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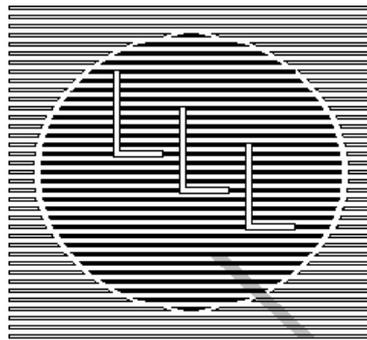


ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

DIRECTION DE L'ÉDUCATION
DIRECTORATE FOR EDUCATION

**Federal Institute for Vocational
Training**

The Role of National Qualifications Systems in Promoting Lifelong Learning



Background Report for Germany

12 May 2003

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OECD Project

“The role of qualifications systems in promoting lifelong learning”

Country Report: Germany

12 May 2003

Federal Institute for Vocational Training – The President

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I. Description of the German qualifications system

The intention of this report is not so much to provide an exhaustive description of the national qualifications system in Germany (cf. Standing Conference of Ministers of Education and Cultural Affairs, 2001; WESTERHUIS 2001), but much rather to focus on describing and analysing a number of structural features of qualifications systems. It is assumed that these features have an effect on learning, on the development of skills and knowledge and on the occupational and geographical mobility of individuals. This chapter, as indeed the entire report, is structured according to the “OECD guidelines for country reports”. These reports form the basis for implementation of the OECD project “The role of qualifications systems in promoting lifelong learning” (OECD 2002). In accordance with the guidelines, only qualifications at the level of upper secondary education and beyond are being considered. Furthermore, the description is limited to the more common, well-established qualifications in Germany. Section III describes more recent as well as the latest developments and examines their impact on lifelong learning.

1. Basic structure of the German qualifications system from upper secondary education onwards

In the German qualifications system, distinctions can be drawn between the different qualifications at the upper secondary and higher levels according to the following criteria:

- Qualification levels: A distinction can be made between qualifications at the level of upper secondary education (general university entrance qualification / vocational training qualifications), advanced vocational qualifications (“upgrading training”) and qualifications acquired at higher education institutions.
- Responsibility: The sixteen *Länder* are responsible for qualifications which (generally) require completion of a secondary school or higher education programme. The Federal Government and the various chambers (representing the craft trades, industry and commerce, agriculture and various professions) are responsible for all qualifications requiring completion of a non-institutional programme.
- Objectives: The qualifications are either more theoretical and lead to tertiary education or they serve as preparation for entering the employment system and/or for continuing education and training.

On the basis of these criteria, five (qualifications) subsystems can be defined in broad terms, which each follow different requirements and logical structures:

- General education qualifications acquired at the upper secondary level,
- Vocational qualifications acquired in the dual system of vocational training,
- Vocational qualifications acquired at full-time vocational schools at the level of upper secondary education,
- Qualifications acquired at higher education institutions,
- Advanced vocational qualifications acquired outside of higher education institutions for the purpose of career advancement.

This is a pragmatic definition of subsystems, which, of course, could be described in much more detail. One particular characteristic of the system in Germany is the distinction made between initial education and training on the one hand, and continuing education and training at higher education institutions or outside such institutions on the other. Compared to continuing education and training,

initial education and training is subject to a much higher degree of regulation and systemic differentiation. This reflects, among other things, the particular responsibility of the Federal Government and the *Länder* with regard to providing education and training opportunities for adolescents. The goal is ideally for all adolescents to attain an initial qualification as a passport to further qualifications and/or skilled employment. As in other countries, the distinction between general and vocational qualifications systems has evolved historically. However, the debate, at least over the last ten years, has been about softening the boundaries and allowing flexible transition. Within the national qualifications system, the *Länder* cooperate closely in designing, certifying and recognising qualifications and coordinate their activities with the Federal Government where necessary.

This study focuses exclusively on formal qualifications based on the vocational training act or on laws of the *Länder*. The following certificates fall outside the remit of this report:

- Certificates of individual providers which only provide assessment of achievement;
- Certificates of nation-wide training organisations such as the educational services of unions or charity organisations;
- Certificates of municipal providers like adult education centres;
- Certificates of sector organisations;
- Certificates of cross sector organisations (e.g. German Society for Personnel Management).

2. Qualifications: the formal recognition of learning

One typical aspect of most qualifications in Germany is that it is not merely the learning goals and the method of verifying them that are specified. It is also stipulated how these goals are to be achieved. In particular, the content and duration of teaching/learning programmes as well as the learning location are specified. In other words, Germany largely pursues a process-based approach towards the formal recognition of learning, with a concluding verification of learning success.

2.1 General university entrance qualification (*Abitur*)

The general university entrance qualification, the *Abitur*, is a qualification that certifies learning aimed at the acquisition of a more in-depth and extensive general education and which enables students to take up a course of study at a higher education institution or to undertake a superior vocational training course outside of the higher education sector. A programme of learning must be completed over two or (in most *Länder*) three years at a *Gymnasium* (secondary school providing general education up to the general university entrance examination), a *Fachgymnasium* (upper level of a *Gymnasium* with a technical bias) or a *Gesamtschule* (comprehensive school). Furthermore, pupils must provide continual proof of their learning progress. The *Abitur* examination must be passed at the end of the period. An *Abitur* holder has the unrestricted right to enter a higher education institution.

This qualification is aimed primarily at adolescents who, given their performance at school, can be expected to complete the learning programmes successfully. Young adults also have the possibility of completing the necessary learning programmes at evening school (part-time) or at day school (full-time). They must be at least nineteen years of age and (as a rule) hold vocational training qualifications. However, adults who have not attended such a school establishment may also enter the *Abitur* examination if they can prove that they have adequately prepared themselves for the exam by attending another type of state or private school (or have participated in distance learning programmes).

The *Abitur* is an overall qualification. It consists of (1) the accumulation of the grades attained in a prescribed number of half-year basic and advanced courses in various subjects chosen from selected

fields (“language-literature-arts”, “social sciences”, “mathematics-natural sciences-technical fields”) as well as in religion and sport; (2) a dissertation; (3) the concluding *Abitur* examination. The combination of subjects consists of compulsory and optional subjects. The final *Abitur* examination comprises at least three written and at least one oral examination. The learning programme may not be interrupted. If the *Abitur* examination is not passed, the learning programme is extended by one year.

In Germany, school attendance and the *Abitur* examination are free of charge. Pupils are eligible for maintenance payments by the state only if they do not live with their parents. In this case, a non-repayable allowance is provided. However, the funding is means-tested and thus depends on the parents’ or family’s income.

2.2 Completion of a training course in accordance with the Vocational Training Act (“Qualifications in the dual system of vocational training”)

In upper secondary education in Germany, the most popular type of qualifications are for the 350 or so officially recognised training occupations (status: 2002). These qualifications certify completion of a period of training organised within the dual system (combining on-the-job training at a company and attendance of a part-time vocational school). Upon completion of training, “vocational proficiency” is certified. This type of qualification is considered to be an important prerequisite for entering the skilled employment market. At the same time it is also the key to advanced vocational training and/or general education courses (such as at a *Fachschule* - technical school providing advanced vocational training). It is now also possible to acquire a double qualification which also allows admission to higher education institutions.

Vocational training within the dual system is mainly aimed at pupils who have completed lower secondary education and pupils who have acquired the *Abitur*. Officially, admission to training for these qualifications is free. However, in reality, an important factor is the recruitment criteria of the companies offering training. As a rule, the nationally regulated training programmes are three to three and a half years in length. For *Abitur* holders, this period may be curtailed to two years. After completion of the mandatory training period, a final examination must be sat at the responsible chamber, which consists of one written and one oral examination testing the skills necessary for the occupation and the theoretical and practical knowledge taught during the training course.

Successful completion of the final examination leads to an overall formal qualification. It is not possible to accumulate partial qualifications which count towards an overall qualification. Adults may enter the final examination even if they have not participated in formal training (exceptional admission). They must be employed in the occupation for which the qualification is being acquired, and (as a rule) have spent twice the amount of time in the occupation as the length of the relevant training period.

As a rule, trainees in the dual system of vocational training do not receive any financial support from the state. Instead, they are paid a trainee remuneration by the company providing the training. This remuneration differs between western and eastern Germany and varies according to the different training occupations. In 2001, 72% of trainees in western Germany received a monthly remuneration of between € 500 and € 700, whereas in eastern Germany remuneration was much lower (Federal Institute for Vocational Training, 2002). If trainees do not have any other financial means to cover the cost of living, travel expenses, other expenses and the course fees (overall requirements), they are entitled to a training allowance, which is paid while they are in vocational training or pre-occupational training. Disabled trainees are also additionally entitled to a special training allowance.

2.3 Qualifications from full-time vocational schools at secondary II level

A broad spectrum of qualifications can be acquired at full-time vocational schools at the upper secondary level.¹ The most frequent qualifications are offered by the *Berufsfachschulen* (including schools run by the health care system). Students must complete a one- to three-year course and pass a final examination. The aim of the course is to prepare for an occupation or at least for a subsequent vocational training course within the dual system. There are also general education courses provided at *Fachoberschulen/Berufsoberschulen* (specialised secondary schools), which prepare for admission to a *Fachhochschule* - technical university - (the qualification obtained is the *Fachhochschulreife*) or for admission to subject-restricted programmes at a university (the qualification here is the *fachgebundene Hochschulreife*) or for unrestricted admission to a university (the qualification here being the *Hochschulreife*). The more vocation-oriented training programmes and the continuing general education courses can be completed consecutively. However, more and more courses are also being offered that lead to double qualifications, which allow access to the employment market as well as transition to higher education.²

Vocational qualifications are aimed at pupils who have completed the lower level of secondary education and *Abitur* holders. The qualifications which lead to higher education are also open to young adults with qualifications from the dual system. In the case of the longer training courses lasting several years, it is possible to acquire a partial qualification after the first year (*Berufsgrundbildungsjahr*). In order to gain an overall qualification, however, students must sit a final examination on everything they have learned during the course.

In Germany, attendance of a full-time vocational school is free. Private vocational full time schools operate on a fee paying basis. The state may award a maintenance grant to a student if the training course in question leads to a (full) vocational qualification or if it asks for such a qualification as a course requirement (BMBF 2001a). However, the applicant must have commenced the course before the age of 30. The grant is non-repayable and depends on the income of the parents and on whether the applicant is living with the parents or in separate accommodation.

2.4 Qualifications from higher education institutions

Higher education qualifications are acquired at universities and *Fachhochschulen* (technical universities). They certify completion of a course of study in one subject or a combination of subjects. At the universities, the aim is to impart the necessary knowledge, skills and methods to enable graduates to engage in independent academic activity and hold positions of responsibility; here the qualification for an occupation is directly linked to academic research. At the *Fachhochschulen*, the study courses are particularly application-based and thus more oriented towards the requirements of the occupation in question; here again, the aim is to prepare students for holding positions of responsibility in the future. Both university and *Fachhochschule* courses are aimed first and foremost at young adults, *Abitur* being an entrance requirement. However, applicants without *Abitur* but who hold the right occupational qualifications may also be admitted to a study course at a *Fachhochschule* under certain conditions, and in accordance with the regulations for higher education institutions. Young adults who have acquired the *Fachhochschulreife* by successfully completing advanced vocational school programmes may also gain admission to a *Fachhochschule*.

The qualifications acquired at higher education institutions certify that a course has been completed within the standard course period stipulated in the examination rules, that the various stages of the course were successfully completed, examinations in the various subjects were passed and that the oral and/or written final examination was taken. Intermediary exams do not constitute a final qualification.

¹ Some of these full-time vocational schools also offer part-time curricula. However, the planning is based on full academic years.

² In some German *Länder*, the various forms of vocational schools are combined in a *Berufskolleg* or *Berufsschulzentrum*.

The course may be interrupted and/or continued at another institution. Any relevant study course periods that have been completed, together with credits and examination grades already acquired, are credited if they are found to be equivalent to the requirements of the new course. Traditional courses at universities are four to five years in length, at *Fachhochschulen* four years. When the Higher Education Framework Act was amended on 20 August 1998, a new graduation system with degrees (Bachelor/Master) acquired in stages was introduced as an alternative to the conventional single-stage graduation system. The option of a Bachelor's degree allows students to acquire an initial degree after three or four years, qualifying them for certain jobs. There are now almost 1500 Bachelor's and Master's courses at German *Fachhochschulen* and universities.

No fees are charged for attending a university or *Fachhochschule*, at least not before the standard period of study is exceeded to a significant extent. Maintenance grants for students are governed by the provisions of the Federal Training Assistance Act (BMBF 2001d). Unlike the financial support provided to school pupils (who receive a full allowance), 50% of the financial support offered to students is in the form of an interest-free government loan, and the other 50% in the form of a non-repayable grant. Very moderate conditions apply to the repayment of the interest-free loan: if a study course is completed very early and the degree obtained is extraordinarily good, the student can be partly released from repayment of the loan. In special cases (notably in the case of a second study course at tertiary level or of financial assistance towards completion of studies after exceeding the standard period of study), the financial support can take the form of a private bank loan with lower interest rates. Both a government loan and a bank loan of this kind must be repaid within 20 years in monthly instalments of at least € 105.

2.5 Advanced vocational qualifications

Advanced vocational qualifications are managed either by the *Länder*, or at national level, or by the relevant chambers according to the Vocational Training Act. The *Länder* deal with qualifications certifying the completion of a formal teaching/learning programme at a *Fachschule*. There are framework agreements between the *Länder* in order to design these qualifications according to common criteria. The *Meister* qualification (advanced qualification for the craft trades or for jobs in industry) and the *Fachwirt* qualification (advanced qualification in the service sector, equivalent to *Meister*) are managed partly at national level and partly by the relevant chambers. At national level, there are currently 200 such qualifications (*Meister*, *Fachwirt*), of which, however, 167 are *Meister* qualifications. In addition to the nationally regulated qualifications, there are another 2600 or so continuing education and training regulations at the level of the individual chambers, representing about 450 different (non-school) advanced vocational qualifications. The social partners have agreed to examine whether these continuing vocational education and training regulations can be transformed into nationally uniform qualifications.

All these qualifications are certification of advanced vocational training and they enable experienced skilled employees to take on functions at a higher level. These include, in particular, specialised activities and/or activities in middle management which generally lie between the functions carried out by university graduates and those by skilled workers. Under certain conditions, these qualifications also provide access to the higher education sector.

One important difference between these qualifications lies in the type of learning achievements being certified in each case. A qualification from a *Fachschule* certifies that a person has two years experience in the occupation in question, has successfully completed a formal learning programme of one to three years, and passed the final exam on the content of the entire programme. The *Meister* certificate, on the other hand, requires an initial vocational qualification as well as a minimum of two to three years experience in the relevant occupation and the passing of a final exam in four areas. It does not involve a mandatory formal teaching/learning programme; however, the various chambers offer one-year full-time courses or corresponding, longer part-time courses.

Education measures which specifically prepare for the acquisition of advanced vocational qualifications are funded by the government (Federal Ministry of Education and Research / Federal Ministry of Economics, 2002). Since the beginning of 2002, new regulations have been in force by which the maintenance costs for an individual person, the person's family and the necessary child care expenses can be paid partly in the form of an allowance and partly in the form of a loan. Such financial assistance is means-tested. The course and examination fees are fully financed (a 35% allowance and a low-interest bank loan). The loans have a period of grace of up to two years, in which they are also interest-free, after which time they must be repaid within ten years.³

2.6 Recognition of non-formal and informal learning

All the qualifications referred to so far require a final examination to be passed. Non-formal and informal learning in the relevant occupation may count towards eligibility to enter the final examination in the dual system of vocational training (cf. section 2.2). For admission to a vocational school or eligibility to enter an examination for a *Meister* qualification, this form of learning (job experience) is a necessary condition (cf. section 2.5).

3. Qualifications system: organisation, links and qualification pathways

The different qualifications systems are managed by different authorities and institutions. Furthermore, the involvement of the social partners in the management of qualifications varies. Finally, the procedures for re-developing or reforming qualifications also differ according to whether the qualifications concerned are subject to federal or *Land* law (cf. WESTERHUIS 2001). These factors probably constitute one reason why the process of placing the various qualifications and sub-systems in relation to one another in order to achieve flexible qualification pathways has not yet been fully accomplished.

3.1 Coordination at national level

Responsibility for the organisation and management of the various qualifications is determined by the federal structure of Germany. Hence, the individual *Länder* are responsible for qualifications from schools, vocational schools and higher education institutions (*Kulturhoheit der Länder* – independence of the *Länder* in matters of education and culture). By contrast, the Federal Government is responsible for the legislative framework in the higher education sector and for qualifications from non-institutional initial and continuing education and training. This means that, to coordinate the national qualifications system, there has to be consultation between the individual *Länder*, between the Federal Government and the *Länder*, and (in the case of advanced vocational qualifications) between the Federal Government and the social partners.

Very soon after the Federal Republic of Germany was founded, there was an elementary public need for coordination and harmonisation in the school and higher education system in order to allow occupational and private mobility between the *Länder*. The body responsible for coordination is the Standing Conference of Ministers of Education and Cultural Affairs (KMK). All decisions by the KMK must be unanimous and have the character of recommendations which have to be subsequently implemented into *Land* law by the responsible ministers. In most areas of the school and higher education system, cooperation between the *Länder* within the KMK has led to uniform and comparable developments in the design and official recognition of qualifications (KMK 2001, p. 43).

