HIGHER EDUCATION
IN
GERMANY

Developments, Problems,
and Perspectives

by
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UNESCO-CEPES, the European Centre for Higher Education, in collaboration with the Institut für Hochschulforschung Wittenberg (HoF Wittenberg) of Germany, is pleased to present this new study on the German higher education system, as the latest volume in its series, Monographs on Higher Education. Indeed, Germany has been present in this series, one of the oldest publication endeavours of UNESCO-CEPES, for some years, for in 1983 the Centre published Higher Education in the German Democratic Republic, by Professor Hans-Jurgen Schulz, and then in 1990, through the efforts of Professor Hansgert Peisert and Professor Gerhild Framhein, Higher Education in the Federal Republic of Germany. The present study, the fruit of the efforts of Dr. Barbara M. Kehm, a researcher at the Institute for Higher Education Research (to use the English name) in Wittenberg, coming ten years after the fall of the Berlin Wall, brings the two strands of postwar German higher education together as it prepares for the new millennium.

Although this study is devoted primarily to the contemporary scene of German higher education, the reader is reminded that throughout much of their history, German universities and German scholarship have served as models to the world. One immediately thinks of the Humboldtian tradition of academic freedom as well as the unity of research and teaching, of the university dedicated to research in all areas of enquiry, viewed not only as a means to expand the frontiers of knowledge, but as the most creative form to be given to the teaching/learning process. The reader is also reminded of the development of the German doctorate as the basic qualification to be met by any aspiring scholar/teacher and the influence of German scholarship in general on postgraduate university education in many parts of the world, particularly in the United States of America.

Still, it is the contemporary scene that gets most of Dr. Kehm's attention, particularly institutional structure, policy making, the interplay of different stakeholders, and the reciprocal influences of the West German and East German experiences on German higher education as a whole. Throughout the study and particularly in the final chapter, the author devotes great interest to the question of the reform of the German higher education system and of its compatibility with other systems of higher education, particularly those of the United States and of other European countries.

Of course, reform was in the air as Dr. Kehm prepared her manuscript, the completion of which coincided in time with the adoption of the new German
Framework Act for Higher Education (*Hochschulrahmengesetz*) that went into effect on 25 August 1998. Indeed, the first draft of this study, that was commissioned to the Institute for Higher Education Research by the German Ministry of Education, Science, Research, and Technology, was presented, upon completion, by the German Government, as its national report on higher education, to the UNESCO "World Conference on Higher Education: Higher Education in the Twenty-First Century", held in Paris from 5 to 9 October, 1998.

UNESCO-CEPES would like to express its gratitude to Dr. Barbara Kehm for the task that she has accomplished in writing this volume and to the Institute for Higher Education Research as well as to the German Ministry of Education, Science, Research, and Technology for their sponsorship and financial support.

Specialists on higher education, laymen, and prospective students will read this book with great profit.

*Jan Sadlak*
Director of UNESCO-CEPES
When representatives of the Federal Ministry of Education, Science, Research, and Technology of Germany approached the Institute of Higher Education Research (HoF Wittenberg) at the beginning of 1998 with the request that it provide a study of the German system of higher education that could be used as a national report on the occasion of the first UNESCO World Conference on higher education, I volunteered to produce the required manuscript. Having had previous experience in writing comprehensive articles on the German system of higher education for an international encyclopedia and knowing what kind of information and issues might be interesting to foreign rather than to German experts on higher education, I did not think that my task would be very difficult.

It soon turned out, however, that I needed to adopt a certain change of perspective, not the least owing to the fact that HoF Wittenberg was deliberately founded as a higher education research institute in East Germany. While almost all of my colleagues were experienced in regard to the East German system of higher education, I was more of an expert on the history of and developments in the current state of higher education in West Germany. These two perspectives had to be brought together in a somewhat comparative framework that took overall developments and trends into account. What followed were quite detailed discussions about the comparability of historical phases, the effects of the transformation, and reciprocal influences between East and West German higher education in the framework of recent reform trends. Our conclusions were additionally discussed at a workshop to which the German delegates to the UNESCO World Conference on Higher Education (October, 1998 in Paris) were invited.

I am thus indebted to my colleagues at HoF Wittenberg, in particular to Gertraude Buck-Bechler, who helped me with the tricky issue of the historical phasing of higher education developments in the German Democratic Republic, for their support and willingness to answer my various questions and to discuss drafts of the text with me. I also thank the participants in the workshop for their valuable comments on the concluding chapter. Still, all errors remain those of the author.

Last but not least, I would like to thank CEPES for the offer to publish the manuscript in its series, Monographs on Higher Education, and in particular, Dr. Leland C. Barrows, for putting so much work into improving my English.

Barbara M. Kehm
Wittenberg, October 1999
Chapter 1

HIGHER EDUCATION AND SOCIETY

1.1. History

The first German universities were founded in the late Fourteenth Century and the beginning of the Fifteenth Century, the oldest being the University of Heidelberg, which celebrated its six-hundredth anniversary in 1986. It was preceded by Prague, founded in 1348, which - owing to its founder, Charles IV of Luxembourg, King of Bohemia and later German Emperor, and its many German scholars and students - was considered at that time to be a German university as well.

The founding of the University of Berlin in 1810, by Wilhelm von Humboldt, was of decisive importance for the German higher education system. Humboldt's ideas regarding the unity of teaching and research, the freedom of the arts and sciences, including the autonomy of the university to regulate its internal academic affairs, and education through science and scholarship became and still are integral parts of German higher education policy, even though the realization of Humboldt's ideas in practice has not always reflected his original conceptions. In fact, some actors in the arena of German higher education policy-making today are declaring the Humbolditian model to be dead.

In the late Nineteenth Century and up to the late 1920's, the German system of higher education expanded and diversified. Beyond the traditional university type, comprising the full spectrum of disciplines, new technical universities and teacher training colleges were founded.

