All children and juveniles are to be supported, independent from social background, in order to have the qualification needed to make use of opportunities that are available in the system of employment.
- Permeability between the different pathways, which means: No course or career in education must come to a dead end. The educational system is to be organized in a way that allows transitions within the different types of school and the different courses and career patterns.

There is access to higher education now, at and from all levels of the educational system, which has led to radical changes in the structure of the school population. The change of the Gymnasium from formerly a highly socially selective educational institution into what is - in tendency at least - an open and socially integrative school was achieved while the institutional and curricular framework remained constant. There was no curricular integration of theory and practice, of vocational and study-related content. It is therefore appropriate to speak of "continuity in change" (ARBEITSGRUPPE BILDUNGSBERICHT AM MAX-PLANCK-INSTITUT FÜR BILDUNGSFORSCHUNG 1994, pp. 483 ff.).

The overall trend may be summarized as follows: By keeping the structural conditions constant, opening up educational pathways leading to higher education to population groups previously distant from the Gymnasium had effects that were detrimental to the system in all. Since they were increasingly oriented towards the connection between final examination and career prospects, students turned in greater numbers to the more attractive educational pathways where these functioned as prerequisites to privileged careers. As a result, these careers had an excess of applicants whereas the less attractive pathways threatened to dry up altogether. The Gymnasium tends to become a main school, while the Hauptschule as the former main school becomes a catch-all for those left over. In 1960 two thirds of the secondary school population were at Hauptschule, the secondary elementary school formerly known as Volksschule. Today, however, less than one third of the pupils go to this lower type of school whereas more than two thirds are at the higher graded Realschule and Gymnasium.

The Hauptschule suffers from a negative image, as a result of which the chances of its former students gaining the training place of their choice have grown far worse. In this regard the Hauptschulen are the evident loser in the one-sided educational reform that has taken place. But they are not the only losers. Training firms, especially in the craft trades, complain of a lack of young talent coming forward.

The development of the education system in Germany and the controversies on educational policy and theory that accompanied it can only be understood if one sets the disjunction between general and vocational education in the context of the distribution of knowledge as a means of access to more or less privileged positions. At the same time, one must be familiar with the notion that the Gymnasium in Germany, because of the way it is connected to the occupational system, and because of the role it plays in the imagination of its pupils and their parents, fulfils the function of a preparatory stage for high flying graduate professions (KUTSCHA 1994, pp. 134 ff.)

The diverse educational efforts needed to enhance the attractiveness of a skilled-worker career are characterizing current discussions in Germany. Nowadays there is a

broad consensus across all political parties, employers' and employees' associations to avoid "dead ends" in the system of general education and vocational training. Equity of general and vocational training courses is required to the point where (e.g.) master craftsmen are enabled to enter a higher education institution - even the university. The reform device is: separate but equal. This means flexibility of pathways, i.e. different pathways can be followed and future options remain (RAFFE 1994; NIJHOF et al 1999, p. 18). However, the transition to Gymnasium increases. As much as ever, it is right what Arthur HEARNDEN (1976, p. 148) summarized in his analysis of the Germans' attitude towards changes of school system in the seventies: "... the situation in fact remains that the Gymnasium is the Gymnasium is the Gymnasium ..."

3. The Dual System of Initial Vocational Education and Training – Dualism, Vocationalism and Corporatism – Reform Pathways under Aspects of System Flexibility

3.1 Basic Structures and Functional Elements - Dualism of Learning Venues ("Dualitätsprinzip") – Approaches towards Flexibility of Delivery: From the Dual to a Plural VET System