The non-institutional qualifications in the field of initial and continuing education and training are organised by the Federal Government on the basis of the Vocational Training Act of 1969 and the craft trade regulations (*Handwerksordnung*) of 1953. The social partners are involved in the proce-

³ The changes to the funding programme have proven highly attractive. Just seven months after amendment to this law, the demand for financial assistance has risen by 145% (cf. BMBF 2002b).

dures for elaborating and coordinating the qualifications. Due to the fact that in the dual system of vocational training, the Federal Government is responsible for in-company training, and the *Länder* for training in part-time vocational schools, an agreement was concluded between the Federal Government and the *Länder* in order to reach coordinated decisions.⁴

3.2 Characteristics of the national qualifications system

There are a number of characteristics of the German qualifications system which may be of relevance to the promotion of lifelong learning. They relate first and foremost to access to the acquisition of qualifications. For almost all qualifications, entry qualifications are required as a pre-condition for acquiring them. Vocational training in the dual system is the only type of course for which no entry qualifications are formally required. Nevertheless, in each specific case, admission depends on the recruitment criteria followed by the company providing the training. Furthermore, a typical feature of most qualifications is that permission to enter the examination is generally subject to completion of a formal learning programme, i.e. the learning pathway is prescribed. Access to qualifications in the segment of nationally organised continuing education and training (*Meister*, *Fachwirt* qualifications, etc.) is generally not dependent upon attendance of a course. For the *Abitur* or examination for qualification for skilled employment, there are exceptional regulations: A person may enter the *Abitur* examination if he or she has proof of adequate preparation; likewise a person may enter the examination for qualification for skilled employment if he or she has proof of relevant work experience. Altogether, almost all the qualifications are overall qualifications and not individual partial qualifications which can be separately acquired and examined. This means that acquisition of qualifications cannot be spread over a longer period of time. It also hinders the possibility of learning the necessary skills at separate institutions. Only the *Meister* examination offers the possibility of accumulating partial qualifications to a limited extent.

The German qualifications system reflects the particular responsibility of the state for the qualification and basic education and training of adolescents and young adults. Consequently, the state has in most cases organised the acquisition of qualifications in schools and higher education institutions down to the last detail. There is a correlation between, on the one hand, age and level of qualification and training, and, on the other hand, the degree of independence and individual responsibility granted to learners to determine what, how and where they learn. The purpose of vocational training is to create a broad basis on which formal, non-formal and informal learning becomes possible. The strong emphasis placed on training in the German qualifications system is also very evident in the way education periods are distributed during active working life. Here, there is a definite focus on adolescent and early adult years. In this respect, Germany can be regarded as a classic example of a country where great emphasis is placed on initial vocational training (SAUTER 2002).

3.3 Organisation of school and higher education qualifications by the *Länder*

School qualifications (*Abitur*, qualifications from full-time vocational schools including trade and technical schools) are designed on the basis of framework agreements drawn up by the education ministers of the 16 *Länder*. These agreements define the essential common aspects shared by the *Länder* with regard to the format and level of the various qualifications. Every minister must implement these agreements into *Land* law. Working within the framework of the agreement, the minister may choose a particular focus, develop appropriate syllabuses and specify the appropriate textbooks. Any group in society can initiate ideas for modernisation and development of the framework agreements. Whether these impulses are taken up by the KMK and lead to new agreements depends in each case on the outcome of the political negotiation process between the *Länder*.

⁴ Agreements between the Federal Government and the *Länder* are also very common in the higher education system.

Applications for the introduction of initial and continuing education and training qualifications offered by vocational schools are often made by public or private sponsors of education establishments, by the *Länder* themselves or by the associations. Applications for advanced vocational qualifications are often initiated by private *Fachschulen* seeking to enhance the appeal of their qualifications on the education market by obtaining official recognition. The education ministries of the *Länder* draw up the blueprint for vocational school qualifications. One key question examined is whether there is demand for the qualifications in question or whether such demand is to be encouraged. The drafts are also coordinated with the existing framework agreements for the qualifications concerned. A *Land* may request an addition to the list of existing subject fields. The finalised draft is then published as a decree by the education minister or the *Land* in question. In the case of qualifications managed at *Land* level, the *Land* education ministers must decide whether a qualification needs to be brought in line with recent developments.

Responsibility for state schools generally lies with the education ministers in the various *Länder*. The main quality assurance activities are focused on monitoring compliance with a given set of input criteria (compliance with syllabuses, school and lesson attendance). Results-based quality assurance methods such as evaluation of school performance have been tried out only in the last few years (eg. centralised tests at *Land* level, comparative studies, cross-*Länder* evaluation of examination questions in individual subjects, etc.). Such methods are embedded in overall strategies towards quality evaluation and quality assurance, which are aimed, among other things, at increasing the autonomy of individual schools (KMK 2001, p. 213ff.).

As a rule, higher education institutions are at once public corporations and public institutions. According to the Basic Law of the Federal Republic of Germany, the arts, sciences, research and teaching are free. Academic freedom requires an autonomous area of academic self-administration. Basic regulations and other important statutes such as new Higher Education study courses and qualifications have to be approved by the responsible *Land* ministry. This does not apply to the newly introduced study courses for Bachelor's or Master's degrees. Here, an accreditation system has replaced the system of official recognition. The course regulations (for all courses) are developed by the higher education institutions themselves. The same applies to examination regulations for higher education exams, with the exception of state examinations (for teachers, lawyers, etc.) When elaborated, the course and examination regulations must be presented to the responsible ministries. In the case of study courses which are concluded with a state examination, the examination regulations are stipulated by the ministries themselves. To guarantee uniform minimum standards, the KMK has laid down framework regulations for examinations together with standard periods of study.

Assessment of the quality of higher education teaching has only been mandatory since the amendment to the Higher Education Framework Act in 1998. In most *Länder*, higher education institutions are required by law to regularly submit reports about teaching and study courses. The indicators include the proportion of freshers who graduate, the proportion of students adhering to standard periods of study, exam pass rates, the proportion of graduates who stay on. Furthermore, in the last few years, evaluation structures have been established for all institutions with the objective of further improving teaching (KMK 2001, p. 216ff.). In 1999, the national Accreditation Council was established on the basis of decisions adopted by the Standing Conference of Ministers of Education and Cultural Affairs and the Association of Universities and other Higher Education Institutions. The task of the Accreditation Council is to specify the basic requirements and the framework for accreditation procedures and to ensure compliance with these. The accreditation procedures are implemented by agencies officially approved by the Accreditation Council. Accreditation by the agencies confirms compliance with minimum standards with regard to teaching and subject matter as well as the occupational relevance of the different qualification stages.

3.4 National management of vocational qualifications in the dual system of vocational training and of advanced vocational qualifications

The social partners and the Federal Government work together closely in the development and adaptation of qualifications offered in the dual system of vocational training. The Federal Institute for Vocational Training (BIBB) acts in an advisory capacity in this matter. Representatives of employers, unions, the Federal Government and the *Länder* work together within the principal committee of the BIBB. The qualifications are developed on the basis of a procedure approved by all the parties. Both the interests of the sector-based associations and the umbrella organisations of industry are coordinated, and the basic syllabuses for the part-time vocational schools are aligned in terms of schedules and programmes with the training regulations for in-company training. Formally, responsibility for adapting the qualifications to changing requirements and/or new goals lies with the Federal Government. However, the opinion of the social partners carries considerable weight in the decision on when to adapt a qualification. The BIBB and the *Länder* can also provide impetus to the process.

The quality assurance procedures to which these qualifications are subject focus above all on input quality criteria. For example, the training regulations specify minimum standards for the subject matter to be taught. Furthermore, criteria for the suitability of instructors are set out, and suitability tests are carried out by the various chambers. Finally, criteria are also laid down for the suitability of training locations. The externally conducted final examinations also serve as an indicator of the quality of training achieved. The regional chambers are responsible for monitoring quality (including the holding of examinations). No specific methods for quality management are stipulated.

Advanced vocational qualifications (*Meister, Fachwirt*, etc.), which are governed by federal law, are also subject to a formal procedure. The organisations interested in such a qualification have to submit an application to the Federal Ministry of Education and Research through leading organisations of the social partners. After examining the need for regulation, experts from the social partners are commissioned, with the involvement of the BIBB, to elaborate a new draft. The Federal Government reaches a decision after consulting the principal committee. The social partners also wield considerable influence in the modernisation of qualifications.

In the case of qualifications organised at chamber level, the regional chamber decides on how they are to be designed. However, in some cases, individual regulations vary considerably, and it would be inaccurate to say that there is a uniform qualifications system in place. Where the regulations are of supra-regional importance, they must be harmonised in accordance with federal law.

3.5 Links between the various qualifications

So far the German qualifications system has not had much experience with formal credit systems. Furthermore, qualifications frameworks, whereby formally recognised qualifications are placed in relation to one another according to the criteria of qualification fields and levels of difficulty, are only partially used.

All in all, it is the vertical links between qualifications which have prevailed in the German qualifications system well into the 1990s. Thus the *Abitur* is the admission requirement for the acquisition of higher education qualifications. Qualifications gained within the dual system of vocational training or from full-time vocational schools are a necessary stepping stone on the way to advanced vocational qualifications. The reason for this is that the latter qualifications are fully defined in terms of aims, content, duration, learning location and exam regulations and are therefore not very flexible.⁵ As mentioned above, it is possible for holders of either of the two types of vocational training qualification to also acquire advanced general qualifications or double qualifications which allow admission to higher education.

⁵ See chapter III on rendering these qualifications more flexible.

The horizontal links between the general education and vocational qualifications are less evident. For example, a qualification from the dual system or a full-time vocational school is equivalent to a *Realschule* or *Hauptschule* leaving qualification, depending on the marks gained. Advanced vocational qualifications can also render a person eligible for admission to university, although under extremely limited circumstances. All in all, however, true equivalence between general and vocational qualifications has so far not been achieved.⁶

⁶ Advisory services exist at national and regional/local level, which provide information on the national qualifications system and details on the various *Länder* and thus facilitate admission or transition for the individual person (OECD 2001).

II. The role of the qualifications system in learning

The term qualifications system denotes the entire spectrum of formally recognised qualifications and the ways in which they relate to each other, as well as all the institutions involved in their design, certification and recognition. The first chapter describes the main qualifications sub-systems in Germany from upper secondary level onwards in terms of both their institutional diversity and the way they interlink. It has been found that selected qualifications which belong to different sub-systems are interlinked in such a way as to facilitate to options for further formal learning to suit the individual. However, formal learning depends not only on how a qualifications system is designed, but also on what value the qualifications have in the employment system and the material and non-material benefits this involves for the individual.

This chapter first presents a series of research findings concerning the role of the qualifications system in formal learning. It then goes on to describe various findings relating to engagement in non-formal and informal learning. It must be said that here, however, a number of factors play a role which are only indirectly related to the qualifications system, such as working environments conducive to learning or personnel policy.

1. Acquisition of the general university entrance qualification and thus of options in the education and employment systems

1.1 Eligibility for the entrance into a higher education institution or to advanced vocational training outside of a higher education institution

Compared to all other upper secondary qualifications, the general university entrance qualification (*Abitur*) opens the door to the widest range of career options in the formal education system. In a 1998 survey of pupils about to sit the *Abitur* in Saxony, over 92% regarded the *Abitur* first and foremost as an opportunity for keeping all further education, training and employment options open (WOLTER 1999, p. 16), one of the options being, in particular, formal, unrestricted access to university.⁷ However, the option of gaining restricted eligibility for higher education in the form of the *fachgebundene Abitur* (allowing admission to subject-restricted university programmes) or the *Fachhochschulreife* (qualification for admission to a *Fachhochschule*) has led to a considerable increase in participation in further education since the late 1980s (ALTHOFF 1999, p. 25f.). In 1999, 37.3% of the youngest relevant age group had a higher education entrance qualification: 27.9% had general or subject-restricted *Abitur* while 9.4% had the *Fachhochschulreife* (HIS 2002, p. 9).⁸ This is the highest percentage in Germany so far. This trend, referred to as “expansion of education”, shows that many people have recognised that success in life and work is linked to education, training and lifelong learning (WOLTER 1999, p. 13).

Not everyone eligible for higher education automatically chooses to enter a higher education institution. In fact, since the early 1990s, those with qualifications for moving on to higher education have shown a decreasing tendency to enter a higher education institution. Between 1990 and 1999, the overall student enrolment rate dropped from 76% to 65% (HIS 2002, p. 40).⁹ It is assumed that this trend has reached its lowest point. Given the good employment prospects for graduates and the improved conditions for state support for students, it is expected that more people eligible for higher education will aim towards or actually take up a course in a higher education institution.

⁷ Access can sometimes be restricted nonetheless due to a shortage of places on particular study courses.

⁸ The number of people with a higher education entrance qualification as a percentage of the relevant age group is calculated in each case on the basis of the average figure for 17- to under-20-year-olds (in *Länder* with 12 years of schooling) or 18- to under-21-year-olds (in *Länder* with 13 years of schooling) among German nationals and foreign residents on 31 December of the preceding year.

⁹ The overall student enrolment rate is the proportion of people eligible for higher education in a certain year who do indeed take up a course of studies at a university or a *Fachhochschule*, irrespective of whether the course is successfully completed or not.

The overall student enrolment rate is primarily determined by the social background of those eligible for higher education. People with graduate family backgrounds are more likely to enter a higher education institution than those from non-graduate backgrounds. Another factor is gender. In 1999 approximately 69% of qualified males but only 61% of qualified females enrolled (HIS 2002, p. 43). Almost all freshers are young adults. In 1999, the average age was 21.6 years (BMBF 2001, p. 182f.). Of course, not all people eligible for higher education actually complete their study course. Depending on the method of calculation used, the percentage of students who drop out is between 23% and 30%.¹⁰ At 30%, only about 17% of an entire age group in the population acquire a degree.

It is also possible for those eligible for higher education to take up a vocational training course as an alternative. In 1999, 33% of people eligible for higher education intended to choose vocational training. 21% of them were aiming to train in the dual system of vocational training, 6% intended to enter a full-time vocational school or a school run by the health care system, 3% intended to enter a *Berufsa-kademie* (college of advanced vocational studies) and the remaining 3% to complete preparatory training for the civil service (DURRER/HEINE 2001, p. 48). A good quarter of the people eligible for higher education (27%) were interested in a non-academic training course only (ibid. p. 48). The rest (6%) planned to undertake a course of study at a higher education institution after completing vocational training.

The reasons for opting for vocational training included the desire to earn money as soon as possible (64%), a greater interest in a more practice-based course (56%), the long duration of higher education courses (33%), and the fact that the target occupation did not require a higher education qualification (33%). 23% stated the reason as being a lack of financial means, 5% as being poor job prospects in the preferred subject area (HIS 2002, p. 51). Of all those eligible for higher education, 8% gave the reason for not choosing this option as being a lack of resources for financing higher education courses and 5% as being poor job prospects, i.e. 13% stated “external” factors for not taking up a course.

Upon closer examination of those people eligible for higher education who opted for vocational training in the dual system, it can be seen that their choice was obviously based on the following aspects (ULRICH/KREKEL 2001, p. 149f.): Firstly, poorer *Abitur* results played a role, which are generally an indication of weaker school performance. Secondly, gender also played a role since women are more likely to decide against going to higher education institutions. However, only some women opt for the dual system and more women are attracted to the full-time vocational schools run by the health care system. Thirdly, those eligible for higher education who take up vocational training in the dual system are obviously more convinced of the benefits of such a choice. It should be noted that the proportion of people eligible for higher education who take up vocational training in the dual system has fallen slightly in the last few years.

1.2 Employment and income prospects for graduates

Despite the pessimistic employment trend forecasts for high skilled employees in the early 1990s, the situation in fact developed differently, at least from the mid-1990s onwards. Since then, science and technology graduates have been in particular demand (BLK 2001, p. 2).¹¹ It is expected that the general trend towards higher qualifications will continue over the next few years and that the proportion of graduates (as a percentage of overall demand in the labour market) will rise (BLK 2002, p. 4f.). The forecasts for *Fachhochschule* graduates are particularly favourable.

¹⁰ According to the OECD’s method of calculation, the dropout rate for German and foreign students is 30%. According to the calculations by HIS, the dropout rate for all students is 27% and thus slightly lower. For German students, the rate is 23%. The OECD’s calculations relate to students doing an initial course or further courses, while HIS only takes into account students doing an initial course (HEUBLEIN et al., 2002, p. 5).

¹¹ In the first half of the 1990s, engineering and natural science graduates were particularly affected by the employment crisis (HIS 2002, p. 263).

The good employment prospects for graduates are also reflected in the low unemployment figures compared to the figures for non-graduate jobs. Since the mid-1990s, the unemployment rate for highly qualified jobs has been steadily dropping and in 2000, the rate in west Germany was 2.6% and 4.7% in the east (Institute for Employment Research (IAB) 2002). It would be true to say that, in west Germany at least, there is full employment in the highly qualified job sector.

Graduates also have very good income prospects compared to people with lower qualifications. As confirmed by the data from the BIBB/IAB survey from 1998/1999, average monthly income increases the higher the level of qualification.¹² The situation is the same in eastern Germany, although there, average income is lower than in the west.¹³ However, the income span for graduates is larger compared to other employees. This means that with a higher education qualification, it is possible to earn much more, but also much less, than the average graduate income. Nonetheless, there is a considerably large “common core” of graduates who earn a similar income.

1.3 Factors which encourage or discourage people from completing upper secondary education and taking up a higher education course

One important incentive for acquiring a higher education entrance qualification is the fact that this opens up more advantages in the education and employment systems compared to what is available to the less qualified. Such a qualification provides access to higher education institutions and this access is further facilitated by the fact that no fees are charged for higher education. For those who successfully complete higher education, the employment and income prospects are in most cases - certainly for a large number of graduates - better than for non-graduate employees. Eligibility for higher education also opens the door to attractive vocational training programmes in the dual system or at full-time vocational schools; these offer the opportunity to directly enter the employment system or to subsequently take up a higher education course.