During the National Socialist period (1933-1945), the German institutions of higher education not only played a discreditable role, submitting to a great extent to Nazi ideology, but also suffered a sharp decline because of their subjection to strict political control. Many scholars and students, in particular those of Jewish origin, were forced to leave the institutions, and many emigrated. These events gave rise to severe setbacks, especially in such fields as those of the social sciences and the natural sciences which took years to mitigate or to redress.

Only after the Second World War and with many university buildings destroyed did it become possible to begin reconstruction and renewal. In 1949, after the division into eastern and western Germany, the three western zones
under the allied control of the United Kingdom, France, and the United States of America were formed into a new state, the Federal Republic of Germany, of which Bonn became the capital. The zone under control of the Soviet Union was formed into the German Democratic Republic (GDR). The former capital, Berlin, remained under the control of the four allied powers and was divided into an eastern and a western part. East Berlin became the capital of the German Democratic Republic. West Berlin, although having a special status, became one of the eleven Länder (states) of the Federal Republic of Germany.

In West Germany, higher education institutions, as indeed all cultural and educational affairs, became the responsibility of the individual Länder according to the principles of traditional German federalism; whereas a centralized higher education system was established in the German Democratic Republic. After the peaceful revolution in 1989 and the fall of the Berlin Wall, which had been constructed in 1961, the Federal Republic of Germany and the German Democratic Republic signed a unification agreement in 1990 which led to the dissolution of the latter and its territorial incorporation into the Federal Republic of Germany. Berlin became the capital. Germany now consists of sixteen federal states (Länder). The five East German Länder are referred to as the "new Länder" (or East Germany), the eleven West German ones, as the "old Länder" (or West Germany).

1.2. The Social and Economic Context

The population of West Germany increased from about 50 million around 1950 to more than 60 million in 1970, while that of East Germany varied between 16 and 18 million people. In 1995, the total population in both the old and the new Länder was about 81.8 million people, which makes Germany one of the most densely populated countries in Europe.

Some 8.8 percent (7.2 million people) of the total population in Germany are foreigners, the highest proportion among them being Turks, followed by people from former Yugoslavia and from member states of the European Union, in particular Italians.

Looking at the demographic structure, the age cohort of those from 25 to 45 years old outnumbers other age groups (26.1 million in 1995). Young people under 25 years of age are the second largest group, representing 22.3 million in 1995, followed by growing numbers of people over 60 years of age (17.2 million). The smallest cohort is made up of those between 45 and 60 years of age (16.1 million).
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In April 1995, the labour force in Germany comprised altogether 36.1 million people (44.1 percent of the total population), among them 15.1 million women (36 percent of the female population). In September 1996, about 10 percent of the labour force in West Germany was registered as unemployed, while the unemployment rate in East Germany and East Berlin was 15.7 percent (cf. EURYDICE, 1997). Among those employed in the mid-1990’s, about 3 percent was active in the primary sector, 37 percent in industry, 20 percent in commerce and transportation, and 40 percent in other services. Although industry has been in a state of decline since about 1970 in West Germany and was widely collapsing after 1989 in East Germany, the proportion of persons active in this area remained among the highest in industrial societies.

In 1995, the gross national product of Germany per inhabitant was 36,900 German Marks (DM). Productivity rates in East and West Germany still vary to a considerable extent, so that in 1995 the gross domestic product was 3,083.5 billion DM in West Germany and 376.1 billion DM in East Germany, on average, 86,700 DM per employed person (cf. EURYDICE, 1997).

1.3. Major Policies and Developments in the Federal Republic of Germany and in the German Democratic Republic through 1989

1.3.1. Higher Education Policy in the Federal Republic of Germany

Immediate postwar higher education policy, between 1945 and 1949, focused on the reconstruction of buildings and working facilities, on the one hand, and on re-education as well as de-nazification under the direction of the three Western allied forces, on the other. In West Germany, the view prevailed that the pre-1933 university system had been "basically sound" and should be restored. When the Federal Republic of Germany was founded in 1949, cultural federalism, i.e., culture and education as the sole responsibility of the Länder, was restored according to the tradition of the Weimar Republic. Thus, sixteen universities and nine technical universities constituted the postwar starting point for the development of the West German system of higher education.

Subsequent developments as of 1989 can be classed into five periods (cf. H. Peisert and G. Framhein, 1994; B. Kehm and U. Teichler, 1996).

i) The 1950's were a period of "decentralized reconstruction" according to traditional federalist principles. But there was also a growing interest in the coordination of the educational policies of the individual German Länder (cf. 2.2) and the universities themselves in order to generate
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greater efficiency in research, to accommodate a growing number of students, and to guarantee equality of living conditions as well as opportunities for national mobility. It was also a period of economic prosperity which led to an increasing demand for university-educated professionals. The Standing Conference of the Ministers of Culture of the German Länder (created as early as 1948) was responsible for the establishment of guidelines concerning general norms and standards for the education system in order to achieve a certain degree of homogeneity. A Federal Ministry for Research and Technology was established in the early 1950's. In 1957, the Science Council (Wissenschaftsrat) was formed (cf. 2.3): an influential buffer organization of representatives of the Länder, the Federal Government, higher education institutions, and public life that deliberates the quantitative, structural, and functional development of the higher education system in the Federal Republic of Germany.

ii) The period of "system-wide initiatives", the early and mid-1960's, witnessed the founding of a number of new universities and the expansion of existing institutions of higher education. Within ten years, the number of students almost doubled; that of professors more than doubled; and that of other academic staff members more than tripled. Faith spread that an increase in graduates was needed in order to ensure future economic growth. Furthermore, efforts were made to reduce inequality of opportunity in education. The Federal Government assumed a substantial role in financing a newly introduced system of non-reimbursable grants for needy students (cf. 6.7), providing funds for the major research promotion system and publicly funded research institutes.