In Germany, vocational training to become a skilled blue- or white-collar worker is mainly conducted within what is known as the Dual System of vocational training (see MÜNCH 1991; GREINERT 1991; OECD 1994; SCHMIDT 1993; SCHMIDT/ALEX 1997). Short and to the point (ASHTON/GREEN 1996, p. 143): The off-the-job training financed by the state is intended to convey the theoretical knowledge necessary for the trades and also a basic education in the requirements of citizenship. The on-the-job training is characterized by its systematic and casuistic nature, as defined by training regulations (federal syllabus for in-plant training) and the presence of the trainer and Meister, specialized in the arts of training, to guide the apprentice through on-the-job training. – This description of "duality" related to the German VET system is an easily remembered picture, but it doesn't reflect the complexity and plurality of learning venues and training regulations, finance modes and decision making structures (STRATMANN/SCHLÖSSER 1990). The current controversy about the "crisis" of the Dual System and the political debate concerning reform activities (see EULER 1998) often suffers from heroic reduction of complexity which ignores the potentials of renewing this system by using the benefits of internal flexibility (see EULER/SLOANE 1997; KUTSCHA 1999).

Since 1969, the existing statutory provisions have been brought together in the Vocational Training Act (see Deissinger 1996). This Act applies only to on-the-job training, not to the vocational schools within the Dual System. The law provides that young persons up to 18 years of age may be trained only in a recognized training occupation. Attendance of vocational schools is compulsory (up to 12 hours a week). Although vocational schools are subject to the law of the Länder – because of the constitutional structure of the Federal Republic of Germany – their set-up is largely standardized.

About two thirds of the young people born in one age class complete a traineeship (apprenticeship) in one of the 355 existing training occupations recognized by the state. School-based training programmes play a relative minor role in numerical terms. Most of the apprentices in the Dual System are trained in private sector companies. A contract between the training enterprise (the firm where the practical training takes place) and the trainee forms the basis of training under the Dual System.

The training offered by a firm must comply with all training regulations, i.e. it must be comprehensive. During the last decades, however, technicalization und specialization have overtaken medium-sized and smaller firms. This has resulted in a situation where an increasing number of these firms are no longer in a position to provide a comprehensive vocational qualification in accordance with existing training regulations and the latest state of the art. Whereas major companies and certain branches solved

this problem at an earlier stage by setting up and extending their own in-plant workshops – where now the bulk of trainees' trade training is provided in addition to the training they receive at their place of work – the financial and organizational potential of small firms does not extend to the setting up of such workshops. In order to help remedy this situation, the concept of interplant training was evolved. In essence, this means that a number of small firms send their apprentices to training courses at a central training centre, usually run by the chamber or guild.

Generally, enterprises finance their own training. The operating costs of external training centres are covered mainly by the membership fees that enterprises pay the district chambers and by the attendance fees charged for courses. Part-time vocational schools are financed by the Länder and local governments. In addition the federal government spends a lot of money to improve training capacity and the quality of training in companies, e.g. by financial assistance for setting up interplant training workshops and creating additional training places. For in-plant vocational training, pilot projects are organized by the Federal Institute of Vocational Training. There are also model experiment programmes for vocational schools. The Federal Government and the Länder participate in these model experiments under the umbrella of the Federal Government-Länder Commission for Educational Planning and Research Promotion (Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung).

If we look at the Dual System in Germany, it becomes clear that this system has long been moving from a dual to a plural system of learning venues. With regard to large-scale enterprises, there is a tendency to decentralize training while at the same time, developing new combinations of learning venues, for example the network of the in-company workshops, workplaces and "learning islands" (DYBOWSKI 1998). The vocational schools, too, try to replace the traditionally theory-oriented teaching by new form of practice oriented teaching and to test new learning venues within the schools for a combination of theory and practice (ACHTENHAGEN 1994), for example, learning offices in commercial vocational training. The change from a dual to a plural system of learning venues - as a prerequisite for more "flexibility of delivery" (NIJHOF et al 1999, p. 18) - cannot be stopped, and it is absolutely essential for modernization of vocational training and education.

However, the quality of vocational education and training is not only dependent on the form and number of learning venues. It is also determined by how the apprentices experience the relations between the different learning venues. Plurality of learning venues must be supplied by cooperation between the learning sites as a prerequisite of transferability. The results of empirical research show that the cooperation between training companies and vocational schools within the Dual System has not – by and large – been successful (WALDEN 1999). Therefore, it is important to gather as many experiences in practice and research with different forms cooperation between learning venues as possible. Not only pilot projects of large-scale companies should set the tone. The connection of working and learning in a network of VET venues and therefore the cooperation between learning sites is one of the most important tasks for modernization not only of the Dual System in Germany but in all European training systems (KUTSCHA 1997).