One of the factors likely to discourage pupils from going on to the upper secondary level with the aim of doing *Abitur* is the performance-based entrance requirements. Furthermore, to acquire eligibility for higher education, it is necessary to complete a compulsory learning programme lasting several years and to sit a concluding examination in a specified number of subjects. No credit is given for exams in single subjects. Acquiring the *Hochschulreife* or *Fachhochschulreife* after completing vocational training requires motivation and ability. A higher education entrance qualification gained after completing upper secondary education is not in itself considered to be a portable qualification in the employment market. This means that generally, people tend to move on to a higher education or vocational training course from school, which extends the period of time spent in education and, in many cases, increases the financial burden.

Other factors which serve to discourage participation in higher education can be the duration of study courses, the academic orientation of courses or their “non-practical slant”, uncertainty about the real benefits to be gained from the qualification on the labour market, and living expenses during the course. Furthermore, higher education institutions in Germany are geared primarily to young people below the age of 30. Dual study courses designed for working adults, which have shorter learning programmes and recognise vocational learning achievements, are still not common. Moreover, apart from a few exceptional cases, a person must be under 30 when commencing the higher education course, in order to qualify for funding. The introduction of the new Bachelor’s and Master’s degrees

¹² In purely financial terms, employees with a qualification from the dual system or from a full-time vocational school receive about € 250 to € 350 more than a person without any qualifications. A person who has attended a *Fachschule*, (and is qualified as a *Meister*, *Fachwirt* or *Techniker* – technician) can expect on average € 400 more than someone with a qualification from the dual system. At the next highest qualification level, the *Fachhochschule*, monthly income rises by another € 250. At the upper end of the scale are university graduates, who receive on average another € 350 more than *Fachhochschule* graduates (ULRICH 2001, p. 72ff). These are round figures that have been converted to euros (J.R., G.H.).

¹³ The lower income level is also linked to higher unemployment in eastern Germany and the higher incidence of inadequate employment.

provides an additional incentive to take up a course of study: These two-step degree courses allow qualification requirements to be met more flexibly, while offering more vocational orientation and better opportunities in the international labour market. The benefits of these courses are shorter periods of study and more flexible organisation of time and course content. This facilitates new interdisciplinary links and the pursuit of studies while in employment. The range of dual study courses, which combine academic studies with an occupation or vocational training, is to be extended.

2. Vocational training outside the higher education system as a basis for entering employment and for continuing learning

2.1 Various ways of entering vocational training

The *dual system* of vocational training and *full-time vocational schools* are the two (qualification) sub-systems for acquiring an initial vocational qualification other than higher education institutions. The enormous importance of the dual system is demonstrated by the fact that about 60% of each age class completes a training programme in this system by the age of 25 (BMBF 2002b, p. 92 footnote 1). Altogether about 350,000 pupils seek to acquire such qualifications, which are not subject to the Vocational Training Act or the craft trade regulations (BMBF 2002b, p. 128). Vocational training at full-time vocational schools includes training at a *Berufsfachschule*, at a school run by the health care system, at a school training for jobs in the social and health care services, at a *Fachschule* for nursery school teachers or at a *Fachschule* for civil servants at the intermediary and upper-intermediary grade. The ratio of people attending a full-time vocational school to participants in the dual system is approximately one to five.

One immediate reason for the popularity of the *dual system* is the fact that no formal entry criteria are stipulated and thus school leavers with completely different educational backgrounds may join the system. In 2000, 32% of trainees with new training contracts had a *Hauptschule* leaving qualification, slightly more than 36% had a *Realschule* leaving qualification, just under 16% had a higher education entrance qualification, and another good 13% had completed the first year of basic training at a vocational school (*Berufsprüfungsjahr*) or a course at a *Berufsfachschule* or a year of pre-occupation training. The remaining 2.5% had no *Hauptschule* leaving qualification (BMBF 2002b, p. 85ff.). Compared to higher education, therefore, the dual system has a highly integrative function (ULRICH 2002, p. 66f.). However, within the dual system, there is specific distribution according to occupation. Those with a higher education entrance qualification concentrate on a narrow spectrum of more demanding occupations in the commercial and administrative sector, and more recently also in the IT and media sector. Those with a *Realschule* leaving qualification can choose from a wide range of occupations, most of them being in administration and higher technical occupations. Adolescents with a *Hauptschule* leaving qualification are trained above all in craft trades and simple service sector jobs (BMBF 2002b, p. 87ff.).

In relation to the selectivity within the dual system, the motives for training in the dual system vary. A representative survey of school leavers in the mid-1990s shows that the majority of school leavers who have completed lower secondary education and prospective *Abitur* holders consider the dual system of vocational training to be an option that enables them to acquire important basic vocational qualifications for initial occupational and social integration (BERGER et al., 2000, p. 179 f.). This view, however, depends on how pupils consider the alternative education routes realistically open to them. Pupils with a *Hauptschule* leaving qualification are less optimistic about the long-term perspectives for occupational and social integration and for occupational self-fulfilment than *Realschule* leavers, who have better access to attractive and forward-looking occupations in the commercial sector and higher technical job sector (see also p. 180). That is why *Hauptschule* leavers sometimes continue at another school before commencing training in order to gain access to more attractive occupations in the dual system. The majority of *Abitur* holders, however, have stated that they find dual training less attractive

since they have the prospect of pursuing a course of study at a higher education institution.¹⁴ A higher education study course is associated with expectations of higher income and better career advancement opportunities (ibid. p. 180).

The vast majority of those aiming to acquire a full vocational training qualification outside the dual system attend a *Berufsfachschule*, the second largest group attend the *Schulen des Gesundheitswesens* (schools of the health care system). The number of pupils attending *Berufsfachschulen* has risen more steeply over the past years than the number of trainees in the dual system. The motives for choosing a programme at a *Berufsfachschule* are manifold, and this has to do with the different functions of these schools. One important finding is that most pupils make a conscious decision to pursue this occupational route. For many, the *Berufsfachschule* provides general orientation and leads to qualifications which could open the door to employment. Often, pupils acquire, in addition to a vocational qualification, a lower or intermediary general qualification or even, more recently, a qualification for entering higher education (i.e. a double qualification)¹⁵. A smaller number of pupils partly use the *Berufsfachschule* as a “stop-over” if they do not find a training place in the dual system. The *Berufsfachschule* also enables people returning to training or retraining to start afresh in a new occupation, and this is reflected in the large age range of training graduates, 18 to 55 years of age (FELLER 1999; BIBB 2001, p. 25).

For most young people in Germany, the desire to acquire a vocational qualification after completing general education is very strong. Only a small minority intend to start a “permanent job” immediately after leaving school. Others join this group when it becomes apparent that their training or career plans cannot be fulfilled (BERGER et al., 2000, p. 204). It is also possible for people in employment to gain permission to enter the training examination in the dual system (exceptional admission). They must have been employed in the right occupation for at least double the length of time of the training period or must be able to prove that they have acquired skills and knowledge which justify admission to the examination. In such cases, informally acquired skills are recognised. These exceptional admissions account for 5.4% of all examination admissions (not including the craft trades) (BMBF 2002b, p. 105).

After gaining a vocational qualification in the dual system or at one of the various full-time vocational schools, the vast majority of young people enter the employment system. Once in employment, it is not only possible to acquire an advanced vocational qualification after two to three years in the job, but also, moreover, to participate in non-formal and informal continuing education and training.

2.2 Importance of qualifications for skilled employees (non-graduates) in the employment system

Present forecasts predict that, despite the already high proportion of skilled workers¹⁶ in the working population in Germany, global demand for employees with vocational training qualifications will rise slightly further. The losers in the labour market are definitely those without vocational training qualifications. On the one hand the number of unskilled jobs is clearly dwindling. On the other hand, the number of people without vocational qualifications will unlikely to decrease in the future (BLK 2001, p. 4f.). This imbalance in employment trends in both groups is not untypical. For instance, average unemployment in western Germany in 1998 was 6.9% for skilled workers, whereas, for unskilled workers, it was 20% (IAB 2002). In eastern Germany during the same period, about 18% of skilled workers were unemployed while the corresponding figure for unskilled workers was 50% (ibid.).

¹⁴ For further details on the motives of *Abitur* holders with respect to acquiring qualifications in the dual system of vocational training, see section II, 1.1

¹⁵ A maximum of 20% of the *Berufsfachschule* leavers graduate not only with a vocational qualification but also with the *Abitur*.

¹⁶ In the German context a skilled worker is defined as one having a specific initial vocational training qualification leading to a specific occupational status (*Facharbeiter/Fachangestellter*)

Compared to graduates, however, the employment opportunities for skilled workers were much poorer. This begs the question whether the positive employment trend for graduates has developed at the expense of employment opportunities for other qualification levels. This concerns, on the one hand, the relationship between graduates and job seekers with vocational training qualifications, and, on the other hand, the relationship between those without and those with vocational qualifications.

If, in the labour market, graduates had indeed been gradually taking the place of skilled workers with vocational training qualifications, the unemployment rate among the latter would be higher. Findings from 1999 show that although demand for highly qualified employees in the service industry has risen considerably, unemployment among skilled workers with vocational qualifications in these occupations is lower than in manufacturing jobs. Thus, in the service sector, the demand for highly qualified employees has not had a negative impact on demand for employees with vocational qualifications (BLK 2001, appendix, p. 57). Furthermore, BERGER et al. reach the conclusion that there is no evidence of an overall trend whereby skilled workers who have received on-the-job training are steadily being pushed out of the market by graduates. Nonetheless, almost one in three large industrial companies is indeed considering a policy of recruiting graduates over non-graduates for the future. The most common reason given is the higher level of qualification required of employees (BERGER et al., 2000, p. 91). Another reason could be that training completed at a higher education institution saves costs for companies.

It has been observed over the past few years that the risk of job loss for skilled employees with qualifications from the dual system varies. The risk is higher in companies whose rationalisation strategies centre on cost reduction. Such companies also attach greater importance to on-the-job training within the company itself when recruiting personnel. In such companies, moreover, demand for skilled employees is growing and new career advancement opportunities for employees with special skills are emerging. These companies are generally among those which provide training, 78% of which (compared to 36% in the case of companies not providing training) regard vocational qualifications for a skilled occupation as being an absolute precondition for recruitment. This attitude is much more widespread among the craft trades and in industry, banks and insurance companies than in the retail trade and other service sector businesses (BERGER et al., 2000, p. 26f.).

People without any vocational qualifications have the worst employment opportunities. Unskilled or semi-skilled employees are being increasingly replaced by employees with officially recognised vocational qualifications. However, company surveys from the 1990s reveal that this trend depends on the size of the company and the sector in which it operates. While the number of jobs for unskilled and semi-skilled workers tended to remain steady or even increase in small and medium-sized businesses, this was not the case in large companies. Changes in the work organisation of large companies have led to a slump in demand for unskilled or semi-skilled workers. This trend is reinforced by the fact that, as a consequence of rationalisation measures arising from cost-saving strategies, it is often unqualified employees who are the first to be made redundant. All in all, the demand for people without vocational qualifications is subject to strong fluctuations and thus those people hardly ever find a job with long-term future prospects (BERGER et al., 2000, p. 25).

2.3 Importance of certificates in employers' recruitment decisions

The findings outlined above show that the German employment system attaches great importance to skilled and qualified labour. Another question is the importance of certificates as an indication of the skills and abilities offered by an applicant for a job. Vocational training certificates in Germany consist of three complementary certificates, namely the examination certificate from the responsible chamber, the certificate from the vocational school and the training certificate awarded by the company. There are a number of findings from surveys of companies which examine this issue, in relation to qualifications from the dual system (BIBB 1998).¹⁷ In principle, the recruitment decisions of companies are based on various sources of information. Almost all companies in the surveys rate the train-

¹⁷ The survey was carried out on companies which participate in the BIBB's Reference Company System.

ing certificates awarded by companies as “very important” or “fairly important”, second only to the job interview. Almost all companies agree that this certificate provides the most information as far as specialised knowledge, practical skills, care and precision in work and comprehension of the occupation are concerned. Other information sources, such as grades in the final examination at the chamber, were rated as “very important” much less frequently. The examination certificate awarded by the chambers provides information about learning ability with respect to more theoretical questions and about intellectual skills rather than about proficiency in the occupation. Accordingly, only 23% of the companies in the surveys largely or fully agreed with the statement, “The examination certificate provides valuable information about proficiency in the occupation.”

2.4 Qualification for skilled employment and income prospects

In Germany, the qualifications system is closely linked to the collective bargaining system. Depending on the sector, the collective agreements apply to 65% to 80% of employees. If the holder of a given qualification works as a skilled employee in an occupation covered by that qualification, he or she is entitled to the salary agreed between the social partners in the sector in question. The evaluation of jobs in the collective bargaining system is based on the knowledge and skills acquired in the respective vocational training programme. An employee with qualifications for skilled employment is placed in a medium-level wage/salary grade. The remuneration for trainees is also regulated by collective agreements.

As already mentioned above, skilled workers earn on average about € 1000 less per month than university graduates.¹⁸ However, income depends on the sectors in which skilled workers are employed and their education and training background. On the basis of the survey carried out by BIBB/IAB, it was demonstrated that top-level salaries of € 3000 and above were reached by 43% of employees who had completed lower secondary education, or had a higher education entrance qualification, plus a dual system qualification in a commercial occupation (banking, insurance, industrial clerk, etc.) plus an advanced vocational qualification. By contrast, only 41% of employees with a higher education qualification in business and economics were in the same income bracket. This means that in this sector, people have the same or even slightly better income opportunities if they have not gone on to higher education but built on their dual system qualification and gained an advanced vocational qualification by undertaking further training. However, it is also true that with a higher education qualification, a person is less likely to end up in the lower echelons of the income pyramid than a person without such a qualification. Finally, it was also shown that a double qualification (qualification from the dual system plus higher education qualification) does not on average lead to a higher income than the direct acquisition of a higher education qualification.¹⁹

2.5 Qualifications and the flexibility of employees to move to another occupation, another company or another country

In connection with the debate on lifelong learning, it is often said that vocational education and training is losing its importance (cf. summary by BELLMANN 2001, p. 10ff). The reasons given are the rapid pace at which vocational knowledge becomes obsolete, the speed at which jobs are restructured and thus the level of mobility expected of employees. The desire of the individual for greater mobility also plays a role. It is often said that employees will have to change their job several times during their working life.²⁰

¹⁸ See footnote 10.

¹⁹ This finding coincides with findings of other surveys (cf. BÜCHEL 1997).

²⁰ An “occupation” is a central category in the German vocational education and training system and employment system. A distinction must be made between “training occupations” and “acquired occupations”. Training occupations are the qualifications gained in the dual system and are generally broader than the occupations which are exercised subsequent to completion of training (cf. REULING 1998).

The link between qualifications and mobility is a central issue in the survey of employees conducted by the BIBB/IAB (cf. HECKER 2000a and 2000b for what follows).²¹ The findings show that changes in activities at work are not always interpreted by the person concerned as a change in occupation. Rather, they are perceived as “normal” changes within an occupational identity developed during training and working life. On a subjective level, 23% of all employees in Germany say they have changed their occupation once and 9% several times. The number of people who subjectively have changed their occupation has remained at the same level as in the survey in the early 1990s (HECKER 2000a, p. 79). For 29% of all those who subjectively have changed their occupation, the change was linked to further education or training (HECKER 2000b, p. 15). This finding can be interpreted thus: the majority of employees obviously feel that the knowledge and skills they have acquired during vocational training, supplemented by non-formal and informal learning, are sufficient to allow them to change occupation.

Skilled workers (*Facharbeiter/Fachangestellte*) do not tend to change occupation very often. Among other things, this has to do with the fact that specific vocational training qualifications are generally a prerequisite for positions for skilled workers. Access to skilled worker status is almost impossible for people who have not acquired the specific vocational training and qualification (HECKER 2000a, p. 82). Changes in occupation occurred more frequently among lower-grade public service employees and civil servants but much less frequently among qualified and higher-grade public service employees and civil servants. Unskilled and semi-skilled workers changed their job the most frequently (53%), although in many cases they most probably had no other choice.

The effects of a change in occupation are particularly interesting with respect to the question of the link between qualifications and occupational mobility. Changing occupation is unproblematic if the knowledge and skills learned during training can also be put to use outside the occupation for which a person has trained. In the case of qualifications gained in the dual system, it was found that, if the change in occupation was within the more narrow occupational field in an economic sector, in almost all sectors, 42% of people who changed their occupation were able to apply “a great deal” or “a fair amount” of the skills and knowledge learned during training in their new job (HECKER 2000b, p. 16). With regard to all employees, the findings also show that, for half of the people who changed occupation, their position had considerably improved. The higher the level of education, the more successful the change. The change in occupation had a particularly positive effect if it was determined by individual choice and motivation, if job wishes could be fulfilled and if the change was backed up by systematic preparation for the new occupation through systematic further education and training (HECKER 2000a, p. 90).

Of the employees questioned in the mentioned survey, 29% were still employed by their first ever employer, 45% had changed employer one or two times and a quarter had already worked in four or more different companies (HECKER 2000a, p. 68). On average, employees work in the same organisation for 11 years. Employees aged 45 or more work an average of 17 years in the same organisation. People with qualifications from a *Berufsfachschule* or a higher education institution change employer very rarely. Many civil servants and public service employees fall into both groups and 40% of them have never changed employer. As with a change in occupation, a change in employer occurs particularly often among unskilled and semi-skilled workers.

With regard to the reasons for changing employer, it emerged that such a change corresponds closely to an employee’s position. The higher the job position, the more often the latest change in employer was initiated by the employee himself/herself. The vast majority of the people who changed employer improved their job situation (HECKER 2000a, p. 72).