iii) The years around 1970 might be called the period of "co-operative federalism". In 1969, a Federal Ministry for Education and Science was established, and the German Basic Law (Constitution) was amended to define the joint tasks of the Federal and the Länder governments in higher education, notably the construction of buildings, the coordination of educational planning, and research promotion. A permanent Federal-State Planning Committee for Construction of Higher Education Buildings was created, and the new Federal Ministry began to deliberate a Framework Act for Higher Education, aimed at setting general guidelines for higher education, teaching, research and studying, access, participation, staffing, organization, and administration of higher education institutions, which was eventually enacted in 1976.

iv) The early and mid-1970's experienced a "dynamics of reform and legislation". Many old traditions were challenged, and far-reaching changes were advocated, notably by students and junior academic staff. Debates about the tasks and functions of higher education in society
FOREWORD

became more heated than ever before or afterwards. The exclusive decision-making power and position of the professors in faculty committees and university senates gave way to participatory models, i.e., to models providing a substantial number of seats and votes for junior academic staff, other staff, and students. The basically unitary system was complemented by the Fachhochschulen (in English, universities of applied sciences; cf. 3.1) and in some Länder by Gesamthochschulen (comprehensive institutions of higher education integrating university and Fachhochschule education). Many curricular experiments were undertaken, and finally, in 1977, national commissions for curricular reforms were established.

v) From about 1977 through the late 1980's, one observes what might be called a "post-experimental truce". The high hopes for substantial changes had already begun to fade in the mid-1970's. There was increasing concern that the number of graduates would, by far, surpass the number of appropriate positions in the world of work. In addition, demographic changes led to predictions that the number of students would grow substantially from the late 1970's until the late 1980's and thereafter decline considerably. Under these conditions, politicians and representatives of higher education institutions agreed in 1977 to a policy of "open access to higher education" for all school leavers with the required entrance qualifications. Higher education institutions were to accept an "overload" of students for about a decade, while budgets and staff positions were more-or-less frozen until the expected decline in student enrollment would balance the situation again. Policy makers in return promised not to irritate higher education by numerous debates and actions regarding administrative or curricular changes.

Indeed, student numbers increased substantially during this period and have continued to increase ever since then, whereas that of academic staff hardly increased at all. Some legislative changes were implemented, for example, in 1985, a major revision of the Framework Law for Higher Education. By and large, however, this period is regarded as having been clearly less dynamic than the preceding decades of West German higher education development.

1.3.2. Higher Education Policy in the German Democratic Republic

The higher education institutions located on East German territory - six universities and three technical universities - began to function as early as 1945. In the next ten years, several new institutions, mainly specialized, monodisciplinary ones were created. The system basically expanded through the creation of specialist institutions. By 1970, altogether fifty-four institutions of
Higher education were operating in the German Democratic Republic. After that date, no new establishments were created.

Higher education development in the German Democratic Republic can also be broken down into five basic phases (cf. G. Buck-Bechler, in, G. Buck-Bechler et al., 1997).

\textit{i}) The first phase was characterized by the higher education reforms implemented between 1945 and 1949 under Soviet military control. During these years, denazification took place, and the reconstruction of buildings was organized by the \textit{Länder} governments which still existed at that time. Another issue in the foreground of those reforms was to secure access to higher education for young people from a broad range of social backgrounds, in particular from the families of workers and peasants, through the establishment of workers' and peasants' faculties and the elimination of educational privileges for members of the higher social strata. Soviet textbooks and guest lecturers were employed on a large scale as a means to reorganize the contents of studies. In addition, structural measures were undertaken, \textit{e.g.}, the establishment of politically affiliated higher education institutions, the founding of extra-university research institutes in the framework of the Academy of Sciences, and increased efforts to train junior academic staff.

\textit{ii}) The second phase began with the official creation of the German Democratic Republic, in 1949, and lasted until the erection of the Berlin Wall, in 1961. It was, particularly, characterized by the introduction of the principles of socialist education which made social science studies on the basis of Marxism-Leninism an obligatory part of any degree programme. In 1952, the five \textit{Länder} were dissolved, and a centrally planned economy was established. According to standardized framework conditions, the planning of higher education and the governance of institutions became the responsibility of a state secretariat. Owing to this step, higher education institutions in the German Democratic Republic basically lost their traditional institutional autonomy. Also, students were no longer allowed to study independently, but were brought together in study groups increasingly supervised by functionaries of the Free German Youth, the single East German youth organization. Work placements in industry and agriculture became an integral part of course programmes. In addition, correspondence courses, \textit{i.e.}, distance learning courses, as well as evening study courses were set up in all universities to provide opportunities for people in employment to acquire a university or a college degree without having to interrupt their work. Furthermore, the principle of "democratic centralism" was introduced into the governance of institutions, and research planning was adjusted according to the five-year plans in the economy.
iii) From 1961 to 1971, a third phase of higher education policy and development can be distinguished, during which higher education expansion took place in East Germany. Not only were ten new higher education institutions established, but in 1965, a new higher education law focused on the adaptation of higher education to the requirements and demands of scientific and technological progress and to the formation of "socialist character" in students. Research, in particular, application oriented research and development, gained substantially in importance. In addition, increased emphasis was placed on building up and expanding further education. The proportion of students enrolled in correspondence courses rose to one quarter of the total number of students by 1970. The existing structures of planning and governance in higher education were changed as well. The traditional division into faculties and institutes was replaced by a division according to sections. An Academic and a Social Council, the latter consisting of representatives from outside the higher education system, were appointed to support the rector.