3.2 Qualifying the Workforce – New Vocationalism ("Berufsprinzip") and Self Regulated Learning – Approaches towards Curricular Flexibility and Flexible Pathways: Separate but Equal

It may be asserted that, both with respect to in-company training and post-compulsory part-time schooling, the dominant principle of VET regulation within the Dual System is vocationalism (Berufsprinzip; REULING1997). According to the Vocational Training Act the object of initial training shall be to provide, through a systematic training programme, a broadly conceived basic preparation for an occupation and the necessary technical abilities and knowledge to engage in a skilled form of occupation

activity. "Ausbildungsberufe" (apprenticeship occupations) involve sets of typical activities around the workplace which are not specific to a single worksite or company but to the labour market as a whole. Young people are equipped with sufficient mobility and flexibility not to be restricted to any particular workplace or company. And because training at the workplace is the predominant training format, young people are qualified for carrying out their "Beruf" by virtue of the extensive work experience which they have to gain to meet the standards set for a vocational traineeship.

There are currently about 355 recognized skilled trades and occupations requiring specialized training. Companies are only allowed to train young people under 18 years of age for one of these recognized apprenticeship occupations. For each of them exists a special training regulation which is set by the Federal Minister for Education and Science in accordance with the employers' associations and the trade unions. These regulations are based on the 1969 Vocational Training Act. They must specify at least:

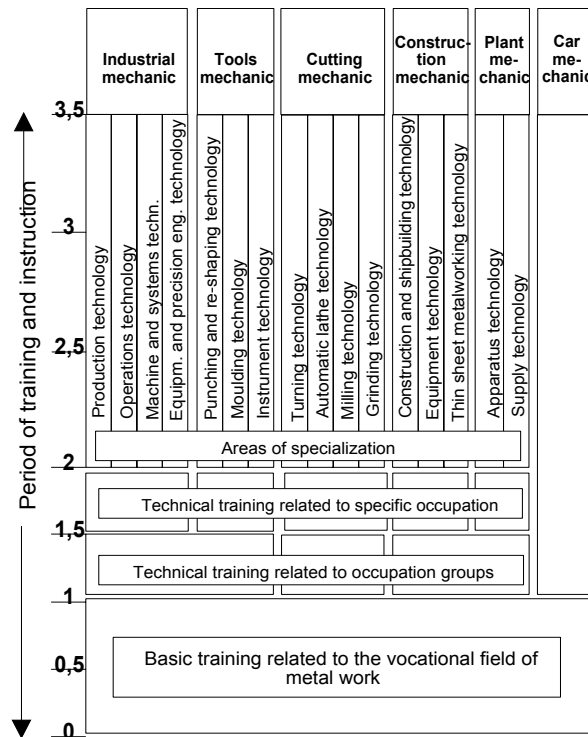
- the name of the trainee occupation,
- the period of training which shall not normally be more than three or less than two years,
- the skills and knowledge to be imparted in the course of training (occupational description),
- an outline on the syllabus and timetable (overall training plan),
- the examination standards.

Training regulations only set out the minimum requirements for any given trade. Their final vocational certificates are meant to offer young workers greater prospects of mobility. The certificates attesting the successful completion of a vocational training fulfil an important information and orientation function for and on the labour market. They make the labour market transparent for both young people seeking a traineeship and employers seeking skilled labour. Therefore the "Beruf"-principle is still defended today by German employers' associations and trade unions alike as a model for regulating training contents and qualification levels (REULING 1997, p. 29). Models such as initial training on a modular basis involving credit schemes and staggered qualifications are regarded as likely to "dilute" this principle and are therefore strictly rejected.