Transnational mobility is not very prevalent among the workforce in Germany. Only 13% of all those questioned (10% of the Germans nationals questioned) spent a substantial period abroad (not counting holiday periods). For 25% of the German nationals in the workforce, this period abroad was spent for career reasons, for 14% it was for the purpose of training. Only 2.4% of all the employees questioned

²¹ For practical reasons, the findings from all qualification groups are presented here.

had worked abroad for a substantial period of time; 1.4% went abroad for training or higher education. The findings on foreign language proficiency show that the low level of transnational mobility is not primarily due to the problem of language. According to the findings, 41% of the survey participants claim that they have sufficient command of a foreign language to be able to conduct business and deal with correspondence (HECKER 2000a, p. 91f.).

2.6 Factors which encourage or discourage participation in vocational training

More than two thirds of adolescents and young adults in Germany complete training in the dual system or at full-time vocational schools. In this respect, Germany is the classic example of a country where the emphasis is on vocational training. Vocational training in the dual system is the more common of the two.

One attractive aspect of vocational training in the dual system is its accessibility. No previous qualification is formally needed to enter this type of training. Furthermore, a large range of training programmes for learners with different performance, abilities and educational backgrounds is available. However, owing to company recruitment criteria, applicants seeking a training place are in fact subject to a process of internal selection, which can make access to the more modern and attractive training occupations more difficult, if not impossible for some individuals. This internal selection becomes tougher the fewer the places and the higher the demand for them in the regional training place markets as a consequence of economic fluctuations. The acquisition of qualifications is more difficult for some learners due to the fact that it is necessary to complete a learning programme over several years and a final examination on all the knowledge and skills learned during the training period. In principle, it is not possible to leave programmes or resume them after an interruption.

Vocational training in the dual system is also attractive due to the high level of portability of its qualifications. A qualification from this system is the starting qualification for the German employment market, which is structured strictly on the basis of occupations. This portability is also achieved by involving employers and unions as central partners in the process of designing, implementing and monitoring training. The result is a high level of acceptance, transparency and a confidence shared by all parties in the value of the qualifications. The employment and income prospects for skilled employees are (on average) not as good as for graduates, but far better than for unskilled employees, since, owing to their vocational qualifications, the majority of skilled employees receive fixed rates of pay for skilled employees laid down by collective agreements concluded between the social partners. In commercial occupations in particular, a qualification from the dual system combined with advanced vocational qualifications can even be a viable financial alternative to a higher education qualification.

The multi-year training programmes of the dual system impart a wide range of knowledge and skills. For most training graduates, this is a prerequisite for finding appropriate employment that matches their qualification. Thus this system of training creates a platform which can be used as a starting point for continually renewing knowledge and developing skills during working life by making use of the continuing education and training opportunities and options individually available and provided by employers.

Another encouraging aspect of training in the dual system is fact that the trainees (unlike in the case of training at schools or higher education institutions) receive a trainee remuneration, which is negotiated and fixed by the social partners.

Another positive factor in the dual system is that the qualifications acquired also open the door to higher education. The equivalence of general education and vocational training allows the acquisition of general knowledge and skills during or after a period of training. As a rule, it is the high-performers who achieve this. Admission to higher education via advanced vocational qualifications is tied to a series of conditions, which can be met by those who are particularly motivated and high-achieving.

Full-time vocational schools offer training options characterised by easy accessibility (depending on previous school performance), allowing students to opt out after one year (from vocational training). They also offer fully developed career pathways leading up to admission to higher education. Thus, in principle, they enable individuals to keep several options open or to postpone career decisions. Full-time vocational schools are also open to adults wishing to gain vocational qualifications. One discouraging aspect is the lower level of portability of the qualifications in the employment market compared to dual system qualifications when it comes to fields of work where there are established training occupations. Another negative aspect is the fact that the financial assistance provided by the state towards living expenses is generally much lower than the rates of pay for trainees in the dual system. This becomes even more of a drawback if a person attends a privately-run *Berufsfachschule*, for which the fees can be quite high.

3. Advanced vocational qualifications for skilled employees (non-graduates)

After gaining a qualification from the dual system or from a full-time vocational school and going on to employment, it is possible to gain an advanced vocational qualification (eg. as *Techniker* [technician], *Meister*, *Betriebswirt* [graduate in business administration], *Fachwirt*). The *Meister* qualifications in the craft trades or for jobs in industry do not necessarily stipulate the way the qualification should be acquired. However, it can be assumed that many of the people interested in advanced vocational qualifications attend a course which prepares them for the *Meister* examination. In 1999, about 142,000 people sat an examination for an advanced vocational qualification, of which about 115,000 passed. In numerical terms this corresponds to about half the number of examinations that are passed at higher education institutions (BMBF 2001a, p. 216, 324). These examinations are for the most part taken by the age of 39. Among today's 40 to 49-year-olds, 25% gained this qualification by the age of 22, 50% between the age of 22 and 31 and the rest after the age of 32 (KREWERTH 2002).

An analysis of the popularity of upgrading qualifications among the various age groups shows that the proportion of employees who have acquired advanced qualifications has decreased overall.²² While 14.6% of employees aged over 60 had acquired such a qualification, in the 50-59-year-old age group the figure was 13.5% and in the 40-49-year-old age group only 10.7%. This decline was particularly noticeable in the case of the *Meister* qualification (9% down to 4.5% while, in the case of the *Betriebswirt* and *Fachwirt* qualifications, there was a large increase in relative terms from 0.4% to 1.4% of the working population. (KREWERTH 2002).²³

Upgrading qualifications is the traditional qualification route for those who acquire a school qualification below *Abitur* level and then complete training in the dual system. However, it appears that the appeal of this qualification route has faded among this group too.²⁴ In the case of the over-60s, 18.7% of those who acquired a qualification from the dual system also successfully undertook upgrading training leading to an advanced qualification. Of the 40 to 49-year-olds, the figure was only 11.5%, although a larger proportion of this age group completed training in the dual system (KREWERTH 2002).

The decrease in importance of advanced vocational qualifications can have various causes. For example, it has often been postulated that employees with these qualifications are being increasingly pushed

²² When determining the number of employees who hold advanced vocational qualifications, higher age groups must be considered since such a qualification can, in principle, be acquired during the course of an entire working life. As the results show, it must be assumed that about 90% of the advanced vocational qualifications are acquired by the age of 39. That is why only groups of employees who are 40 or older are taken into consideration here.

²³ However, the effect of age is not taken into account here. It could be the case that those who complete upgrading training behave differently with regard to retiring from employment than those who have not done any further training.

²⁴ The decrease could also be due to the fact that the dual system has recently been more in a position to also help poorer-achieving adolescents to gain a qualification, for whom an advanced vocational qualification would not be suitable.

out by university or *Fachhochschule* graduates. There is no uniform picture of the development of opportunities for employees with advanced vocational qualifications. Moreover, it is doubtful whether large companies are actually carrying out their partly declared intention to gradually replace skilled employees by graduates (BERGER et al. 2000, p. 91). Results from the BIBB/IAB survey show that the opportunities for finding adequate employment that matches this type of qualification did not decrease in the 1990s (PLICHT 2001). More recent findings from the field of commercial occupations show that, despite changes in corporate structures, the career advancement opportunities for people with these qualifications have basically remained intact. However, the pathways for career advancement are being modernised and to a certain extent replaced by new specialised careers (eg. specialists, consultants) (TILLMANN/BLÖTZ 2002, BMBF 2002b, p. 223f.).

The BIBB/IAB survey also shows that employees with an advanced vocational qualification earn approximately € 400 more than employees with just a qualification from the dual system. Although there is a difference between commercial and craft trade occupations. With an advanced vocational qualification in a commercial field it is possible to achieve a higher income than with a comparable qualification in the craft trades (as a wage/salary earner). However, even as wage/salary earners, employees with the *Meister* qualification in the craft trades are much better off financially than their colleagues who have just an initial vocational qualification.

The income gains resulting from upgrading training qualifications must be measured against the expense of attending the courses to prepare for the examination. In a survey by the BIBB from the mid-1990s, it became clear that further training to become a *Meister*, *Techniker* or *Fachwirt* was by far the most costly (BARDELEBEN et al., 1996, p. 73f.) of all advanced qualifications. Even after deduction of financial assistance provided by the state, this group bears the highest costs per individual compared to participants in other further education options. In 2000, about one third of the participants in further training examinations received financial support through the Upgrading Training Assistance Act. To be eligible, course attendance must amount to at least 400 hours. Since the amendment of this law in 2002, the number of applications for financial support has increased by 145% (BMBF 2002a).

It is certainly possible that the comparatively high cost for the individual is the key reason for the decline in interest in upgrading training. In addition, the prospect of competition from university or *Fachhochschule* graduates could also lead high-achieving training graduates to decide against acquiring an advanced vocational qualification or, alternatively, may lead them to attend a *Berufsoberschule* or *Fachoberschule* in order to gain admission to higher education. It remains to be seen how the changes to the law governing financial support for this type of training will have an impact on interest in these qualifications. After all, the part-time programmes for *Meister* courses or *Fachschule* courses and the option of taking the *Meister* examination in individual units all serve to make the acquisition of these qualifications relatively flexible.

4. Conditions which encourage or discourage participation in continuing education and training

Continuing education and training in Germany differs from the other sectors catered for by the education and training system in the diversity and wealth of its providers. It is organised as an open market in which providers compete with one another and potential participants choose education options on the basis of service and price. Furthermore, the state plays a subsidiary role in continuing education and training, only intervening when the tasks of continuing education and training surpass the private commitment and financial scope of the social groups. In this respect, continuing education and training is much less regulated or standardised than, for example, vocational training (ALT, among others, 1994). Given these circumstances, continuing education and training is organised as an open system in which there are no formal admission requirements. The learning programmes and courses can be flexibly designed and oriented to individual needs, learning and job experience.

4.1 Structures with regard to participation in continuing education and training and their development over time

Generally, it is difficult to assess participation in continuing education and training because it has very different conceptual definitions. Added to this is the problem of recording statistics, in particular procuring data on the different types of informal learning (BELLMANN 2001, p. 5f.). In the reporting system for continuing education and training, a distinction is made between general continuing education, formal continuing vocational education and training, and informal continuing vocational education and training (KUWAN/THEBIS 2001)²⁵:

- Further general education refers to programmes, courses or lectures on different topics such as health, financial management, language skills etc.; they can be certified or not, they don't lead to a qualification.
- Formal continuing vocational education and training includes courses or programmes for career advancement or for retraining for another occupation including a formal vocational qualification. Furthermore, it includes preparation courses or programmes for a new job or for learning new tasks and other programmes/courses in connection with an occupation - not leading to a formal qualification.
- Informal continuing vocational education and training includes job-related visits to trade fairs or congresses, participation in small-scale events such as lectures or half-day seminars, instruction or guidance at the workplace, self-teaching by observing and experimenting at work, self-directed learning at the workplace or during leisure time, special visits or exchange programmes organised by employers within or outside of the workplace, quality control circles, the reading of specialist literature.

The general findings of the reporting system for continuing education and training with regard to structures and the development of participation in continuing education and training over the course of time are as follows²⁶:

- Participation by 19-64-year-old employees in general and formal continuing education has risen steadily since 1991 and peaked at 48% in 1997. In the year 2000, however, only 43% of the survey participants said they had taken part in these forms of continuing education and training.
- When the results are broken down according to the different forms of continuing education and training, the situation is as follows: participation in continuing general education rose from 1991 to 1997 from 22% to 31% and in the year 2000, went down to 26%. In western Germany, the level was slightly higher than in eastern Germany.
- Participation in formal continuing education and training, on the other hand, increased from 21% in 1991 to 30% in 1997 and in 2000 stayed almost the same at 29%. The corresponding figures for eastern Germany were much higher than in western Germany (37% and 29% respectively in 1997). These differences can be put down to the efforts towards requalifying employees in eastern Germany. However, in 2000, the figure in eastern Germany dropped by 6 percentage points.

²⁵ This distinction differs from the distinction between formal, non-formal and informal learning in the EU/OECD context.

²⁶ This reporting system is a representative survey of the situation in the continuing education and training system, which has been conducted every three years since 1979 by *Infratest Sozialforschung* on behalf of the Federal Ministry of Education and Research. The results are from the perspective of participants in or potential candidates for continuing education and training. Participants aged 19 to 64 are asked whether they have participated during the years of the survey (or within the preceding three years) in further education and training. The latest findings are from the year 2000. These time series concern continuing education and training in each year recorded. Since 1991, eastern German *Länder* have also been included in the survey. (KUWAN/THEBIS 2002).

- Participation in informal continuing education and training was recorded for the first time in 1994. It rose from 52% in 1994 to 72% in 1997 and was 67% in 2000. This means that two out of three employees took part in informal continuing education and training. Here, too, the participation level in eastern Germany was somewhat higher than in western Germany.

The BIBB/IAB survey from 1998/1999 shows similar findings with respect to the distribution of formal and informal continuing education and training (ULRICH 2000, p. 26f.).²⁷ According to the survey, in the preceding five years, 28% of all employees had participated at least once, if not several times, in formal continuing education and training and 63% in informal continuing education and training. This underlines the enormous importance of informal learning for the development of skills.

4.2 Factors which affect participation in continuing vocational education and training

Participation in continuing education and training depends on a host of different potential factors, and the strength of these factors and the way they interact can only be clarified by multivariate analyses (KUWAN 2000, p. 507f.). On the basis of such analyses, BEHRINGER examines the significance of different factors with regard to participation in continuing education and training (BEHRINGER 1999)²⁸ and reaches the following conclusions (BEHRINGER 1999, p. 154ff.): The probability that a person takes part in continuing education and training is higher

- the younger the person is,
- the faster new technologies spread in the occupation being practised and
- the higher the person's vocational qualifications.

Furthermore, participation depends on

- whether the participant holds a fairly high position at work,
- whether the person is employed in a large company.

Together with these more structural factors, a series of rather more subjective factors also play a role, particularly factors relating to calculation of individual benefit (BEHRINGER 1999, p. 211ff):

- The number of continuing vocational education and training activities previously attended determines to a relatively high degree whether a person participates in such activities again. There are evidently groups of people who habitually participate in continuing education and training and others who do not. In the case of the latter, one of the reasons could be negative experiences with education, which have given rise to inhibitions which are hard to overcome.
- Another factor influencing participation in continuing vocational education and training is whether or not a person is employed in an occupation which matches his or her training. The question here is whether or not people can make use of their vocational qualification in the employment system, which also has a bearing on the experience of being able to achieve occupational benefits by actively engaging in further education. This link can also be interpreted thus: participation in continuing vocational education and training is built on the continuity of working in the occupation somebody was trained in during his/her working life. From this perspective, the training occupa-

²⁷ In the BIBB/IAB survey, employees were interviewed at intervals of several years about various aspects of their initial and continuing education and training and about developments at their place of work.

²⁸ BEHRINGER uses the results of the *Sozioökonomisches Panel* (Socioeconomic Panel – SOEP) from the first half of the 1990s. The SOEP is a representative survey of random households in which those household members who were 16 years of age or above at the time were asked if they had participated in continuing education and training during the three years prior to the survey.

tion is essential input for continuing vocational education and training. Continuing vocational education and training does not replace occupation; it offers the chance to continually renew knowledge during working life by making use of the learning opportunities and learning options individually available and provided by employers (HARNEY et al., 1999, p. 287).

- The assessment of the career advancement opportunities within a company/organisation and the possibility of changing job has a significant positive impact on participation in continuing education and training. By the same token, the assessment of the probability of job loss has a significant negative impact on participation in continuing education and training.
- The cost of continuing education and training has a considerable bearing on the decision to participate in continuing education and training. Lack of time, however, proved not to be a serious impediment.

As part of the BIBB/IAB survey, relevant factors affecting the attitude of employees towards continuing education and training were also analysed using multivariate analyses. According to the survey, there is a close link between the degree of special knowledge required for a job and the extent to which formal and informal continuing education and training is pursued. Those who need more knowledge tend also to make use of continuing education and training more often. (ULRICH 2000). It is interesting to examine more closely how attitudes vary towards continuing education and training depending on a person's vocational education and training background. Such an analysis is all the more worthwhile because the participants in the dual system in particular often have totally different educational backgrounds. Some do undertake upgrading training later on, after completing initial training, go on to higher education. It has been found that there is hardly any difference between the attitude of graduates towards formal and informal continuing education and training and that of people with initial training qualifications for commercial occupations plus advanced vocational qualifications. Furthermore, irrespective of the training and education pathways chosen, the degree of participation in continuing education and training is influenced by a person's previous school education (ULRICH 2002, p. 98ff).

4.3 Attitudes of particular groups towards continuing education and training

It has been found in surveys concerning the attitude of graduates towards continuing education and training that five years after completing their study course, a good three quarters of the interviewees had taken part in non-formal continuing education and training (not including informal learning) (WILLICH et al., 2002). This high rate can partly be put down to the considerable level of individual initiative and financial commitment of the participants.

As the multivariate analyses show, the continuing education and training activities of young graduates depend very much on their integration in the employment system. These activities are more frequent where graduates are constantly in employment and are in relatively secure employment conditions. The extent of participation in continuing education and training among graduates depends on the type of employment and increases with the size of the employing company/organisation and with the duration of employment. Ultimately, participation in continuing education and training also depends on the degree subject. Lawyers continue to gain further qualifications by taking part in courses etc. much more frequently than, for example, mathematicians and scientists. The latter are mostly employed in research and higher education institutions in which continuing education and training tends to take place on an informal basis. Finally, it has also been found that women are more likely to initiate and finance continuing education and training for themselves. However, this is less a consequence of direct discrimination than of gender-specific employment biographies and forms of employment.