iv) Until around 1970, higher education expanded rapidly in the German Democratic Republic. However, the Eighth Party Assembly of the Socialist Party (SED), in 1971, changed the course of its evolution once again, and thus, the fourth phase, that lasted until about 1980, began. With the change in party leadership from Walter Ulbricht to Erich Honnecker, ideological education was intensified, and a continuation of the expansion of student numbers came to be viewed as a development in the wrong direction. Admission quotas were reduced from 1972 onwards, especially in subjects like mathematics, natural sciences, and engineering/technology, but also in economics, philosophy, history, and pedagogy. The provisioning of distance studies also declined in importance. Institutionalized forms were developed to increase and to regulate co-operation between higher education institutions and industry, and a centralized system was set up with the remit to organize the central planning of the contents of study of all study programmes and to develop new curricula and quality criteria. However, the placement of graduates, that was centrally organized by the state according to manpower planning parameters, met with increasing resistance from the graduates themselves. From the mid-1970's onwards, admission quotas to higher education remained constant with about 30,000 new entrant students per year. Although access was thus restricted according to central manpower planning approaches, this procedure guaranteed a far more favourable student-teaching staff ratio than in West Germany. Still, it should be pointed out that owing to the general manpower requirement approaches in educational planning, participation rates in higher education remained considerably lower than in the Federal Republic of Germany. On the
average, between 10 and 13 percent of given age cohorts were admitted to higher education institutions.

v) During the fifth phase, between 1980 and 1989, a binary system of tertiary education was gradually established, consisting basically of higher education institutions and specialized professional schools, for instance, in engineering. This result was achieved by differentiating admissions, fields of training and education, and professional fields for highly qualified work. The fifth and final Higher Education Conference of the German Democratic Republic, held in 1980, tried to improve quality in higher education by giving more importance to basic undergraduate studies and by linking general studies more closely to professional studies. In addition, it granted students more independence through increased flexibility in the organization of studies and tried to intensify cooperation between higher education and industry, in particular through an increase in contract research.

1.4. Impacts of German Unification upon Higher Education

The fall of the Berlin Wall in November 1989 and the dissolution of the socialist regime in the German Democratic Republic led to German reunification. The Unification Treaty, signed on 31 August 1990, set off a process to adjust the political, economic, and social conditions in the newly established five Länder of the former German Democratic Republic to those of the old Länder in the Federal Republic of Germany. Among many other provisions, the Unification Treaty also included regulations aimed at establishing a basic structure for the education system in the five new Länder comparable to that of West Germany.

Except for a few specifics, the status quo in West Germany served as a model for the transformation of the East German system of higher education (cf. overviews in R. Mayntz, 1994; G. Buck-Bechler and H. Jahn, 1994; H. Schramm, 1993). The task of restructuring the East German higher education system slowed down reform debates and measures that had been initiated in West German higher education around the end of the 1980's. The restructuring and the renewal of East German higher education were based on higher education renewal laws oriented towards guidelines derived from the West German Framework Act for Higher Education. Extra-university research, in particular that of the institutes of the East German Academy of Sciences, was evaluated by the Science Council (cf. 2.3). Staff and research structures were cut back and often dissolved, and the remaining research groups were integrated, to some extent, into universities. To a larger extent, their survival was assured by integrating them into existing or newly established extra-university research institutes.
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On the basis of a number of recommendations issued by the Science Council, commissions were established to elaborate the new structure and developmental perspectives of higher education in the new Länder. Many institutions as well as individual departments were closed, and thousands of academic staff members and other personnel lost their jobs, not only because staff numbers were reduced owing to what was considered to be "over-staffing" but also as a result of evaluations of the quality of work and the moral integrity of given individuals; i.e., their involvement in the state security system or the party politics of the former German Democratic Republic. In addition, staff structures were adapted to the West German pattern, i.e., a general reduction of non-professorial positions at higher education institutions. Apart from the introduction of universities of applied sciences (Fachhochschulen) (cf. 3.1), a type of higher education institution previously not existing in East Germany, most departments or faculties of law, economics, social sciences, as well as parts of the humanities and teacher training were closed and then re-opened under predominantly West German deans. Between 1991 and 1996, the Federal Government and the German Länder provided more than 2.4 billion DM under the Higher Education and Research Renewal Programme for staff renewal and the preservation of research potential and infrastructure for research and scholarship in the new East German Länder (W. Mönikes, 1993). Nevertheless, for the majority of the East German academic staff members involved in research and teaching, this experience was one of the most bitter ones of their lives.

The institutional development of East German higher education progressed rapidly. New institutions were established according to the institutional patterns of West German higher education, and open access was guaranteed. Many regional imbalances could thus be redressed to a certain extent. East German higher education institutions became regular members of the German Rectors' Conference and of other scientific and academic organizations. The distribution of competencies and responsibilities followed federalist principles (cf. 2.1 and 2.2), while academic self-governance in internal affairs as well as freedom of teaching, research, and studies were established.

Overall, the most visible activities of restructuring the East German system of higher education can be summarized in five points (cf. B. Kehm and U. Teichler, 1996):

a) De-politicization: the closing of all departments of Marxism-Leninism as well as all politically linked colleges; the political screening of all academic staff; the phasing-out and possible re-establishment - with new staff - of departments in which the knowledge system was closely linked to the political system, notably in economics, law, and the social sciences;
b) **Reorganization and evaluation of extra-university research**: the dissolution of many institutes of the Academy of Sciences; others becoming extra-university research groups or institutions. Some of the remaining research staff members were integrated into universities. Altogether, the universities became the key research institutions.

c) **Establishment of universities of applied sciences (Fachhochschulen)**: this task was accomplished either through the transformation of previously existing specialized colleges or through the founding of new institutions.

d) **Restructuring of disciplines**: composition, size, and curricula were restructured according to West German models with some leeway for innovation. Notably, detailed specialization was discontinued.

e) **Restructuring of academic staff**: the typical staff structures of West German higher education were introduced. The East German academic staff underwent political screening and assessment regarding minimum academic qualifications. Procedures varied according to the Land and the institution in terms of the ways in which positively assessed staff members were eventually phased out if no suitable positions were available in the new system. Some staff members were kept on but with a special status. These persons could apply for new positions. Others were directly integrated into the new system. Early retirement and enforced redundancy also took place to a great extent.