The challenge of new technologies and corresponding industrial processes and the different speed and intensity of their application in different kinds of businesses has made new demands on the skilled workforce. Particularly the big industries expect their workforce to be able to provide prompt application of specialist qualification on the one hand and a wide basis of qualification for changing applications with different requirements on the other. Skilled workers have to carry out their work independently and flexibly, taking personal responsibility for the quality of their products. Therefore the training of young people's abilities to meet these new challenges has been and will be given first priority.

New training regulations have been developed to form the legal frame for these new preoccupations. An example are the training regulations for the industrial metal occupations. Up to 1987 there were about 40 metalworking occupations, partly with a high degree of specialization. There are now only 6 internally differentiated metal occupations since the reform. All of these new courses last for 3 and a half years. The training has been divided into one year of basic vocational training covering the widest range of skills and knowledge for metalworking followed by specialized training related to occupation groups, to each of the specific occupations (like industrial mechanic, tool mechanic etc.), and to 16 areas of specialization (for example turning technology, automatic lathe technology, milling and grinding technology within the cutting mechanic occupation).

**TRAINING REGULATIONS FOR
INDUSTRIAL METAL WORK OCCUPATIONS**



The introduction of a new prototypical autonomous skilled worker as a model for vocational education and training is as important at the level of occupational structure as the innovative training processes themselves. On this subject, the new regulations lead to a change of paradigm qualifying the workforce in Germany. Since then training regulations require that vocational education and training must help to shape the new role of the skilled worker, describe the new perspectives and train for “autonomous planning, execution and control” of the work task. The components mentioned are points of reference for complete vocational actions. Training in task- and action-oriented way means enabling the future skilled worker to master the performance of tasks in a complete manner. In this sense the new training regulations demand that beyond technical qualifications personal and social competences are also imparted. These are supposed to ensure that cooperation in the workplace meets the demand of the tasks set and the individual participating, and also that a mutual exchange of information takes place in a constructive and continuous manner.

The principle of action-orientation implies in the case of vocational education in the industrial metalworking occupations that the apprenticeship model which has dominated the scene formerly is abandoned in favour of integrated forms of training (KUTSCHA 1994). The apprenticeship schemes introduced by the large companies in the 1920s and 1930s were characterized by a linear organization of learning steps, which had to be taken by trainees in a uniform way one after the other. In doing this, the learning sequences were isolated from the complex action scenarios of skilled work in such a way that social, communicative and economic interdependences remained out of the picture. The apprenticeship concept represented the pedagogical counterpart to the Taylorist division of labour with strongly hierarchical directional structures organized in linear fashion. Its effectiveness stood or fell along with precisely this form of organization of work. The new conception of qualifications takes into account the

changed demands in the context of production processes where tasks and functions are integrated (KERN/SCHUMANN 1984).

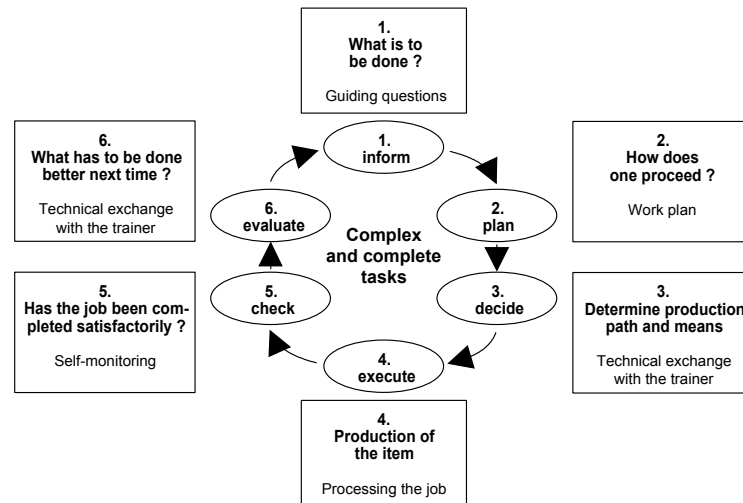
FORMER CONCEPT FOR FIRM-BASED TRAINING: FOUR-STEP-METHOD	
Actors	Training Process
Trainer	1. Preparation
	2. Demonstration
Trainee	3. Imitation
	4. Exercise

Of course, according to the action theory conception of autonomous and cooperative working, integrated learning makes demands on the whole training set-up and the activities of the training personnel. The trainer is no longer primarily the superior and demonstrator but tends to take on more and more the task of an adviser and moderator. New training materials and media are deployed between trainees and trainer which extend opportunities for independent learning and at the same time offer tutorial assistance in working through complex tasks.