To conclude, the factors which discourage participation in continuing education and training should be considered in more detail. These factors are easy to identify in the case of the two groups which show comparatively low participation in continuing education and training, namely employees without formal vocational qualifications and older employees (BEHRINGER 1998; BEHRINGER 2000). Employees

without formal vocational qualifications show a lower interest in continuing education and training than those with formal vocational qualifications (cf. also HECKER 2002, p. 188). However, when unskilled employees are indeed interested in continuing education and training, they are less likely to turn their interest into actual participation. The link between vocational training and the participation in *in-house* continuing education and training is particularly striking. In-house continuing education and training is sponsored or financed by an employer. Here, the demand for continuing education and training stems from the employer and it is the employer that more or less decides who should have access to continuing education and training. It appears, however, that employees without formal vocational qualifications do not belong to the priority target groups for in-house continuing education and training measures. Altogether then, it can be concluded that the employers personnel policy serves to reinforce rather than reduce the disparity in participation in continuing education and training (BEHRINGER 1998, p. 302f.).²⁹

BEHRINGER also reaches a similar conclusion when analysing the factors influencing participation by older employees in continuing education and training (BEHRINGER 2000, p.559). She first ascertains that older employees show considerably less interest in continuing education and training than younger employees. This could be because older employees are not expected to show any significant interest. However, it could also be because older employees expect fewer personal benefits from continuing education and training. Nonetheless, it is also striking that, in particular, employees over 50 who are indeed interested in continuing education and training are much less likely to translate this desire into actual participation than younger employees. In addition to the problem of finding suitable continuing education and training options, one of the primary reasons for this is most probably that older employees are much more often placed in positions which do not match their training qualifications than younger employees. In their experience, vocational education and training is not worthwhile: more often than others, they find themselves in jobs which do not offer any learning incentives (ibid. p. 558). Since age plays a much greater part in in-house continuing education and training than in individually financed continuing education and training, it can also be concluded here that the lower level of participation by older employees is not least a result of the accessibility of continuing education and training programmes and the extent to which employers encourage participation.

4.4 Qualifications as input for non-formal and informal learning

The findings described here show that non-formal and informal learning are affected by many different factors (such as personnel policy, age, sex, etc.), which are only indirectly or not at all connected to the qualifications system. One particularly positive aspect of the qualifications system which has an influence on participation in continuing education and training is the fact that there is a wide range of different learning programmes available that help learning to learn and thereby creating a broad basis for the working life. The experience of being able to use their qualifications to a sufficient degree boosts employees' motivation to constantly renew their knowledge and further their skills through non-formal or informal learning.

²⁹ According to the results of the BIBB/IAB survey, people with non-formal qualifications are particularly under-represented in informal continuing education and training (RAUCH 2001, vol. 246).

III. Education policy requirements and reform initiatives

In the 1990s, a series of reforms to the German qualifications system were set in motion. As far as vocational learning was concerned, the major goals up to the middle of the decade were “strengthening and modernising” by achieving greater flexibility, differentiation and individuality in the qualifications system. The ultimate goal was to boost Germany’s competitive standing. The main issues revolved around increasing provision of in-company training places, and above all, modernising training occupations providing support for low-achieving adolescents and placing vocational training and general education on an equal footing.

Only in 1997 was the issue of lifelong learning put on the agenda in the “Reform Project for Vocational Training – Flexible Structures and Modern Occupations” (BMBF 1997). Qualifications and competence were identified as key factors for Germany’s competitiveness, factors which cannot be developed in schools and programmes alone, but which above all must also be furthered by employers. Another aspect was improving the flexibility of advanced vocational qualifications by further developing the system, offering additional qualifications and by assessing and accrediting work experience in the acquisition of qualifications. A third aspect in this context was the development of dual initial and continuing education and training in cooperation with employers and *Fachhochschulen*. Finally, flexible transition from vocational training to higher education in order to improve career advancement for qualified employees was also pinpointed as a factor.

After the change in Federal Government in 1998, the Working Group on Initial and Continuing Education and Training of the newly created Alliance for Jobs, Training and Competitiveness,³⁰ also confirmed the urgency of these measures to further lifelong learning. In early 2001, the Federal Ministry of Education and Research released the action programme “Lifelong Learning for Everyone”, in which the areas of action leading to a “learning society” are systematically and comprehensively elaborated and presented (BMBF 2001c).

1. Dual study courses

At present there is a large spectrum of dual study courses (combining studies on tertiary level and training in a company) in Germany. They mirror the different interests of higher education institutions, employers and individuals. The aim of establishing such study courses was to try and respond to a whole range of problems in education policy (KLOCKNER 2000).

The rigid separation between the vocational and the academic spheres was considered a problem of the higher education system by the advocates of dual study courses. This separation leads to the tardy entry of graduates into the employment system compared to other countries. The rigid sequence of a four- to five-year study course and subsequent employment also to a certain extent fails to take into account the changes in individual choices with regard to education and way of life and ignores the demands placed on graduates by employers. Thus alternatives have been sought in the form of shorter, higher-quality forms of tertiary education and training allowing both academic and vocational knowledge and skills, i.e. theory and practice, to be taught.

Dual study courses play a role not only in vocational education and training, but also in continuing education and training. For example, in the early 1990s, there was a broad-based debate on the equivalence of vocational and general education and training. It was demanded that access to higher education should be opened up to those with vocational training qualifications and work experience firstly by making advanced vocational qualifications valid as an entrance requirement for higher education.³¹

³⁰ The members of this body, which was set up by the new Federal Government in 1998, were government representatives and high-ranking representatives from industrial and business associations and trade unions.

³¹ The regulations in the legislation of Germany’s 16 *Länder* vary considerably; they either stipulate the requirement of a higher education entrance examination, or allow a trial or refresher course, or allow direct access to higher education.

Secondly, career pathways within a company were to be linked to study options. In this respect, universities and *Fachhochschulen* were to also take on functions of continuing education and training (DYBOWSKI et al., 1994).

The range of dual study courses, which has been considerably enlarged since the early 1990s, is offered primarily by *Fachhochschulen*. They are following the lead of the *Berufsakademien*, which were introduced as early as the 1970s in Baden Württemberg and later in a partially modified form also in other *Länder* (Berlin, Saxony, Schleswig-Holstein and Thuringia). The hallmark of the *Berufsakademien* is their more institutionalised cooperation with the participating businesses compared to the *Fachhochschulen*, and as a consequence the study courses are also more tightly organised and shorter in duration. Study courses at *Berufsakademien* last three years. Each semester is divided into a 12-week practical period of work in a company and a study period at the *Berufsakademie*. The applicants for a study course at a *Berufsakademie* are selected by the companies participating in the training. The companies not only have to take into account their own capacity but also that of the *Berufsakademie* (HARNEY et al., 2001, p. 20). In the mid-1990s, as many as 3100 companies participated in the Baden Württemberg *Berufsakademie* alone in the fields of business and technology (HARNEY, among others, 2001, p. 20). Since 1995, upon the recommendation of the Standing Conference of Ministers of Education and Cultural Affairs, these qualifications have been allocated to the tertiary sector, depending on the type of *Berufsakademie* (KMK 2001, p. 168f.). Nationwide, there are about 25,000 students enrolled in *Berufsakademien*. In Baden Württemberg in the year 2000, as many as 45% of all business management training graduates had gained their qualification from a *Berufsakademie*, 30% from a *Fachhochschule* and only 25% from a university (DER SPIEGEL 32/2002, p. 58). Nonetheless, nationwide, the number of graduates from *Berufsakademien* compared to graduates from higher education institutions is almost negligible.

As at the *Berufsakademien*, the dual study courses at *Fachhochschulen* are aimed at people eligible for higher education; they are practice-oriented and prepare students early on for future occupations while allowing them at the same time to complete a study course (cf. in particular MUCKE et al. for what follows, 1999). The recommendation to develop these study courses and make on-the-job training an integral component came above all from the *Wissenschaftsrat* (German Science Council)³² The main intention was to create a practice-based, time- and cost-saving alternative to traditional study courses. Also, the parties involved in the system of vocational education and training recognised in dual study courses a way of ensuring the attractiveness of the dual system. From this viewpoint, dual study courses would improve transition between the education sectors by opening up access to higher education to those people with vocational qualifications but without a higher education entrance qualification. Furthermore, vocational training courses were to be linked to higher education options (double qualification) in order to create an alternative to the time-consuming model of *Abitur* – vocational training - study course. The development of dual initial and continuing education and training in cooperation with companies and *Fachhochschulen* was considered by the Federal Ministry of Education and Research to be a new approach to promote lifelong learning (BMBF 1997).

The existing four types of dual qualification pathways and study courses are directed at different target groups, namely, at people interested in vocational education and training, on the one hand, and at people interested in continuing education and training, on the other (MUCKE 2001):

- Young people with a higher education entrance qualification can acquire a dual system qualification during the first stage of their study course (*Grundstudium*) at a *Fachhochschule*. During the second and final stage of the course (*Hauptstudium*), these students have a placement on a part-time basis at a company which more or less relates to the subjects being studied. These courses are referred to as courses with integrated training.

³² The German Science Council advises the Federal Government and the *Länder* in programmatic and structural matters relating to higher education, science and research as well as to construction of higher education institutions. The members of the Council are scientists appointed by the Federal President together with Federal Government and *Länder* representatives.

- Young people with a higher education entrance qualification can, instead of doing a vocational training course, practice an occupation on a part-time basis from the beginning of their study course or at another time during the course, either on regular days or in blocks over set periods (study course with integrated practical component). Here too, the placement at the company, which must last for a total of more than two practical semesters, should be related to the subjects being studied.

These two types of dual qualification pathways and study courses thus come under vocational education and training. They mostly extend over four years and are offered above all in the subject areas of business management, IT and engineering. There are another two types which come under continuing education and training. They are tailored to the following target group:

- People who have completed vocational training qualifications and do or do not have a higher education entrance qualification, and who generally combine their study course from the start with a part-time company placement on regular days or in blocks over set periods. The study course is based on the previously completed vocational training and the part-time placement relates more or less to the course subjects (study course with an integrated occupational component).
- People who have completed vocational training and who do or do not have a higher education entrance qualification can also choose a study course with a parallel full-time job. The study course is a self-directed study course with accompanying seminars which take place on one day a week at the most. Unlike in the case of traditional distance learning courses, the company makes a practical contribution, such as exemption from duties or organisation of working options which are in the interests of the company and which further the chance of success on the course. These courses are offered in business and economics, in the health and social care systems and also in the engineering sciences (study course with parallel occupation).

Dual study courses at *Fachhochschulen* offer many advantages. However, there are also quite a few restrictions, which at present still limit the effectiveness and scope of these models. (MUCKE et al., 1999, MUCKE/SCHWIEDRZIK 2000). For example, the purpose of the duality - the two learning locations of "Fachhochschule" and "the company" - is to create a closer link between theory and practice. The alternation between phases of initial and continuing education and training within a company and at a higher education institution together with the possibility of connecting theory and practice can increase students' motivation. However, at the same time, this requirement also places considerable pressure on the students since ultimately they are the ones who must put what they have learned into practice and manage the transfer between the learning locations. Presumably only a few very high-achievers among the students are capable of doing this.

The success of the various models also depends on how the change between working and learning is organised and how the theoretical and practical knowledge is organised in the curriculum. Mostly, the link between working and learning is restricted to the students being entrusted with manageable projects in the companies or being allowed to write diploma dissertations which relate to the training companies. However, it would hardly be accurate to speak of systematic curricular coordination. Of course, the different interests of and options offered by *Fachhochschulen* and companies are striking here. Companies are subject first and foremost to economic constraints. Either the need of the *Fachhochschulen* for more cooperation is beyond the companies' scope or it is too complicated for them to respond to such requirements. The danger of limited curricular cooperation is that dual study courses offer the same programmes in compressed form as the "traditional" courses at the *Fachhochschulen*. It is questionable whether, under such restrictive learning conditions, it is possible to further important key qualifications such as communication skills, cooperativeness and willingness to take risks and to create conditions for "self-directed learning".

The fundamental question is this: to what extent are dual study courses at *Fachhochschulen* becoming part of a vocational education and training route which allows transition from initial vocational education and training to the tertiary sector via continuing education and training, particularly for young people without a higher education entrance qualification? Findings show that, altogether, there are so

far only a handful of dual study courses in which initial and continuing education and training really do seem to be interlinked. These courses are national pilot projects in which the further training (eg. preparation for the examination for the *Meister* qualification) is combined with academic curricula. These projects are currently being developed and tested. However, more experience has been gained with dual study courses designed particularly for *Abitur* holders. Thus, dual study courses are regarded by some as an “inferior” version of higher education courses rather than a “superior” version of initial and continuing vocational training shifted to the higher education sector. (HARNEY et al., 2001, p. 83). The few study courses with integrated training show that it is possible to acquire a dual system qualification during the *Grundstudium* stage and to subsequently conclude the study course with a *Fachhochschule* qualification.

The linking of informal and formal learning is considered to be an unresolved problem. The concept of such a linkage is indeed present in the various pilot projects, however, there are still no practicable instruments for formally recognising knowledge and skills acquired on the job. As long it is not possible to document the results of this type of “self-directed” learning, it will be the curricular learning processes that are tested and certified with respect to learning success which will prevail.

Although dual study courses at *Fachhochschulen* were considerably expanded in the 1990s, they nonetheless remain marginal in relation to the whole spectrum of programmes at *Fachhochschulen*. Moreover, only a few companies are willing to participate in dual study course programmes and even their willingness in the long term is uncertain. The level of interest shown by large companies with a workforce of 500 or more is comparatively high. The main motives for companies to participate are the prospect of increasing the transfer of knowledge between themselves and the *Fachhochschulen*, the opportunities arising for promoting skilled employees with *Abitur* within the company, the practical orientation of the study course and the low-cost recruitment of personnel (BIBB 1999, HARNEY et al., 2001, p. 47f.). The smaller companies interested in participation or which already cooperate with *Fachhochschulen* are mostly companies under considerable innovation pressure.

It is expected in the future that the proportion of people who pursue dual qualification pathways and study courses will rise (MUCKE et al., 1999). One of the reasons given for this forecast is the fact that the learning and qualification requirements for employees in occupations requiring intermediary qualifications are growing and that this requires formal learning processes, at least at the level of upgrading training and beyond at the level of the *Fachhochschule*. Furthermore, it is assumed that changes in employment structures (only about 65% of the working population work full time) will mean that more employees (in particular the members of a permanent workforce) will have access to learning opportunities. Furthermore, additional learning with the aim of safeguarding employability will become necessary for a growing number of employees. Finally, competition between the rising number of *Fachhochschule* and university graduates and employees with vocational qualifications below the higher education level is growing with the changes in work organisation, particularly at the intermediary qualification level. The occupational development of the latter group probably depends on how much access they have to the acquisition of higher education qualifications. Ultimately, the interest of the companies hinges on whether adequate job deployment and career patterns can be created using these dual study courses and whether or not this leads to changes in their recruitment policies. (DREXEL 2000).

2. Supporting young adults without vocational qualifications by documenting partial qualifications

In 1998, a representative survey revealed that about 12% of young adults between 20 and 29 years of age had no vocational qualifications. Neither were they participating in a training course or attending an institution of general further education. If this figure is applied to the whole of the Federal Republic of Germany it means that, in 1998, about 1.33 million young adults in this age group had no vocational qualifications (TROLTSCH 2001). The survey was triggered off by research findings showing that certain groups of adolescents were having increasing difficulty finding training places, that dropout rates were continuing to rise in almost every field of training and that the chances of finding work

were increasingly diminishing for unskilled workers. More than a third of young adults without vocational qualifications (38%) stated that they had never sought a training place, 14% had tried unsuccessfully to obtain a place, 12% had failed to take up places offered to them and over a third of young adults without vocational qualifications (36%) had dropped out of training courses. When the survey was carried out, 44% of these young adults without vocational qualifications were in employment. The rest were employed in private households or were unemployed and seeking work (TROLTSCH 2001).

Within the existing vocational education and training system, it is difficult for this group of young adults to acquire vocational qualifications at a later stage (KLOAS 1995). Traditional vocational training in the dual system is out of the question for this group of people. First of all the trainee remuneration would not cover their living expenses, and secondly the forms of learning in the training courses do not suit adult needs. The traditional pathways for gaining qualifications at a later stage have not proved suitable for this group either.³² Frequently the timeframe for the courses is too narrow and inflexible; the teaching methods are too school-based for those not used to learning; there is not enough financial security and better qualifications are not linked to better pay; and finally, there are no standards for officially recognising the vocational skills which such people often have and for counting these skills as credits in modular upgrading measures.

The Federal Institute for Vocational Training (BIBB) carried out a number of pilot projects back in the mid-1990s in order to help young adults without vocational qualifications to gain such qualifications. The key to these projects was linking learning and work in the students' respective fields of activity in a way that met the needs of the target group. The qualification was designed in such a way that it was possible to complete the vocational training gradually whilst continuing to work. The intention was to help the participants in the courses by documenting the knowledge and skills they had acquired from various jobs and periods of training. Thus despite interruptions in their training, it would be possible for them to resume training and gain exceptional admission to sit the respective examination.

The Working Group on Initial and Continuing Training and Education in the Alliance for Jobs, Training and Competitiveness adopted a series of guidelines for the "particularly disadvantaged" in 1999 (BÜNDNIS FÜR ARBEIT 1999, p. 68f). These guidelines not only concerned young adults with no vocational qualifications, but also young people who, because they were not "mature enough for training", had failed to find a training place or who had not completed their training courses. Young people who failed to complete their training were to have the chance to continue it later. For this purpose certificates were to be issued for the qualifications achieved up to the point when the training was broken off. For young adults who had not completed their training courses, it was recommended that the aforementioned measures for combining part-time working with part-time training be developed. As in the case of training drop-outs, here too, the individual qualification steps were to be documented so as to increase transparency, acceptance and usability. The purpose of this documentation was to encourage resumption of vocational training, to enable participants to offer previously acquired skills on the labour market and to facilitate exceptional admission to examinations.