This German-German tour de force required a huge input of money and staff in order to achieve the aim of adjusting East German higher education structures and conditions as much as possible to the West German status quo, even though the latter system was itself in dire need of reform and renewal (cf. H. Peisert and G. Framhèin, 1994; Wissenschaftsrat, 1992).

The question of the need for a dual reform has been frequently debated among experts and political actors in the field. Views vary on the issue of whether or not the West German system missed a historical opportunity for reform; however, the assessment that is widely shared is that the task of restructuring the East German system of higher education, while at the same time reforming the West German system, would have been an impossible one to accomplish. Still, the process of unification created unexpected challenges and new issues as well as new problems and opportunities for both parts of the system.

In this context, the role of East German higher education as a challenge and a stimulus for reform and change within German higher education in general should not be underestimated. Several factors contribute to this situation:
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- The transformation, restructuring, and renewal process of East German higher education has been used pro-actively by many institutions to introduce innovations into management, teaching, and curriculum development.

- The GDR tradition of student-centered and teaching-oriented higher education still determines, to a considerable extent, the attitudes and the self-understanding of academic staff members.

- The newly established structures are less rigid so that generally a higher degree of openness for experimentation and reform can be assumed.

Two aspects should be pointed out in the attempt to determine the reciprocal challenges that both parts of the system are constituting for each other. First, overall restructuring, including the rigorous evaluation of the East German higher education system in which many West German academics were involved, has broken down a number of barriers against reform and evaluation which previously existed in West Germany. It became possible, during the first half of the 1990's, to establish a broad consensus about the need for reform of the German higher education system as a whole, even though certain aspects of direction and measures are still being debated. Second, the transfer of West German structures and conditions of higher education has not led to identical developments in the forms and contents of teaching, studying, and research. Some of the most interesting and promising impulses for innovation in the organization of teaching and learning as well as in the structure and provision of course programmes are currently coming from East German higher education institutions, thus providing models with which West German institutions can experiment as well. It is also noteworthy to see how more-or-less identical types and structures develop differently as is the case, for example, with the East German universities of applied sciences (*Fachhochschulen*); (cf. 7.4). Overall, a new dynamic can be noted which is gradually seizing the whole system of German higher education and causing a new thrust towards reform and innovation.
Chapter 2

PATTERNS OF NATIONAL POLICY IN A FEDERAL SYSTEM


According to the federal structure of Germany, responsibility for education and culture are in the general purview of each of the sixteen German Länder. However, as the Basic Law (the German Federal Constitution) guarantees equality of living conditions and opportunities at national level in cases of private and employment-related mobility, a certain degree of system co-ordination has become necessary in the field of education and higher education.

Higher education institutions in Germany are predominantly public institutions, defined as "corporations under public law". They are supervised by the education or higher education ministry of the respective Land in which they are located. State regulation extends over the following aspects of their operation:

- approval of the statutes of higher education institutions;
- regulation of institutional organization and administration through higher education laws, in particular the administration of staff, budgets, and finances;
- approval of new course programmes;
- approval of study and examination regulations;
- confirmation of rectors and presidents after election;
- confirmation of professors.

But higher education institutions also have a certain amount of autonomy that confers self-regulation in regard to all internal academic affairs (cf. 4.3, 4.4). Basically, there are no formal differences in the legal status and the degree of governmental supervision of institutions of the same type, i.e., universities, on the one hand, and universities of applied sciences (Fachhochschulen), on the other, so that the system is characterized by a relatively high degree of legal homogeneity or harmonization. Although this homogeneity is currently beginning to break down, owing to various reforms and experimental measures (cf. 4.5, 7.5), the higher education policies of the Länder have always considered that a certain amount of
system co-ordination is necessary to guarantee unified conditions of living and opportunities for private and employment-related mobility at national level.

To ensure system coordination in education, the Standing Conference of the Ministers of Culture of the (West) German Länder was established as early as 1948. Its purview also includes higher education. The deliberations of the Standing Conference have the aim of arriving at common opinions and decisions on various aspects of education and higher education and at jointly representing the concerns of the Länder. Decisions have to be taken unanimously and have the character of recommendations to be turned into state regulations or laws. The Standing Conference is supported by a number of more-or-less formal advisory groups and teams of experts and a secretariat.

During the peak period of higher education expansion in West Germany in the 1960's, sole funding through the Länder became too much of a burden for them. Amendments to the Basic Law in 1969 granted the Federal Government certain competencies in the area of higher education, for example, that of regularizing by statute the general principles governing higher education and the opportunity to collaborate with the Länder in the planning and financing of higher education. For this purpose, the Federal Government and Länder Joint Commission for Educational Planning and Research Promotion was established in 1970, while the Framework Law for Higher Education was passed in Parliament only several years later, in 1976. The financing and the construction of higher education buildings and large-scale facilities was also established as a task to be carried out jointly by the Federal Government and the Länder.

In 1973, the Joint Commission for Educational Planning and Research Promotion submitted an extensive paper on overall educational planning in West Germany. Nine years later, its review, based on further projections, failed and by failing indicated the end of comprehensive educational planning in Germany. Since then, the Commission basically deliberates issues of educational policy, including higher education and research promotion, pilot projects in higher education financed jointly by the Federal Government and the Länder, and developments in distance learning. In addition, the budget of the German Research Association and the funding of other extra-university research institutions is determined in co-operation with the Joint Commission (cf. 2.2, 2.3).