Put into practice the new concept could look like this: A certain item of the syllabus is imparted in projects. Rather than using the traditional four-step way of preparation-demonstration-imitation-exercise the trainees take six steps in teamwork:

- The trainees are given a task plus basic explanation, if necessary. They try on their own to find those information they need.
- The trainees plan and organize necessary steps and resources.
- The plan is discussed with the trainer who supports decision-making.
- The trainees execute their plan in teamwork largely unaided or, in the case of complex tasks, on a teamwork basis.
- The trainees control, discuss and assess the final product. This check should be carried out first and foremost by the trainee himself as it is only thus that the trainee learns to judge the quality of his own work.
- After self-monitoring the trainees present their results to the trainer. They discuss problems, difficulties, and find conclusions to be drawn for future activities.

**NEW CONCEPT FOR FIRM-BASED TRAINING:
ACTION ORIENTED LEARNING**



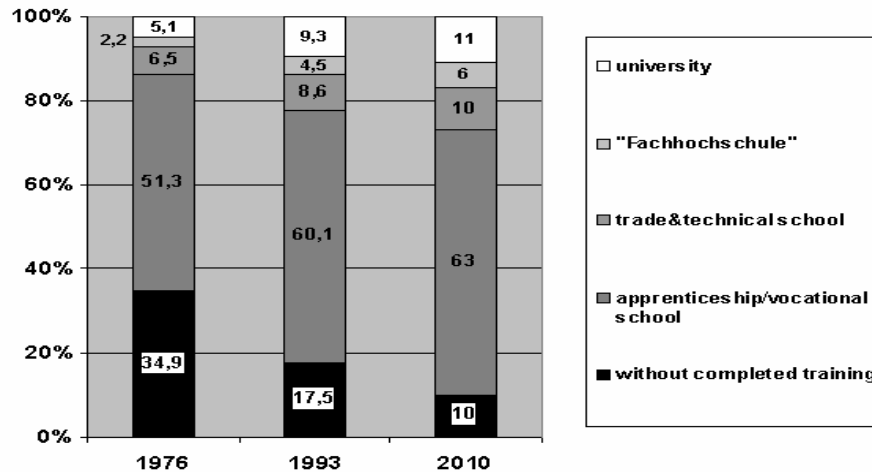
Anyone who sets out to examine the conditions in training firms and part-time vocational schools now is confronted with a variety of different learning circumstances (ACHTENHAGEN 1994; DYBOWSKI 1998). It is relatively uncontroversial to say that new qualifications accompany technical innovations and changes in the organization of work and that these qualifications are distinguished by increased cognitive demands, a greater degree of abstraction and a greater need for flexibility and mobility. Simultaneously, in many fields traditional structures of work organization persist to this day. All of the recent research publications on the diffusion of technical and organizational innovations in the commercial and technical field agree that the transformation process in industrial production neither runs smoothly nor corresponds to the same qualification needs. All in all, conclude SCHUMANN et al (1994), production work is undergoing a transformation process, but up to now this has not been as far-reaching as they expected ten years ago (KERN/SCHUMANN 1984).

The heteronomy and "new confusion" in the transformation process of industrial production cause doubts to be raised in public about the path that reform of vocational education has taken. However confusing the training scenario may seem, when one leaves the level of reform programmes and turns to the everyday experience of training under normal conditions, there is no alternative in the longer term to modernization towards integrated conceptions of production and qualification. The integration processes associated with the European Union and the structural changes taking place in central and eastern Europe are placing companies in Europe under even stronger pressure to train. On the path towards the Europeanization of workforce skills, all companies are well advised to familiarize themselves with European vocational training policy and its instruments.