The Main Committee of the Federal Institute for Vocational Training followed these recommendations and then adopted its own recommendation with regard to documentation of job-related qualifications, which was published in 2001.³³ The intention of such documentation is to describe qualification areas (partial qualifications) in accordance with the occupational profiles of education and training regulations. Furthermore, the content (knowledge, skills, activities, etc.) covered by the pertinent qualification areas is to be listed. Finally, the period (days, weeks) in which the contents in question were acquired is to be stated. This documentation does not assess the partial qualification at all. No information is available yet as to whether and to what extent employers, education providers or vocational training schools are making use of this documentation (GUTSCHOW 2001, 2002). The fact that the

³² The traditional pathways are retraining courses which are far shorter than normal vocational training courses and exceptional admission to examinations. The latter presupposes many years of work experience and the willingness to prepare for the specialised theoretical examination by attending evening and weekend courses. See Chapter 1, section 2.2 and Chapter 2, section 2.1 for more on "exceptional admission".

³³ The form is available as a download: www.bibb.de/nachweis.

same subject matter can be taught to different depths without this being evident from the documentation is a problem. Moreover, there is a need to clarify whether the subject matter taught or the skills acquired should indeed be documented. Further work is being done towards implementing this new documentation.

A key problem seems to be that the documentation of acquired partial qualifications must serve different objectives. In the case of young unqualified adults wanting to gain qualifications at a later stage, the partial qualifications (modules/units) are planned beforehand and exams are held to record learning progress. The acquired partial qualifications are recorded in so-called qualification passes. Moreover, there are detailed instructions as to how the individual modules/units can be planned, offered and tested. However, when documenting knowledge and skills acquired during a period of traditional vocational training, it is only possible to establish retrospectively what a training drop-out has learnt. After all, the Vocational Training Act requires as a fundamental principle that young people be offered a complete course of training (vocational principle). The German system of initial training is not based on pre-planned modules/units with the option of partial certification, and such an approach is considered incompatible with the goal of vocational education and training, namely the acquisition of proficiency in an occupation.

In the meantime, however, qualification units have been introduced in connection with the training occupations in order to enable more curricular flexibility, quicker adaptation to new demands and closer links between initial and continuing training and education. For example, new structural concepts have been developed for training, which envisage individual optional units and courses for acquiring additional qualifications.

3. Linking initial and continuing vocational education and training through additional qualifications

The national qualification standards are, on the one hand, often too general or they are adapted too slowly for them to be able to react adequately to the demands of the working world. On the other hand, vocational education and training outside of higher education institutions lacks adequate career pathways. In the national debate on modernising the system of vocational education and training, additional qualifications have been touted as instruments for greater flexibility, differentiation and individuality since the mid-1990s. They should make it possible to respond quickly to the dynamic changes in qualification requirements in industry and society and simultaneously help create more effective, uncomplicated options for vocational careers and further education pathways. Additional qualifications should help smooth out the discrepancies between the education and employment systems, in other words between supply and demand for qualifications, whether from companies or from young trainees, and should also help to close the gap between the system of initial education and training and the system of continuing education and training.

Additional qualifications are generally defined by the fact that a link is established between learning in formal, non-formal and also informal surroundings on the one hand, and the officially recognised national qualifications of the vocational education and training system on the other; they serve to complement or update individual national qualifications or make them more fitting. This "link" is established by the parties involved in vocational education and training at the regional, sectoral and national levels. An "additional qualification", therefore, is any expansion of a standard qualification in the broadest sense, ranging from quite detailed additional units to hybrid and double qualifications. The broad understanding of the concept also includes combinations of qualifications for skilled employees and general school qualifications or dual study course qualifications; in the narrower understanding of the concept, a distinction can be made between the following types of additional qualifications: additional qualifications that lead to a recognised advanced vocational qualification or which can be counted towards such a qualification; qualification modules which are taken from other qualifications at the same level (e.g. units from training for commercial occupations used for technical qualifications); independent minor qualifications, which are certified by chambers, professional associations or educational institutions (e.g. languages); qualifications for expanded or improved skills in connection

with company organisation/staff development (e.g. communication, co-operation, organisation); topical knowledge and skills that are not (yet) part of the regular training courses; and company-specific qualifications (TUSCHKE 1999).

The concept of "additional qualifications" is not entirely new. The 1970 "Structural Plan for the Education System" states that the timely acquisition of additional qualifications can help avoid or facilitate retraining (DEUTSCHER BILDUNGSRAT 1970, p. 54)³⁴. Initially nothing followed this general recommendation; it was not until the mid-1980s that the topic of additional qualifications was considered again in view of the emerging divergence between the qualifications system (education and training) and the employment system on the one hand, and the growing proportion of *Abitur* holders on the other: it was now hoped that additional qualifications would help to make the dual system of vocational training an attractive alternative to higher education (BMBW 1985, p. 13) and enable a more flexible response to the special needs of the labour market (BMBW 1985, p. 15). The changes in the structure and values in society and the economy that were starting to become evident have become even more rapid since then. Vocational education and training policy responded by initiating a few individual pilot projects in the second half of the 1980s, which developed above all an intermediary qualification between *Geselle* (journeyman) and *Meister* for *Abitur* holders in the craft trades (which is the *Betriebsassistent* qualification) (BRAUCKMANN/SLOANE 1994). Additional qualifications did not become a universal idea until the mid-1990s, after a double erosion of the dual system was diagnosed in view of rapidly falling demand by school leavers and the withdrawal of businesses from formal vocational training (BAETHGE et al.; no date). A working group on vocational education and training, composed of representatives from the Federal Government, the *Länder*, employers and unions, developed a catalogue of measures for reforming the dual system (BMBF 1994), which was further developed by the Ministry of Education and Research in 1997 as the "Reform Project for Vocational Training – Flexible Structures and Modern Occupations" (BMBF 1997). Additional qualifications were described in it as priority measures. Employers should thus be provided with a new flexible instrument for targeted manpower development; for young people prepared to work hard, new options were to be opened up for careers via apprenticeships and motivation provided for early continued learning. In 1997, a start was made on implementing a concept for the broad introduction of additional qualifications.

Additional qualifications were defined as qualifications that are provided by employers, vocational schools, chambers and other private educational providers in parallel with training or directly after completion of training - qualifications which are at a higher level than the standard qualification or which concern knowledge and skills other than those prescribed by the standard qualification and which are or can be certified (TUSCHKE 1999, p. 13).³⁵

In order to make the concept known throughout the country, six regional expert seminars were carried out in 1998, which were attended by the relevant parties in each case. The Federal Ministry for Education and Research is supporting the concept of additional qualifications with its own series of pilot projects in co-operation with employers, in which the whole spectrum of additional qualifications on offer is being tested and evaluated. The Ministry is also supporting the development of a database (<http://www.ausbildungplus.de>), which is intended to give a national overview of additional qualifications (listed by profession, region and qualification target). The Ministry has commissioned the *Institut der Deutschen Wirtschaft* (Institute of the German Economy) to set up the database. The intention is to

³⁴ The Structural Plan was the only draft since the war for a reform of the entire education system – with the exception of higher education – including initial and continuing training and education. Most of the 21 members of the Education Commission of the German Education Council were professors and administrators; industry was represented by one person from the unions and one from the employers.

³⁵ Two time-based criteria were introduced into the debate by the Federal Institute for Vocational Training: a minimum of 100 hours and the acquisition of the additional qualification at the latest half a year after completion of the original training course – firstly in order to mark a clear distinction vis-à-vis non-formal learning and secondly in order to delineate between additional qualifications and traditional continuing education and training. However, neither criteria were applied when the concept was implemented. The Ministry did not want to limit the fundamental flexibility which the concept offered.

ensure the transparency which all parties involved have called for. At present nearly 19,000 additional qualifications are listed in the database.

The additional qualifications currently available have been investigated in a series of empirical surveys (TUSCHKE/SCHRÖDER 1999; BERGER et al., 2000; BERGER 2001; HERGET et al., 2002). The various chambers and *Land* education ministries were interviewed as well as employers. There are two main types of additional qualifications, namely task-based ones that are centred on the ability to accomplish a wider range of tasks at work, and upgrading or exam-based ones that are linked to acquiring a higher vocational and/or general educational qualification; the qualifications are variously distributed between industry and commerce on the one hand and craft trades on the other. In the case of the chambers of industry and commerce, from which the biggest range of courses is available, 95% of the additional qualifications are task-based, whilst in the case of chambers representing the craft trades, 81% are exam-based qualifications of a more formal nature. For the craft trades, the primary concern is to make training courses in such trades attractive for school-leavers with higher school-leaving certificates/*Abitur*. The *Land* education ministries offer primarily exam/upgrading-based courses (just under 60%), of which a certain number are courses leading to dual qualifications, the graduates of which receive a vocational qualification and a general education qualification (for completion of lower secondary school education, *Abitur* or even a *Fachhochschule* qualification).

Whilst 75% of the courses offered by the chambers of industry and commerce are open to all trainees and only 25% are specifically aimed at *Abitur* holders, in the case of the chambers of craft trades, 70% of the courses require students to have passed the *Abitur*; for those courses run by the *Land* education ministries, 80% of additional qualifications are offered to particularly talented or high-achieving young people (with or without *Abitur*).

Many of the special courses for *Abitur* holders offered by the chambers of industry and commerce lead to a hybrid qualification, with the standard period of training, which is one year shorter for *Abitur* holders, being extended by a year of dual training with dual exams. In accordance with the type of courses offered in the craft trades sector, the main subjects taught are management skills/business economics, and they generally lead to the qualification *Betriebsassistent im Handwerk*, which often counts towards the exam for the *Meister* qualification. In the case of qualifications offered at schools, training for commercial occupations in particular are complemented by more demanding subjects, (e.g. logistics for freight forwarders). In a number of cases, the qualifications add an international dimension to the function (e.g. European business assistant).

In terms of the subjects taught, foreign languages top the list, well ahead of all other topics; together with other international subjects, they account for about 40% of the courses; they are followed by subjects such as more in-depth knowledge of processing and manufacturing methods, management techniques, and information and communications technology. In schools, customer services/advice is a particularly prominent subject besides foreign languages and more in-depth knowledge of methods. (Other courses: teamwork, presentation/moderating, controlling, environmental protection technology, basic commercial skills for technical professions, electrical engineering for metal workers, etc.).

The courses at the schools (state schools) are free of charge; as are additional qualifications offered by the employment services. By contrast, only a few of the courses offered by the chambers of industry and commerce are free; none of the courses offered by other private providers are free. The costs mainly range from €50-500. Higher costs are generally incurred for qualifications offered by the chambers of craft trades; here examination fees in particular are also an expensive item and they can sometimes amount to as much as €500. If the initiative for an additional qualification comes from an employer, then it alone generally pays all the costs; in a few cases, the costs are shared between the employer and the trainee.

The duration of the courses for additional qualifications differs greatly. The task-based courses range from 20 to 200 hours; the examination-based ones from 300 to 1000 hours. The shorter the duration, the greater the likelihood that it will end merely with a certificate documenting participation in the course, the greater the length of the course, the greater the likelihood that there will be an examination

and a special certificate and that it will count towards an advanced qualification. About three quarters of the task-based additional qualifications at the chambers of industry and commerce end with a certificate, however almost all these certificates do not count towards an advanced qualification. 61% of the courses offered by schools conclude with an examination certificate while all of those offered by the chambers of craft trades lead to such a certificate – the certificates being either independent qualifications or counting towards an advanced vocational qualification.

Most of the additional qualifications offered in the workplace (BERGER 2001) relate to specialisation in a particular occupation, and it is not always possible to draw a line between this and regular training; fewer than 10% of these qualifications are aimed at career advancement, whilst 5% are aimed at enhancing qualifications through the addition of skills from "related" qualifications. Bigger companies offer additional training more often than the smaller ones. The focus here is primarily on training that is more tailored to the needs of the job, The aim of attracting and retaining good trainees is secondary. Many employers also see this as a more economical solution as opposed to continuing education and training at a later stage. Just under half the additional training courses initiated or implemented by employers are documented by an examination certificate. The rest end only with a certificate of participation or no certificate at all. Employers are guarded about the possibilities for internal career advancement as a result of additional training; the general opportunities in the labour market, on the other hand, are mostly considered to be better.³⁶

There are as yet very few empirical studies on the benefits of additional training qualifications for the individual (HERGET et al., 2002). The actual courses on offer are mostly well received by the participants. However, their "practical use" varies quite greatly: in some cases acquiring an additional qualification is part of a strategy for long-term staff development and is linked to a better position and higher income; in other cases it is a fact that higher wages are not forthcoming (initially) and the additional qualification is a "future bond" for a possible future career.

Additional qualifications are a key instrument for taking into account the increasingly complex reality in the working world and the increasingly diverse vocational education and training pathways. They create networking possibilities for initial and continuing training and education, which also enable learning periods to be planned individually. The greater differentiation of the qualifications system thanks to additional qualifications can serve to promote lifelong learning in many ways:

- The interval between qualification as a skilled worker and qualification as a *Meister* is enriched by "interim qualifications"; the options for continued learning are thus increased.
- Transitions are created between formal qualifications, so that there is more encouragement to acquire further qualifications following the initial qualification.
- The flowing transition between non-formal learning and formal qualifications in the concept additional qualifications offers motivation for lifelong learning at an early stage.
- In terms of future prospects, the concept of additional qualifications can also be used to recognise informal learning or job experience at a later stage.

What further impact the spread of additional qualifications will have for the qualifications system in the future remains to be seen.

³⁶ In the discussion about additional qualifications, employers and employees have different viewpoints in the sense that employers favour needs-based differentiation of training far more, whilst the workers' representatives focus on enhancing the subsequent possibilities for advancement and the value of the qualifications on the labour market and are therefore more eager for certification.

4. Approaches towards developing a qualification framework

In Germany the IT sector is the area in which for the first time a qualification framework is beginning to take shape which comprises all levels of vocational qualifications. The background for this development was an acute lack of skilled people in this sector, which manifested itself at the latest from the middle of the 1990s onwards. In 1992, a mere 6,200 jobs for IT experts were advertised in the major German daily newspapers. Five years later the figure had shot up to over 32,000 (CDI Stellenmarktanalyse [job market analysis], 1997). In July 1999, the Alliance for Jobs, Training and Competitiveness noted that the IT branch had about 75,000 vacancies for skilled workers (BÜNDNIS FÜR ARBEIT 1999, p. 34). The Alliance formulated guidelines for an employment and training initiative for the IT industry. The development of a formal continuing education and training system specifically for the IT sector was envisaged as the most urgent measure. Such a system would make it possible for the greatest possible number of people wishing to participate in further training courses recognised throughout the industry to do so. In that way skilled workers from related professions in particular could be trained for specialised IT tasks relatively quickly (*ibid.*, p. 37).

Up until the mid-1990s, there were only two qualifications in the dual system designed to cover the requirements for hardware engineering and software engineering respectively. Moreover, these qualifications were obsolete, and as a result, the number of training contracts fell by half between 1991 and 1995. At the same time, in 2000, the number of continuing education and training certificates that were not nationally recognised grew rapidly to 300 (BORCH/WEISSMANN 2002, p. 14). Since the 1970s, IT certificates had mostly been acquired by people retraining at a later stage in order to change to the IT sector. It can be assumed that two thirds of all IT experts are originally from outside the sector. (DOSTAL 2002, p. 5).

From the mid-1990s onward four new qualifications were created for training at skilled worker level and in 1997 they were recognised nationally. A decisive step was taken for the development of these qualifications by combining the expert groups of employers and trade unions for the technically oriented occupations and those for the commercially oriented occupations to form a cross-sectoral group covering the entire field of the information and communications technologies. The main characteristic of the qualifications developed is that they are based on new structural models for initial vocational qualifications.³⁷ They consist of a relatively stable core of vocational knowledge and skills, which make up the mandatory units. These are linked to optional units, which – depending on the occupational field – account for between one third and half of the overall qualification. All four qualifications share technical, IT and commercial core qualifications, which make up about 50% of the overall qualification. For the remaining 50%, specialist qualifications are defined, which must be acquired on the job. The list of fields of activity is a list of suggestions which is not exhaustive; the four new profiles thus remain open for changing applications and new developments.

The qualifications based on the new structural models allow variations and combinations for creating differentiated profiles. In this way the convergence of what used to be separate functions can be contained within complex working processes. Furthermore, the pressure to update qualifications due to the dynamic pace of economic and technological change is eased (SAUTER 2002). A fixed number of units must be selected from certain prescribed areas, which means that new or company-specific tasks are covered. The optional units also provide a basis for continuing education and training. Skilled workers can extend their range of skills in the early years of their working lives (or later) by adding qualification units which were not among those originally selected. Thanks to this open structure, initial and continuing training and education are thus connected; this structure is the foundation for life-long learning.

In the ongoing national debate in the vocational education and training sector, employers are calling for the common core for the four qualifications to be made more flexible, so that the individual companies have more scope for their training (KWB 1999; DIHT 1999). The trade unions, on the other

³⁷ These structural models were subsequently used in the media occupations and for laboratory occupations as well.

hand, want to keep the parts of the qualifications specifically related to the companies as small as possible relative to the training as a whole (HIEMANN/EHRKE 1999). All parties (government, employers and employees) emphasise, however, that there should be no certification of individual units (partial qualifications), despite the altered structures in standard vocational education and training. The "vocational principle" is therefore to be retained.