Beyond co-operation in the funding of higher education expansion and the construction of buildings as well as educational planning and research promotion, all of which are defined as joint tasks to be carried out by the Federal Government and the Länder, the Federal Government is authorized to issue framework regulations which regulate the general principles of the German higher education system, of studies, of teaching and research, of admissions, of membership and self-governance in higher education, of academic staff and organization, and of the
PATTERNS OF NATIONAL POLICY

administration of higher education. These regulations were first enacted in the First Framework Act for Higher Education in 1976. They were revised in a major way in 1985 and were revised again with a view to introducing major changes in the new Framework Act for Higher Education that was enacted in August 1998.

The changes embodied in the new Framework Act are targeted at deregulation, performance orientation, the introduction of incentive systems, competition among and differentiation of higher education institutions, and a greater degree of institutional autonomy. The possibility of introducing tuition fees, that was rejected, was one of the last remaining issues of disagreement in 1998, before the new Framework Act could be passed by Parliament (cf. 6.3, 8.4).

Here as well, a new system dynamics can be noted, developed out of concern for a loss of international competitiveness on the part of the German higher education system. Changes in the Framework Act and the higher education laws of the Länder are intended to introduce elements of accountability and to improve the efficiency and the effectiveness of higher education institutions in Germany, thus belatedly trying to implement changes in organization and policy that have been prevalent in the higher education systems of other industrialized countries for some time (cf. 3.6, 3.7, 4.5, 4.6).

One issue is noteworthy in this context. Higher education policy makers in the Federal Government as well as in the Länder are tending to opt, for the first time since 1945, for deregulation and differentiation rather than for harmonization and legal homogeneity in higher education. This tendency is clearly leading toward decentralized reform and renewal activities, currently still in a more-or-less experimental state, but multiplying their approaches, modes, and projects. Almost every one of the Länder is supporting its own favourite pilot programme in the various areas of higher education reform. Thus it is hardly possible to provide a comprehensive overview and to keep track of what is happening. In this respect, the East German institutions are tending to come up frequently with interesting and innovative models for course programmes and changes in regard to institutional organization.

2.2. Buffer Organizations: The Science Council and the Planning Committee for the Construction of Higher Education Institutions

If it is possible to speak of buffer organizations in the German higher education system at all, the Science Council (Wissenschaftsrat) must be the first one cited. This body was established by the Federal Government and the Länder in 1957 to deliberate and to make recommendations on basic questions of higher education policy in West Germany. Its recommendations deal with such matters as
quantitative and structural planning, \textit{i.e.}, the overall capacity of higher education, the regional distribution of institutions, quantitative developments according to fields of study, etc. The recommendations of the Science Council are taken up by the governments of the \textit{Länder} according to their budgetary and educational policies and implemented by decree. The members of the Science Council are representatives of the Federal and the \textit{Länder} governments, of public life, and of higher education institutions. Over the years, the Science Council has become an influential body and has, in particular, been involved in making recommendations about higher education restructuring and renewal in East Germany and organizing the evaluation of the East German Academy of Sciences and other extra-university research institutions.

The Planning Committee for the Construction of Higher Education Institutions is a joint Federal Government and \textit{Länder} committee that was established in 1970. It is chaired by the Federal Minister of Education, Science, Research, and Technology. In contrast to the Science Council which can only make recommendations, the Committee has planning and decision-making powers. As the costs of construction of buildings used for the purposes of higher education and large-scale investments in facilities are jointly funded by the \textit{Länder} and the Federal Government, decisions can only be reached if the Federal Government and a majority of the \textit{Länder} support a proposal. Planning takes place on the basis of multi-year framework plans that are revised annually. Required facilities and capacities are judged according to a formula based on special need per place of study or on research costs.

The remit of the Planning Committee is to provide facilities and capacities for study and research that are adequate in quantity and quality and balanced regionally as well as in terms of discipline or subject related offers. The creation of new provisions and facilities and the extension of existing ones respond to expected demand for study places and long-term demand for graduates (\textit{cf.} K. Faber \textit{et al.}, 1991).

\textbf{2.3. The Funding of Higher Education and Research}

Originally, the funding of higher education was the sole responsibility of the \textit{Länder}. Only at the end of the 1960's did the Federal Government become involved in providing funds for specified activities and areas (\textit{cf.} 2.1). The basic resources (staff salaries and material resources) for the current expenditures of higher education institutions are covered by the \textit{Länder} and were at a level of 45.5 billion DM in 1995 (94.8 percent). Also included in this sum are basic investments for buildings and infrastructure which are financed jointly by the Federal Government and the \textit{Länder} if overall costs for specific building and construction activities surpass a certain level (EURYDICE, 1997).
In 1995, the Federal Government provided 2.5 billion DM (5.2 percent) for higher education (see also 3.7, 6.7). The overall share of higher education was 4.01 percent of the total public budget in 1995. The joint promotion of research represented an additional share of 0.66 percent (EURYDICE, 1997).

The proportion of the gross domestic product spent on higher education in West Germany dropped from 1.32 percent in 1975 to 1.21 percent in 1980 and to 1.17 percent in 1985. Owing to the task of higher education restructuring and renewal in East Germany after unification, this proportion increased again to 1.25 percent in 1990 and to 1.36 percent in 1996.

Table 1 portrays the development of public expenditure for higher education (the Länder and the Federal Government) in the Federal Republic of Germany since 1970 in net prices and as percentages of GDP.