The move to high value products and intelligent production plans is not following a voluntaristic industrial policy but the logic of economic and technological developments. The way towards post-industrial, information-based and knowledge-based economies is accompanied by the rapid spread of new technologies and by new forms of work organization and labour division. The Tayloristic and industry concentrated era in many branches apparently is being replaced by a re-engineering of the whole business process, which is marked by growing importance of knowledge and information in all

spheres of work and life requiring an efficient information management both for the individual and the enterprise as well as suitable measures to generate, assess and update knowledge and skills (TESSARING 1998a, p. 275).

Manpower demand by qualification, D-West 1976 – 2010 (%)
(Source: TESSARING 1994)



Medium and long term employment forecasts in Germany are carried out by a number of research institutions (PROGNOS 1996; TESSARING 1998a; 1998b). They result in a similar scenario, corresponding with Fourastié's theory of the Three Sectors: decline in the occupations in agriculture, production and manufacturing and expansion of service occupations, in particular personal, consumption and production related services. These shifts in the structure of employment are accompanied by rising qualification requirements in all job activities, resulting in a dramatic decline in the overall demand for unskilled workers and an above average rise in the demand for workers with higher qualifications. The growing trend towards employment in the (private) tertiary sector favours workers who have completed vocational training.

Seeing these developments of manpower demand in Germany, there is much to be said in favour of orienting innovative strategies of vocational education and training towards decentralized and integrated production in the sense of "holistic" and high-skilled work, even if one has to reckon with highly disparate working conditions for some time during the period of transformation. In any case, there is no convincing alternative in sight. Another aspect must be taken into account. All of the recent studies on young people in Germany indicate that for the great majority of young people subjective aspirations to work predominate (DEUTSCHE SHELL 2000). This is not a matter of abstract ideals. If one talks to young skilled workers about their training and work, as in the results of national surveys of young people conducted by SOFI (BAETHGE et al 1988), then three aspects are apparent which are important to young people: that their work is enjoyable, that they can carry it out in an independent manner and that work serves to further their own qualifications and advanced career. There is a desire to participate mentally in work, as BAETHGE (1990, p.2) puts it, to bring oneself as a person into work and to experience a confirmation of one's own competence through it. "One doesn't want to be just anyone at work but to behave as a subject with one's own particular abilities, tendencies and talents" (BAETHGE 1990, p. 2).

Subjective aspirations like this regarding work are of course nothing new. In some professions and occupational groups aspirations of this kind have always played an important role. What is new is how widespread they have become and the naturalness with which they are articulated. To follow BAETHGE's argument, the positive anchoring of work in the construction of individual identity, the "subject-centred understanding of work". seems to be establishing itself as a new "social character of work". The shift in values in youth culture cannot continue to be ignored by companies without endangering the recruitment of the next generation of skilled workers. Besides, education and training have functions other than the transmission of the skills necessary for work. They are also powerful means for ensuring personal development and the full realisation of human capabilities (ASHTON/GREEN 1996, p. 191).

Finally, the attractiveness of training in firms depends largely on whether prospects for advancement and further education are available and that these under some circumstances may lead to higher education (KUTSCHA 1994). At present, the option of making vocational qualifications equivalent to those giving entitlement to further study is being discussed in Germany as a possible solution. For many years all efforts at making vocational and general education equivalent have met with scepticism and open rejection on the part of the employers (GRUSCHKA 1988, pp. 17 ff.). But nowadays it is seen that one of the most important tasks of vocational training policy will certainly be to ensure the long-term attractiveness of on-job vocational training compared with higher general and university educational paths.

In 1992 the top business associations in Germany published their "position paper" entitled "Differentiation, Opening Pathways and Attainment". It included a radical demand: "In view of the high standards attained under the Dual System, access to university must also be available for students who complete their vocational training successfully. Anyone who shows himself or herself to be excellent at their occupation and continues in further vocational education should be allowed to study at university without being forced retrospectively to pass formal school examinations" (BUNDESVERBAND DER DEUTSCHEN INDUSTRIE et al 1992). The parties responsible generally agree that new and attractive initial and continuing training programmes have to be developed and more opportunities created for young people to go from the Dual VET System to higher education. Moreover, most German Länder have issued regulations permitting admission to university of students with initial and continuing vocational training but no Abitur, i.e. standard formal university entrance qualifications. "Nevertheless, considerable hurt must be taken before persons qualified only by vocational training are admitted to university courses" (KOCH/REULING 1998, p. 10).