The new training occupations in the IT field were evaluated three years after they were recognised. It was found that these qualifications are seen in a positive light by both employers and the young people acquiring them and that they have proved viable (BORCH/WEISSMANN 2002a, p. 97). This is reflected by the strong, steady demand for these qualifications: At the time of the evaluation 15,000 young people were studying for the "old" qualifications. Within three years after they were recognised, there were 40,000 training contracts for the new qualifications - a success story that is still continuing. Criticism from employers and from trainees is directed above all at the examination: If learning is linked to the business processes of companies and this forms the basis of the examination, there is the risk that there will be a lack of objectivity and examination results will be hard to compare. If attempts are made to keep results comparable, a slight discrepancy may arise between the highly contextual learning and the knowledge tested (PETERSEN/WEHMEIER 2002, p. 139).

Building upon the four new qualifications in the IT field, a system of "continuing education and training" with three career levels above vocational training and a total of 35 qualifications was defined by the BIBB on behalf of the Federal Ministry for Education and Research, accompanied by an expert advisory panel appointed by the leading associations of the two sides of industry. On the first level were "specialists", on the second "operative professionals" and on the third "strategic professionals" (BORCH et al., 2000; BORCH/WEISSMANN 2002; BMBF 2002, p. 220f.). The first level is made up of 29 specialist profiles (customer advisor, software developer, technician, etc.). They will be accessible to holders of the four skilled worker qualifications and for entrants from outside the profession. The individual profiles or qualifications are clearly defined by their fields of work (no substitution possible); it will be possible to use them as entry qualifications for the next level up (operative professional level); qualification and certification should take about one year. An examination by the chamber is not envisaged; instead the qualification is certified by a private organisation, which is accredited by an accreditation body. However, the operative professional exam is also open to those who can make a convincing case that they have acquired the skills that justify them being admitted to the exam. This means that formal learning can be replaced by certification of work experience.

In a second step, four qualifications at the second career level and two qualifications at the third career level of the system were defined. For both levels a public exam in accordance with the Vocational Training Act is envisaged. The second career level (operative professional) covers the following areas of qualification: IT skills, staff leadership/management, budget management, technical engineering, process engineering, project management and marketing. The staff leadership/management section is recognised as part of the trainer eligibility exam. At the third career level (strategic professional) the qualifications relate to the development of business policy and to planning resources, product lines or investments. The middle level of the system is considered equivalent to a Bachelor of Engineering, the highest level is equivalent to a Master of Engineering; the tasks at this level are currently for the most part carried out by university graduates.

In order to facilitate transition between the systems for vocational training and academic studies, the education and economics ministries and the social partners have advocated a system for counting vocational qualifications towards higher education qualifications, along with regulations for IT continuing education and training.³⁸ The Standing Conference of Ministers of Education and Cultural Affairs was called upon to allow such qualifications to be counted towards further studies in the case of the new IT qualifications by applying a points system as practised within the framework of the ECTS.

³⁸ Declaration of the leading associations representing the two sides of industry, the Federal Ministries for Education and Research and for Economics and Technology to implement university points systems in continuing education and training, taking the example of the IT Further Training Ordinance. In: Bundesanzeiger No. 105a of 12 June 2002, Berlin.

Explicit reference was made to the Bologna declaration of the European Education Ministers of 19 June 1999. This Declaration stated that, in order to promote lifelong learning, it should also be possible for qualifications acquired outside of higher education institutions to be recognised and credited through a points system; this goal was adopted by the Association of Universities and other Higher Education Institutions and the *Bund* and *Länder* Commission for Educational Planning and Research Promotion.

The new qualification structure in the field of IT is the first qualifications framework to be created that could in principle be applied to other branches as well; this possibility is to be tested initially for the chemical industry. Other branches of industry are still hesitating, although the leading associations representing the two sides of industry did commission an expert group in 1996 to develop a system of qualification levels for regulated upgrading training in accordance with the Vocational Training Act (BMBF 2002, p. 222). That concept, launched at the end of 2000, envisages three levels: further training qualifications that differ from initial training due to certain additional qualifications, qualifications for intermediary-level specialist and managerial staff and qualifications for senior staff. The middle and upper levels come under bachelor and master degrees respectively. The social partners want to use this concept in future as the basis for their own regulatory activities and for the Federal Government's further training regulations (*ibid.*). This structure built on levels should also serve to reduce the myriad of existing further training regulations.

5. Supplementing and/or substituting formal qualifications through skills development?

In the Working Group on Initial and Continuing Training and Education of the Alliance for Jobs, Training and Competitiveness, the Alliance partners agreed in February 2000 on common fields of priority action and measures to further develop vocational learning possibilities in working life.³⁹ Some of these fields of action are part of the programme "Learning Culture of Skills Development" initiated by the Federal Ministry for Education and Research. Following the current developments in connection with innovation and transformation processes in the old *Länder* and the experiences with continuing education and training in the eastern German *Länder* since the beginning of the 1990s, the concept of continuing education and training has expanded. Results from various research programmes and individual projects show that:

- Innovation and transformation in industry and society takes place via continuous learning by the people.
- What is learnt is becoming increasingly complex; i.e. the focus is no longer solely on acquisition of knowledge, but has widened to include new values, new codes of behaviour and the remodeling of past experience.
- The forms of lifelong learning, especially at the workplace, are changing radically; there are not only traditional courses but also a conscious effort to organise learning on the job, coaching, self-directed learning, *inter alia*. In general terms it is possible to say that the faster the processes of change take place, the more directly learning must be intertwined with the working process.
- Learning structures at the workplace that are becoming more and more complex also make it necessary to develop strategies for preserving skills in times of unemployment.

The programme "Learning Culture of Skills Development" identifies and structures focal areas for future research and development tasks in the field of continuing education and training. Essentially this involves designing and further developing a systematic approach to skills development and ultimately also implementing a more complex understanding of continuing education in industry and so-

³⁹ The following comments on the research programme are a shortened and slightly modified form of what is to be found in the Vocational Training Reports for 2001 and 2002 of the Federal Ministry for Education and Research (*cf.* BMBF 2001b; 2002).

ciety. Elements of the programme are basic research and specific development and design projects with scientific back-up in the following thematic areas: learning in the process of work, learning in the social environment, learning in continuing education and training institutions and learning on the Net and with Multimedia.

As shown by the research findings quoted above, formal qualifications are of central importance in Germany for entry into the employment system. They are also a crucial input and foundation for continuing education and training processes. Informal learning is becoming increasingly important for individual skills development. Formal qualifications are, however, not being replaced by informal learning or skills development, but supplemented by them. There is a need to clarify how the informal skills developed as a result of working and gaining experience in an occupation can be evaluated in a verifiable way and honoured as a contribution to education and training, in order that they may better fulfil this supplementary function. Here future experience with IT continuing education and training will play a key role. It could turn out that formal learning is gradually replaced more and more by the certification of work experience and a concluding examination.

The fact that it makes sense to document the market value of qualifications which employees have acquired through continuing education and training measures at their place of employment, or informal learning processes in the workplace, is demonstrated by the findings of a survey of training managers in small, medium-sized and large companies. 77% of them are of the opinion that successful participation in company-based continuing education and training measures should be validated. And 67% of them believed that it should also be possible to certify the skills that staff have acquired as part of their work, e.g. also through work experience. Only one in four was against such certification and 7% considered such certification a good idea but doubted whether it was practicable (GRÜNEWALD/MORAAL 2001, p. 42).

The programme "Learning Culture of Skills Development" creates the prerequisites for investigating more closely the documentation and certification of informally acquired skills. At present there are only a few first attempts in Germany to show how such skills might be systematically recorded, documented and recognised on a broad basis and thus how the individual needs of the workers and the demands of the employment system can be met.

All in all, this means that the relationship between the qualifications system and learning is not just a one-way street, but rather a two-way process. The "discovery" of skills development has revealed skills that need to be recognised, which in turn has repercussions on the design of the qualifications system itself.

IV. Qualifications and learning at the level of practice and users

This chapter analyses the impact of a range of specially designed pilot programmes on individuals, education providers and companies with regard to the influence which qualifications may have in promoting or hindering learning. The programmes targeted young adults without vocational qualifications and aimed to prepare them for the acquisition of initial vocational qualifications as a basis for lifelong learning. The analysis was based on the following questions:

- What importance do *individuals* attach to the possibility of acquiring vocational qualifications under this learning programme? What promoting or hindering effects does this have on learning?
- What is the *view of education providers* concerning the influence that the goal of skills acquisition may have on the organization of the learning programme? Are qualifications sufficiently flexible so that learning programmes can be developed which meet the interests of the target groups concerned?
- What view do *companies* as beneficiaries of skills development take of the qualifications acquired under this programme? Do they offer such learning opportunities themselves?

Our answers to these questions are based on the results of available empirical surveys and case studies. However, as these surveys to some extent pursue other objectives and serve other purposes, they can only provide a basis for tentative assessment of the relationship between qualifications and learning at the level of practice and users.

1. Pilot schemes to qualify young working adults without vocational qualifications, on a part-time basis.

In the mid 1990s the Federal Ministry of Education and Research, together with the Federal Institute for Vocational Training, launched a series of pilot schemes to qualify, on a part-time basis, young working adults (cf. Chapter III section 2.).³³ This was a response to the then prevailing situation where between 12% and 15% of young adults aged between 20 and 30 had not completed vocational training.³⁴ The then existing programmes were not suited for the qualification of adults for two main reasons (cf. GUTSCHOW 2002a): Firstly, their formal requirements and their time frame, organisation and content did not meet the needs of this target group. Secondly, it was not an attractive option for young adults to earn their living under the conditions of regular vocational training or retraining. What seemed a promising approach was to offer programmes that combined work and training and led to recognised vocational qualifications. In this context the pilot schemes were to contribute to addressing certain central issues. These issues included the innovative modular design of learning programmes, increased co-operation between firms/employers and education providers, new funding models and the recognition of module assessments for admission to final examinations. A total of five pilot schemes were organised for the target group of young adults over 20 without vocational qualifications.

2. Conceptual elements of the pilot learning programmes

The learning programmes in these pilot schemes were characterised by a modular approach based on subject-related and didactic criteria.³⁵ The modules were completed and certified in an internal procedure and included in a qualification portfolio. A set of modules covered the knowledge required for

³³ In Germany, pilot schemes are a central instrument of government for testing innovations in the education sector. They differ from other instruments such as laws and regulations in that they follow a bottom-up approach based on an open process. All pilot schemes are supported by scientific research (BIBB 2000).

³⁴ According to the results of the microcensus for 2000, the rate of 20 to 29-year-olds was 14.4% - 10.3% for German young adults and 37.7% for young foreigners (TROLTSCH/ULRICH 2002).

³⁵ Cf. BMBF 2002, p. 117 et seqq as well as www.berufsabschluss.de

passing the (external) final examination administered by the competent chamber of industry and commerce. The workplace was systematically used for learning. Learning was organised in such a way as to enable participants to make use of previously acquired occupational skills. Furthermore learning was to take place mainly through and during work to ensure, *inter alia*, highly practice-related learning.

Co-operative relations with companies were governed by agreements. These agreements included the selection of participants, company-based counselling and support by education providers, organisation of the learning process at different places of learning, as well as the didactic concepts to be applied. Companies were involved in the conceptual design of the modules. Consequently, the education providers had to organise the learning processes in an entirely different way and to co-ordinate them much more closely with companies than is usual under regular training and continuing training programmes.

Two basic models combining work and vocational training were offered. One of these models combined publicly supported employment of one or two years' duration with subsequent continuing training. This included the possibility to complete individual modules during employment. The average duration of such programmes was three years. The other model provided for employment contracts between companies and unskilled or semi-skilled persons including periods of release for school-based training. Both full-time and part-time employment was possible. These combinations were supplemented by a one or two-month preparation and orientation phase and a support phase of about six months' duration following completion of the programme. A compulsory element of the programmes was the counselling and support service provided by educators for participants during the entire programme, beginning with the recruitment of participants and ending with their successful integration into permanent employment. Such counselling and support was not only provided with regard to learning issues but also for family, social or financial matters.

A major prerequisite for the success of such programmes was that participants had a regular income during their phases of work and training release.. The amounts paid were based on the collectively agreed wages or the local wage rate for unskilled or semi-skilled workers. Government grants were paid to make up for any differences between income (paid during employment phases) and subsistence allowances (paid during the training release phases).³⁶

In this analysis we mainly focus on the results of the pilot scheme implemented by the *Bildungswerk der Hessischen Wirtschaft*.³⁷ (The employers' training services in the Hesse region) *Bildungswerk der Hessischen Wirtschaft* offered learning programmes which were to prepare young adults without vocational qualifications for the external final examination that qualifies people to work as retail salespersons (*Kaufmann im Einzelhandel*).

Consideration was also given to the results of the pilot scheme of the *BBJ Service GmbH* in Berlin (BBJ SERVIS 2000). This pilot scheme included alternating phases of work and training both in companies and in external training organisations to prepare participants from the office sector for the final examination as office clerk (*Bürokaufmann*). In both pilot schemes the learning programmes were organized in co-operation with companies.

3. Qualifications and learning as seen by the users

Under the pilot scheme of the *Bildungswerk der Hessischen Wirtschaft*, 45 out of the 145 adults who participated in the orientation phase eventually decided to undertake the training in order to qualify as

³⁶ On the basis of the concept of these pilot schemes and the experience gained with them, further return-to-learn programmes for adults who have not completed vocational training were organized. About 1,300 adults participated in modular part-time training programmes in 2001. Most participants wish to complete training for commercial occupations. Adult training programmes for IT occupations have increasingly been offered recently (BMBF 2002, p. 124 et seq).

³⁷ In doing so, we closely follow STEINHÄUSER's evaluation from a practical perspective concerning the pilot scheme of the *Bildungswerk der Hessischen Wirtschaft* (STEINHÄUSER 2002).

retail salespersons (*Kaufmann im Einzelhandel*).³⁸ The entire qualification phase of 3 to 3 ½ years was completed by 33 of them, and 32 participants passed the final examination.³⁹ 20 of them found employment immediately after completion of training; the remaining 12 were offered comprehensive advice and support in the follow-up phase (STEINHÄUSER 2002, p. 47 et seqq).

Most participants belonged to one of two groups. The first group included ethnic German immigrants with a medium to high-level educational background who had grown up in Russia and on settling in Germany were faced with language and cultural integration problems. The second group included Germans whose educational standards were rather low, with problems that included debt, criminal offences, homelessness or drug abuse (STEINHÄUSER 2002, p. 161 et seq).

The following results exclusively refer to the 32 participants who acquired vocational qualifications as retail salespersons. Most of them belong to the age group of 19 to 22-year-olds.

Adults were motivated to participate and complete the programme for various reasons. For some participants it was important that they could acquire vocational qualifications under the learning programme. Owing to their previous work and their experience with employment services, they hoped to be offered more highly qualified jobs and better working conditions in the medium term. Some felt they had to complete vocational training before becoming too old. In addition, numerous personal, social and financial factors had a positive or negative influence on participants' motivation to complete the programme (STEINHÄUSER 2002, pp. 164-185).

Assessment of the conceptual elements of the learning programme also varied. Participants who welcomed the organisational concept of combining work at the company and instruction at a training organisation felt that the planning of company phases needed to be improved. The teaching concept, designed to nurture personality development and increase self-confidence, was appreciated by some participants because they were given intensive support by educators during the entire programme. These educators were both mentors and motivators. All in all, the concept based on the needs and circumstances of specific target groups seemed to be a major factor in the success of the learning programme (STEINHÄUSER 2002, pp. 186-190).

The participants' view of their status in the company depended amongst other things on whether they were considered to be apprentices with limited responsibility or regular staff members with decision-making powers in their own area of responsibility. The status of apprentice was felt to be a problem by some participants as it expressed disregard of the knowledge and experience they had previously acquired (STEINHÄUSER 2002, pp. 199-202).

A generally positive view was taken of the modular structure of the learning programme. However, it did not always meet the learning needs of participants because it offered little scope for dealing with topics that seemed important to individual participants. As regards the design of the modules, participants considered that these modules should have related more closely to examination requirements. In some cases, job-related learning and examination-related learning were not perceived as complementary forms of learning. Module tests were felt to be instruments for increasing motivation. In addition they enabled learners to see whether their knowledge would suffice to meet the requirements of the final examination administered by the chamber of industry and commerce. (From the participants' point of view, module certificates contributed to a clear time frame and content structure of the entire learning programme.???) Module certificates remained useful even after the award of vocational qualifications as they could be enclosed with job applications as evidence of work experience and as proof of performance and specialist knowledge and skills (STEINHÄUSER 2002, pp. 205-212).

³⁸ According to STEINHÄUSER, the relatively high rate of drop-out during and after the orientation phase is due to the following: (1) the fact that only one vocational qualification, that as retail salesperson, was offered; (2) the fact that the learning programme was organized at only two places; (3) the complicated funding conditions for some participants; (4) individual reasons such as a lack of motivation or serious personal problems (STEINHÄUSER p. 227 et seq).

³⁹ The drop-out rate of those that started the course (45) was thus 29% altogether.

The results furthermore show that the vocational qualifications awarded on completion of the learning programme had a considerable influence on participants' career opportunities and social integration. Persons who had been awarded such qualifications apparently took a more favourable view of their personal situation on the labour market, irrespective of whether or not they had found employment. All in all, completion of the learning programme and the award of vocational qualifications seemed to have improved the social status of participants and stabilised their personality. This enabled or encouraged them to become active and assume responsibility for shaping their own future in society and the world of work – an experience that is of fundamental importance for further learning (STEINHÄUSER 2002, pp. 216-224).