<table>
<thead>
<tr>
<th>Year</th>
<th>Higher education institutions</th>
<th>Student aid</th>
<th>Joint research promotion</th>
<th>Other research expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(in billions of DM and percentages of Gross Domestic Product)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>6.9</td>
<td>2.6</td>
<td>1.3</td>
<td>3.7</td>
</tr>
<tr>
<td>1975</td>
<td>13.6</td>
<td>3.6</td>
<td>2.6</td>
<td>6.2</td>
</tr>
<tr>
<td>1980</td>
<td>17.8</td>
<td>2.3</td>
<td>3.6</td>
<td>9.2</td>
</tr>
<tr>
<td>1985</td>
<td>21.4</td>
<td>2.3</td>
<td>4.5</td>
<td>11.5</td>
</tr>
<tr>
<td>1990</td>
<td>30.4</td>
<td>2.7</td>
<td>5.4</td>
<td>14.1</td>
</tr>
<tr>
<td>1996</td>
<td>48.2</td>
<td>2.7</td>
<td>8.4</td>
<td>15.7</td>
</tr>
</tbody>
</table>

a) Total (including the new Länder).

b) Including teaching hospitals, but excluding funds for the German Research Association and special research programmes.

c) Including aid for students in secondary education.

d) Joint Federal-Länder programmes for research promotion for higher education and research institutes outside higher education.


The funding of higher education institutions changed to some degree with German unification and the task of restructuring the East German higher education system which involved and still involves immense costs. Apart from the fact that the West German institutions had to accept additional financial restrictions and were faced with less money for research, the Federal Government and the Länder in 1991 decided on a "Programme for the Renewal of Higher Education and Research in the New Länder". For this Programme,
1.760 billion DM were originally made available, a sum which was increased to 2.427 billion DM one year later.

In 1993, the German Länder paid 23.6 billion DM (in net prices) for the basic provisions of higher education institutions (including hospitals). The Federal Government contributed 2.5 billion DM. The expenditure for student aid of the Federal Government and Länder was 2 billion DM, and joint Federal Government and Länder expenditure for research promotion was 2.5 billion DM. The private sector contributed about 450 million DM to higher education, mainly through the funding of professorships and contract research. Overall, 88.7 percent of the expenditure for higher education in Germany was provided by the Länder, 1.9 percent by the Federal Government, and 9.4 percent by the private sector (cf. Hochschulrektorenkonferenz, 1996b).

In the face of severe cuts in basic funding for higher education institutions in recent years, the Federal Government and the Länder have created special programmes for higher education to jointly finance specified areas and activities for which extra funds were required in order to achieve changes and reforms. Such areas and activities were, for example, the improvement of infrastructure in higher education, the further development of universities of applied sciences, the strengthening of European and international co-operation, the promotion of junior academic staff and women, etc. The third of these programmes is running from 1996 to 2000 with an estimated budget of 7.7 billion DM provided jointly by the Federal Government and the Länder.

As university education in Germany is based on the principle of the unity of teaching and research, academic staff typically must be engaged in both tasks. Only a few positions for academic staff at universities are dedicated exclusively to either teaching or to research.

The research carried out at universities represents only one of altogether three sectors comprising the German system of research. The other two are government-funded research conducted at extra-university research institutes (e.g., the institutes of the Max Planck Society, the Fraunhofer Society, the Helmholtz Society, or the institutes of the G.W. Leibniz Community), and industry research. In addition, private foundations promote research. This institutional and organizational differentiation is paralleled by a certain functional differentiation of types of research, i.e., basic research and applied research. Although some applied research is carried out at universities and specifically at universities of applied sciences, the universities constitute the specific domain within the German system of research in which the largest proportion of basic research takes place.
Apart from the definition of research as being a part of the duties of academic staff and thus to be funded from the basic resources provided by the Länder, the funding of basic research at universities is the main responsibility of the German Research Association (Deutsche Forschungsgemeinschaft). This body is the most important organization for the funding of research at higher education institutions. Founded in 1951 as a non-profit organization, its members are the universities, the large science institutions, the academies of science, and other scientific organizations (H. Peisert and G. Framheim, 1994). Its budget is provided jointly by the Federal Government (60 percent) and by the Länder (40 percent). In addition, the German Research Association receives some financial means from private foundations. In 1995, the budget provided by the Federal Government and the Länder amounted to 1.87 billion DM.

Promotion of research through the German Research Association covers all disciplines and is directed at basic research. The allocation of grants to individual researchers or research groups is based on the peer review of proposals submitted to the Association. On the one hand, this system exemplifies an important aspect of the self-regulating organization of science and scholarship in Germany and its emphasis on "internal" academic quality rather than on external relevance. Until recently, the procedures of the German Research Association to allocate research grants have met with a rather high level of acceptance and trust. On the other hand, however, the static and conservative aspects of such procedures have recently met with growing criticism, for example, as regards the orientation to disciplinarity, the subjective factors in peer review, and lack of social relevance. Therefore, an evaluation of the German Research Association has recently begun but has not yet been completed. Thus the results of this evaluation are not currently available.

The other major external funders of research at universities are the relevant ministries in the Länder and the Federal Government that provide public funds to support research projects at higher education institutions or commission research themselves. The Federal Government ministries finance about four-fifths of this so-called departmental research among which the Federal Ministry of Education, Science, and Research (BMBF) is by far the most frequent provider of funds, especially in technology-oriented fields. Commissioned research is often related to questions relevant to planning in the area of political responsibility of the respective department.

A further pillar of research at higher education institutions financed by third parties is the support provided by private foundations and non-profit organizations. In 1995, the research and development sector outside industry in Germany received external support of about 260 million DM from private foundations and non-profit organizations for the promotion of research of which higher education institutions received a so far unspecified proportion. Among the
private foundations, the Volkswagen Foundation is the largest sponsor of university research covering all disciplines and providing about one-third of the overall sum of research funds available from foundations and private societies. A number of foundations sponsoring research are linked to industry. Others are related to political parties and to trade unions.

Research commissioned by enterprises or carried out jointly by enterprises and higher education institutions is largely oriented to application and is particularly available in those disciplines (e.g., engineering and chemistry) which are of interest in this respect. Other disciplines too, for example linguistics, have established contacts with industry and with enterprises. The proportion of third party funds from industry for research at West German higher education institutions has increased considerably since the beginning of the 1980's and meanwhile accounts for about one-sixth of all external research funds (Schimank, 1995).