Undoubtedly, more differentiation within the Dual System and more connections between initial and further vocational training are required to make it more attractive compared with the "king's way" of the Gymnasium as a preparatory stage for high-flying graduate professions. Curricular flexibility must supply more options for the trainees and possibilities to make choice. It is to be increased through regulatory concepts which – as a complement to common qualifications for the occupation – allow different combinations from components that can be selected or which allow the training to be differentiated depending on how the qualifications are to be used (BUNDESMINISTERIUM FÜR BILDUNG UND WISSENSCHAFT 2000, p. 12).

In order to achieve these goals, it will be necessary to set up initial training courses (modules) as elements of dynamic qualification profiles on the base of the "Berufs"-principle. The structural characteristics of such dynamic qualification profiles are (DYBOWSKI 1998, p. 150):

- common core qualifications – differentiated professional qualifications;
- differentiation according to disciplines, areas of activity, vocational and technical fields;

- orientation to customers, business processes and services;
- orientation to real work processes and projects instead of course instruction, the linking of systematic subject knowledge and process oriented approach both in the school-based and in-company part of training, a holistic perception of tasks.

3.3 Decision-Making Structures in Initial Vocational Training Policy and the Principle of Consensus-Based Tripartite (“Konsensprinzip”) – Approaches to Flexibility of the VET Steering System: Corporatism and New Alliances

Because of the potential elasticity of its internal structure, the Dual System is in a position to adapt quickly to changing demands. However, the self regulatory forces of the training system do not always suffice when it comes to coping with new challenges. In such cases, vocational training must innovate measures to ensure that the training system maintains its efficiency under changed circumstances. The effectiveness and flexibility of the structures and procedures used to elaborate education policy have a decisive influence on success, within a reasonable period of time, of any modernization process. It is therefore essential for the Dual System to convert its capacity of adaption in the medium and long term, that the state and the social partners cooperate and reach agreement on an education policy (OECD 1994, p.110).

Although most of the apprentices in the dual system are trained in private sector companies, the state has a strong public interest in the aim that vocational training should provide the necessary technical skills and knowledge in order that the apprentices can afterwards pursue a qualified occupation. In-plant training in the Federal Republic is considered not only a private company task but also a social task - so to say a matter of public responsibility. When planning training regulations the Federal Ministry acts on the consensus principle, by building on the agreement of employers and trade unions. The Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung/BIBB) offers the database and advice to employers, trade unions and the government. BIBB provides a platform for joint planning and for the improvement and adaption of vocational training.

To understand how the Dual System works one must take in mind that between state and companies there are intermediate organizations which transmit law and regulations into practice. Especially the chambers of industry and commerce, the chambers of crafts and trades, the chambers of agriculture and the professional associations will ascertain whether an employer has the necessary qualifications to provide training according to the regulations of the state. The training period ends with a final examination, conducted by the chambers. The examination is both to proof that the candidates have successfully completed their training and do possess the required qualifications as skilled workers. The examination is held by a board of examiners consisting of at least three members. Employers and employees are equally represented on the board, and at least one member must be a vocational school teacher with an advising vote.

As I have tried to indicate the most important regulatory components of the Dual System are:

- The state determines the legal parameters of vocational education by means of law and regulations on training (state regulatory component).
- The firms supplying training offer training places on the training job market; they decide on the agreement of training contracts and carry out the training in keeping it with the legal guidelines (market economic regulatory component).
- The chambers (of industry, business, crafts etc.) oversee the legal and regulatory norms for vocational education in their capacity as public autonomous agencies within the economy; they do administer vocational

education and training within the sphere of responsibility according to the legal guidelines (corporative regulatory component).