The results indicate that, from the point of view of individuals, the success of the learning programme obviously depends on several interacting factors. It seems that mainly two aspects are crucial for the success of the programme: First, the entire programme must consistently be tailored to the special situation of young adults. Modularization of the learning programme, which is to lead to the award of vocational qualifications, is certainly an important factor in this connection. And second, success depends to a high degree on the commitment, expertise and social skills of the teachers and educators involved and of the supervisors in the companies (STEINHÄUSER 2002, p. 236).

4. Qualifications and learning as seen by education providers

The purpose of the education provider's learning programme was to enable participants to obtain nationally recognised vocational qualifications of the type awarded under the dual system of vocational education and training in Germany. It was thus an attractive learning programme, whose value and importance on the labour market and in the education system (could be assumed to be known to interested persons????). The results have shown that, owing to modularised curricula, the learning programme had the flexibility it needed for reaching the above-described, difficult target group and preparing these persons for the final examination. Education providers consider the development of such modularised curricula an important element. On the one hand, this scheme was in keeping with individual learning prerequisites and learning habits in this highly heterogeneous target group; as regards the order of the modules to be completed, participants were given some scope for self-organisation of the learning process. On the other hand, modularised curricula enabled the education provider to respond quickly to changes in job requirements due to new technologies or caused by the restructuring of work organisation in companies (STEINHÄUSER 2002, p. 51 et seqq; STEINHÄUSER/JÄGER 1998, p. 95 et seqq)

Dual-system qualification, which aims to promote employability, also provided a basis for linking the individual modules to workplace situations, thus covering all the knowledge and skills required for passing the examination. This didactic concept met the expectations of adult learners in particular and increased their motivation. In order to link theoretical reflection and practical work in the company, the education provider had to develop numerous instruments for quality assurance within the framework of the pilot scheme without, however, being able to ensure that they always had the desired favourable impact (STEINHÄUSER 2000, p. 57). However positive and innovative a step it was to use the workplace for learning, the impact on the specific content of work was only of minor importance for contractual reasons (STEINHÄUSER 2000, p. 69 et seq).

However, the objective of teaching vocational knowledge and skills, a feature of the dual system, limited the flexibility of the programmes offered.⁴⁰ (It was not possible to take into account participants' work experience, which would have reduced programme duration in individual cases. Neither was it possible to complete and certify single modules. review this in relation to previous comments or revise the previous related comments) In addition to these restrictions on time-related flexibility, the programmes were limited in terms of institutional flexibility. It was, for example, not possible to complete

⁴⁰ Funding mechanisms too were based on completion of the entire qualification process.

the individual modules with different education providers and in different regions. This was, however, also due to the fact – at least during implementation of these pilot schemes – that not enough education providers offered such learning programmes in different places (STEINHÄUSER 2000, p. 71).

All in all, it seems that the orientation of the learning programme to "traditional" qualifications encouraged individuals to engage in learning. It is difficult to say whether greater flexibility in terms of time, place and institutions would have increased the efficiency of the programme. Relevant initiatives have since been launched. These must at any rate include the development of funding concepts on the basis of relevant legal provisions in order to enable the flexible qualification of adults without vocational qualifications during part-time employment.⁴¹ (the message is not very clear)

5. Qualifications and learning as seen by companies

For companies, too, there are numerous reasons for participating in such adult qualification programmes and supporting learning in this target group.

A manual produced on qualifying working adults without vocational qualifications, on a part-time basis, in which the experience from various pilot schemes has been included, states several potential interests of companies (BMBF/BIBB/BA/INBAS 1999, p. 143 et seqq). A general point that is made is that jobs for unskilled and semi-skilled workers will disappear in many sectors. Within the framework of personnel development, companies should be interested in having their unskilled or semi-skilled workers participate in vocational qualification programmes. Learning programmes that give second or third chances to adults without vocational qualifications would make a special contribution to such qualification efforts. The advantages for companies are summarized as follows:

- The company can make foresighted personnel development efforts and exploit the in-house qualification potential.
- Qualification programmes can be designed to meet the needs of companies. Tailor-made training programmes can be offered.
- The company can share in the organisation and design of the qualification process.
- The staff concerned continue to work in the company during the qualification process.
- Owing to its modular design, the qualification process can be flexibly adapted to incorporate changes.
- The company can use the know-how of external advisors (BMBF/BIBB/BA/INBAS 1999, p. 145).

The experience gained in Hesse, and other pilot schemes, revealed that education providers faced considerable difficulties in encouraging companies to participate in the pilot scheme (HERZ 1998, p. 185 et seqq; STEINHÄUSER 2002, p. 105; LUKAS et al 2000, p. 179).

Apart from the interest in personnel development and its expected benefit, further reasons why companies – often after receiving extensive advice – finally decided to participate, include the following:

- Some companies had been unable to find any, or a sufficient number of, apprentices. Furthermore qualification in return-to-learn programmes was an interesting option for them because participants were older and more mature. And, under this learning programme, companies had to spend less time on training than in regular vocational training in the dual system.

⁴¹ After conclusion of the series of pilot schemes on qualification of young working adults without vocational qualifications and of related activities, the BMBF launched several other initiatives, the aim being to provide all-round support and further reduce the number of people without vocational qualifications (cf. BMBF 2002, Chapter 8).

- For some companies it was important that the education provider both offered support for participants during the entire qualification process and gave financial advice to companies.
- Some companies that were socially committed but not entitled to provide training under the Vocational Training Act (*Berufsbildungsgesetz*) decided to give young adults an opportunity to acquire vocational qualifications under this scheme.
- Other companies wished to benefit from the grants towards R&D payroll cost. They promoted qualification far beyond the usual corporate skills development because they wanted to recruit well-qualified staff. But as they were mainly interested in the benefit they would derive from enhanced skills, they largely left to the education provider the preparation of participants for the final examination administered by the competent chamber of industry and commerce.
- When companies were not in a position to offer corporate learning opportunities for all the fields of learning and activities involved, transfer to another, more suitable company was recommended and acted upon.
- What seemed to be the most important single factor in preventing companies from participating in such learning programmes was previous unfavourable experience with participants in vocational training programmes.

Whether or not companies participate in such learning programmes, the vocational qualifications acquired under such programmes seem to be just as useful to them as the skills taught in the dual system. In the pilot scheme of the *Bildungswerk der hessischen Wirtschaft*, about two thirds of the participants found employment immediately after completion of the programme. An evaluation eight months later showed that only a few (more specific?) participants were still unemployed (STEINHÄUSER 2002, p. 68 et seq).

6. Results

As regards their social and educational background, potential participants in these learning programmes are a very difficult target group. The experience gained from the pilot schemes indicates that participation and successful completion of such learning programmes were promoted not only by the programmes' orientation to the special situation of adult learners but also by the opportunity of acquiring vocational qualifications. But experience also shows that it would be possible to gear the learning programmes even better to participants' needs if greater flexibility were ensured in the provision and acquisition of qualifications. This presupposes the existence of a system of qualification modules that could be certified in a standard national procedure and the recognition of informally acquired knowledge and skills. Government is currently preparing both such modules and recognition. These efforts might, for example, reduce the duration of such learning programmes, thus making them even more attractive and efficient. This would not negatively affect the value of the overall qualification because the acquisition of vocational qualifications still requires passing an external final examination.

V. Conclusion

The rapid pace of change particularly in the world of work is having far-reaching consequences with regard to people's learning requirements and their readiness to learn. Continuing learning is necessary in order to manage structural change and to secure the capacity for innovation. Learning enables individuals to establish themselves on the labour market and to contribute to the shaping of society. Life-long learning takes place in a continuum of developing competences and acquiring qualifications. Each individual is responsible for planning and steering their own process of - life-long – learning. However, this presupposes a qualifications system which prepares them for and supports them in this effort. "As their individual levels of qualifications and training increase and as they get older, learners should be able to increasingly determine and assume responsibility for when, where and what they learn," (SACHVERSTÄNDIGENRAT 1998, p. 7). In keeping with this learners in the German qualifications system have only limited scope to develop personal responsibility and self-determination when gaining qualifications at upper secondary level and comparatively more opportunities to determine their learning process at institutions of higher education and in continuing vocational training. In order to encourage life-long learning, recent initiatives to reform the German qualifications system have focused particularly on the close relationship between initial and continuing vocational education and training and/or academic education.

The qualifications acquired at the end of upper secondary education prepare the individual for access to institutions of higher education and/or transition into the employment system. Here the Federal and *Länder* governments - sometimes in cooperation with the two sides of industry – regulate in detail the precise qualifications which should be acquired during a specific period of time and at a specific place of learning. These regulations are complemented by quality assurance and/or school supervision systems. The majority of the learning programmes cover a period of several years and are targeted towards adolescent learners and the achievement of the entire qualification.

However, opportunities are also available for various groups of learners to exercise more self-determination and personal responsibility. Grammar school students are allowed an element of choice with regard to their courses and examination subjects in relation to their age and level of education. Learners at full-time vocational schools can choose between different learning paths, ranging from prevocational training, basic training and the achievement of a vocational qualification, to the achievement of a double qualification. In recent years, the structuring of training under the dual system in compulsory and optional units has also increased the influence of the individual in deciding what he or she would like to learn. However, the question of which optional units are actually available also depends on the individual training company. On the whole, these measures offer greater flexibility and are thus appropriate for encouraging learners to assume more personal responsibility and self-determination in the process of life-long learning. Nevertheless, the aim remains the achievement of an entire qualification as proof of the individual's ability to study and/or take up skilled employment. As a rule, the individual must take a final examination; the system does not provide for the accumulation of employable skills to form an overall qualification. This is intended to preserve the value of the qualifications and to strengthen their portability. This means that more value is attached to the transparency and acceptance of the qualifications, and the ways in which they can be achieved are set down relatively clearly.

These strict regulations on how qualifications are to be obtained during the phase of general and vocational learning are due to the fact that the German labour market is predominantly a vocational qualifications market. Individuals are paid according to the level of their qualifications, on the basis of collective agreements negotiated between the two sides of industry. In order to ensure the ability of the vocational labour market to function properly, the education system is geared towards generating individuals with the corresponding higher education and vocational qualifications. The strict regulation of the procedure for obtaining qualifications thus expresses public responsibility for this phase of general and vocational education.

The rate of participation in, and completion of, educational programmes at upper secondary level is high by international comparison, thus confirming the relative success of this strategy. The proportion

of school students with higher education entrance qualifications (*Abitur*) has risen steadily over the last twenty years. By gaining higher education entrance qualifications, learners can choose between access to vocational training or higher education, both of which open the way to attractive careers. The high portability of qualifications under the dual system of education and training is a particular incentive for those people leaving school with lower general education qualifications to obtain vocational qualifications. On the one hand, these vocational qualifications enable the individual to find appropriate employment. On the other hand, they also act as a platform from which it is possible to undergo further formal, non-formal or informal training.

Despite numerous special programmes, however, just under 15% of a year group do not complete vocational training. It is particularly difficult for school-leavers with poor school achievements to obtain qualifications under the dual system, *inter alia* because the number of company training places varies depending on market conditions. There are programmes to help young adults without vocational qualifications to gain a related vocational qualification. The combination of learning and working, the modularisation of the curricula, and the documentation of credits offer this group an opportunity to shape and phase their training flexibly, according to their individual requirements, without, however, abandoning the aim of gaining a qualification.

There is the potential in the system to increase the number of people with higher education or advanced vocational qualifications. The proportion of people who have qualified under the dual system and who subsequently gain qualifications to enter higher education has remained low for many years.⁴² In terms of quantity, the proportion of people gaining vocational upgrading qualifications (outside institutions of higher education) has fallen over the past years. This applies in particular to younger age groups in industry and trade. Apart from obstacles to access, such as proof of professional experience, lack of recognition of qualifications, and the absence of opportunities to acquire employable skills, individual reticence could be due in particular to the high costs involved in acquiring such qualifications. Furthermore, access to tertiary level education is usually linked to a number of conditions. The amended Upgrading Training Assistance Act offers increased incentives for upgrading training in the years to come.

As far as the promotion of life-long learning is concerned, considerable potential is seen in the introduction of additional qualifications, which began several years ago. These may take the form of independent, supplementary qualifications or units which count towards advanced vocational qualifications. There are also great expectations for new qualification frameworks, the certification of informally acquired competences, and the introduction of a Credit Transfer System. These initiatives should open up new prospects for closer links between initial and continuing vocational education and training. Learners will be offered the following opportunities (cf. SAUTER 2003, p. 213):

- There will be possibilities for a relatively smooth transfer between vocational training and continuing training for competent trainees who are interested in acquiring demanding vocational qualifications, particularly for those with *Abitur*. Apart from numerous dual courses of study with integrated initial vocational qualifications, the introduction of qualification frameworks, which is already taking place in the IT sector and is planned for further sectors, should help individuals to obtain qualifications right up to the tertiary sector.
- The question of access to continuing vocational education and training is particularly relevant for learners without formal vocational qualifications because this group needs alternatives to formal initial vocational training (as a precondition for continuing education and training). For this group, the flexibility of provision and the possibility of acquiring qualification units is just as important as the recognition of what they have learnt informally. This does not only apply to adolescents

⁴² A mere 5% of this group subsequently acquire a qualification to enter higher education, whereas in the case of people completing full-time vocational school the percentage has risen to 10%. This might be due to courses at full-time vocational schools which emphasised the flexibility of the corresponding learning programmes (KREWERTH 2003).

with poor starting chances and to young adults with low qualifications, but also to lateral entrants who are thus able to acquire a qualification in the field of continuing vocational training.

- The restructuring of the curricula into compulsory and optional units and the recognition of additional qualifications represent important preconditions for introducing more flexibility in the field of continuing education for the large majority of learners, most of whom are seeking to acquire qualifications within the framework of the dual system.

These initiatives are aimed at making the qualifications system as a whole more coherent by restructuring training and continuing training, by introducing different forms of learning (both formal and informal), and by enabling flexible learning paths from initial vocational training to continuing training and/or higher education (SAUTER 2003). This means that learners enjoy framework conditions which allow more personal responsibility and self-determination when acquiring qualifications and developing competences.

Formal continuing vocational education and training represents only a small part of continuing training. Adults' self-assessment of their continuing learning indicates that their learning takes place more often in non-formal "lessons" and informal settings than in formal courses. Informal learning in particular is considered to encourage the development of competences in a special way. However, the results of a new study also indicate the limitations of this method of learning (BAETHGE/BAETHGE-KINSKI 2002)⁴³ such as the difficulty to assess the respective quality of informal learning. The study shows that in Germany persons with a lower learning competence consider informal learning as their main learning context.⁴⁴ Persons with a higher learning competence, on the other hand, are more likely to seek further training in formal, medial or combined learning contexts. It is possible that the certifying and documenting of informal learning increasingly aimed at by the German system will contribute towards encouraging those people with less access to formal and medial learning to make (even) better use of the potentials of this form of learning in future.

Even more important in our context are the findings that there is a general connection between the learning competence of the individual, on the one hand, and working conditions which are conducive to learning on the other.⁴⁵ This connection is apparently so strong that it is effective quite irrespective of earlier experiences of socialisation. The authors point out that socialisation experiences, professional status and level of education and training do, of course, also influence learning competences. "But there are indications of how far a place of work which is conducive to learning can contribute towards these competences, either by strengthening or – to whatever degree – correcting or (possibly) counteracting earlier influences" (BAETHGE/BAETHGE-KINSKI 2002, p. 135).

A place of work which is conducive to learning can thus offer a "second chance" and also stimulate individuals and groups of employees who are not interested in education to undergo continuing vocational training in a formal, non-formal or informal framework. A coherent qualifications system, which allows easy access and sufficient flexibility for learners and which is geared towards the needs of the market, can support such efforts. On the other hand, the system could lead to segmentation between different groups of workers. "It could lead to a situation whereby on the one hand, those groups with good training *and* jobs which are conducive to learning are granted double privileges, while on the other hand, those groups which are not able to either develop or make up for the necessary competences for life-long learning due to poor training and a working environment which is not conducive to learning are doubly deprived" (*ibid.*, p. 136).

⁴³ This study assumes learning in informal contexts to be solely on-the-job learning, such as exchanges of experience with colleagues, instruction/training at the workplace and everyday work. Not included are medial learning as well as the study of specialist literature, surfing on the Internet, etc.

⁴⁴ Learning competency in this study is taken to mean: the ability to deal personally and strategically with changes in job and profession; the willingness and ability to engage in self-directed learning; demonstration of initiative in gaining access to learning processes (BAETHGE/BAETHGE-KINSKI 2002, S. 84f.).

⁴⁵ The author distinguishes between the following aspects of working conditions which are conducive to learning: distinctiveness of the task; social integration; opportunities for participation; opportunities for development in the company.

What means does politics have at its disposal to prevent such disparate developments, or to put it differently, to promote life-long learning for everyone? Obviously, it must pursue a broader approach which includes more than the mere development of a coherent qualifications system to promote vocational learning. In addition, further framework conditions must be established and infrastructure assistance provided in order to strengthen the individual's investment in education (cf. KRUSE 2003, for details). It is not sufficient to provide individuals with financial resources. The investment in promoting competences, the promotion of a varied range of regionally linked training opportunities, and the establishment of structures to provide counselling are just as important. The state has set up intensive funding programmes in order to support such approaches. Initiatives to ensure more transparency in the range of educational measures available and their quality development are among the central improvements in infrastructure. In this context, the tests which Germany has introduced some time ago to assess the quality of educational measures could be a suitable instrument for improving the conduct of both those providing courses and well as learners (SAUTER 2002a, p. 270). A further key area of state funding programmes is the development of structures for "Learning within the Company" and the documentation of the results. Here the two sides of industry in particular are called upon to implement such approaches by means of external or internal company agreements.

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