- Last but not least, at all levels of this system representatives of the employers' and employees' associations participate on an equal footing as policy-makers (social partnership component).

The advantages of corporate negotiating systems like those practiced under the Dual System lie in particular in the way they limit the risks of "market failure" and "state failure", in the way they exploit resources of information and reduce obstacles in the interpretation of policy decisions in terms of training practice in companies. The participation of the social partners in the regulatory process is indispensable for the efficient management of the Dual System of vocational training. If the market were the only regulating factor in vocational training, there would be a risk of erroneous choices. At the same time, any attempts by the state to regulate a vocational training system on its own would soon encounter serious systemic limitations. The participation of social partners in the national regulation process on the base of consensus helps to ensure that the different levels of performance of individual sectors or groups of training enterprises are taken into account when complying with minimum standards considered to be acceptable in training (HILBERT/SÜDMERSEN/WEBER 1990; SCHMIDT 1993).

However, in the case of difficult and controversial problems the respect for this principle of consensus can cause considerable delays or even block the introduction of new regulations. Therefore proposals for simplified and quicker participatory procedure of modifying vocational training regulations in response to new requirements of the global economy were developed and practised in recent years. And new alliance strategies and organizations at national and regional level have been initialized.

One of the main problems currently facing the Dual System is the provision of sufficient training opportunities. In order also make headway in the medium term with the reform process in central areas with economic, labour market as well as socio-political significance, the Federal Government set up the Alliance for Jobs, Training and Competitiveness in 1998. Representatives from the government, employer associations and unions are working together with the objective of achieving a reduction in unemployment and giving a permanent boost to the competitiveness of the economy. The fact that the government is seeking solutions in a consensus with the other parties is of central importance.

In addition educational, economic and social renewal policies must be intensified on the local and regional level. With the nationwide consensus on training reached in the Alliance mentioned above and the decision on securing and further developing the provision of training places, particularly in eastern Germany, adequate provision of a large range of different training places is to be achieved. This concentrates on strengthening and expanding regional activities, training conferences, networks and support structures for exhausting and increasing in-company training potential. The annual conferences on training agreed on and held by the Alliance partners in all regions in spring and autumn are central instruments for putting the consensus on training in practice on regional level. The purpose of these conferences is to create lasting forms of cooperation between trade associations, unions, professional associations, employment offices and other bodies in the region responsible for vocational education and training. The top priorities of the regional alliance conferences are to intensify the advisory and placement services for young people and to utilize an increase in-company training potential in the regions.

4. Concluding Remarks: Modernizing the Dual System on the "Flexicurity Route" – an Expandable Model

The Germany Dual System model is undoubtedly not a “garden of roses” (REULING 1997, p. 29). There are fundamental problems associated with the Dual System on different levels (ASHTON/GREEN 1996, p. 144). The updating of vocational education and training currently faces the twin challenges of raising standards, on the one hand, and lack of training places, on the other. Growing pressure of competition due to the ongoing internationalisation of markets, the rate of technological change, the networking and concentration of system-mediated communication have led to higher demands on abilities which transcend vocational distinctions but are clearly occupational requirements (key qualifications), such as independence, flexibility, the ability to work in a team and organizational skills.

The literature suggests that the megatrends mentioned here point to fundamental longer-term changes in the system of vocational education and training: growing differentiation in vocational training and a greater heterogeneity among the training clientele in terms of aptitude, motivation and career plans, a broader range of more flexible learning arrangements accompanied by higher demands for coordination and cooperation between learning sites, restructuring of skills acquisition patterns with a greater emphasis on continuing and advanced vocational training as opposed to initial vocational training as an integral element of corporate human resource development.

The Dual System is contingent upon its duality being replaced by greater variety. More system flexibility is seen both by the employers' and the employees' associations as a prerequisite to improve the German VET system (see BIBB-research: BERGER/BRANDES/WALDEN 2000). The main problem is how to protect system flexibility from misuse. In this sense “flexicurity” is the key word to mark a consensus-based pathway to fit out the Dual System as an “expandable model” for the future (KUTSCHA 1996).

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