Research at higher education institutions in the German Democratic Republic before 1989 was much more strongly linked to the needs of industry and enterprises then in the West and was often carried out jointly. Basic research, however, was mainly carried out in the institutes of the Academy of Sciences. The large-scale collapse of the economy of East Germany after 1989 has led to the breakdown of university-industry co-operation in the former German Democratic Republic (cf. 3.5).

Research funds from the European Union (Framework Programmes for Research and Technological Development), which carry considerable weight in other European countries, still constitute a negligible proportion of research funding at German higher education institutions, even though this situation is changing. Nevertheless, the European Union policy of research promotion is acquiring a growing influence in the development of strategic emphases in a selected number of research fields and related disciplines (cf. B. Kehm, J. Enders, and U. Schimank, 1998).

Within the framework of the "dual" funding system for research at higher education institutions, around 75 percent of the total research budget is provided by the Länder in the form of basic resources covering staff, laboratories, libraries, etc. The funding of research projects (around 25 percent of the total research budget) comes mainly from various third-party sources, the most important of which are the German Research Society (37 percent in 1990), the ministries of the Federal Government (29 percent in 1990), commerce, industry, and associations (15 percent in 1990) and private foundations (9.5 percent in 1990) (cf. Bode, 1996).
Overall, one can conclude that the losses in basic provision for research owing to cuts in institutional budgets has only been partially compensated by increases in third party funding. Therefore, not only higher education institutions, but also certain policy-makers in the field; have warned of a certain danger that research will dry up or "emigrate" from higher education institutions. The continuing increase in student numbers is also giving rise to the fear that a displacement of research might take place in the time budgets of academic staff members. These issues, however, are part of the efficiency and legitimation disputes currently taking place in German higher education (cf., 8.3).

Table 2 provides an overview of the development of public and private expenditure for higher education, research, and development in relation to the gross national product. Public expenditure for higher education increased during the first half of the 1990’s, owing mainly to the financial requirements of the restructuring and the renewal of the East German higher education system. Public expenditure for research stagnated or even decreased from the mid-1970’s until the beginning of the 1990’s and has been rising slightly since the mid-1990’s. In contrast, private expenditure for research and development increased considerably between 1980 and 1990 and thereafter started to decline.


<table>
<thead>
<tr>
<th>Year</th>
<th>GNP (in Million DM)</th>
<th>Public Expenditure for Higher Education (in % of GNP)</th>
<th>Public Expenditure for Research (in % of GNP)</th>
<th>Private Expenditure for Res. &amp; Development (in % of GNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>675,700</td>
<td>1.02</td>
<td>0.19</td>
<td>1.17</td>
</tr>
<tr>
<td>1975</td>
<td>1,027,700</td>
<td>1.32</td>
<td>0.25</td>
<td>1.17</td>
</tr>
<tr>
<td>1980</td>
<td>1,477,400</td>
<td>1.20</td>
<td>0.24</td>
<td>1.38</td>
</tr>
<tr>
<td>1985</td>
<td>1,834,500</td>
<td>1.17</td>
<td>0.25</td>
<td>1.73</td>
</tr>
<tr>
<td>1990</td>
<td>2,426,000</td>
<td>1.24</td>
<td>0.22</td>
<td>1.81</td>
</tr>
<tr>
<td>1991</td>
<td>2,853,600</td>
<td>1.19</td>
<td>0.22</td>
<td>1.76</td>
</tr>
<tr>
<td>1992</td>
<td>3,078,600</td>
<td>1.16</td>
<td>0.23</td>
<td>1.58</td>
</tr>
<tr>
<td>1995</td>
<td>3,459,000</td>
<td>1.37</td>
<td>0.23</td>
<td>1.44</td>
</tr>
<tr>
<td>1996</td>
<td>3,541,500</td>
<td>1.36</td>
<td>0.24</td>
<td>1.47</td>
</tr>
</tbody>
</table>

a) Until 1990 West Germany only, from 1991 onwards East and West Germany.


A fact that cannot be overlooked is that many of the recent debates on the reform of German higher education are closely related to the increasing financial
stringency of the public purse, in particular that of the Ländere. In fact, it has been said that the changes promoted by political actors and the key concepts under which higher education reforms are discussed suggest that the responsible political actors prefer a cheaper rather than a better university (cf. B. Kempen, 1998). Many of the reform proposals currently under debate in Germany and sometimes being implemented experimentally in the form of pilot projects indicate a strong interrelationship between funding and legitimation issues, for example, lump sum budgeting and new forms of accountability, evaluation and incentive systems, the proposed introduction of tuition fees, the diversification of the funding base, etc. (cf. 4.3, 4.4, 4.6).
Chapter 3

INSTITUTIONAL PATTERNS AND QUANTITATIVE DEVELOPMENTS

3.1. Types of Institutions

Until the 1950's, the term, university, was employed in West Germany only to designate multi-disciplinary institutions engaged in teaching and research. Developments in the German Democratic Republic were patterned on the Soviet model of state institutions with relatively little autonomy and the establishment of Workers' and Peasants' Faculties. In 1950, in West Germany, there were eighteen universities, thirteen specialized institutions providing university-level programmes, notably in engineering, human and veterinary medicine, agriculture, and economics as well as more than a hundred - mostly small - colleges for teacher training, arts and music, and theology. In East Germany in 1951, there were six universities and three technical universities, one teacher training college, two specialized institutions for economics and agriculture, eight art colleges, and two political higher education institutions. By 1960, a further seven technical institutions and six pedagogical institutions of higher education had been founded as well as three academies for medical sciences and three art colleges. Also, a third institution linked to public administration, the socialist party, and socialist economics was established.

While the East German system expanded through differentiation into specialized, often mono-disciplinary institutions, a trend towards a unitary system could be observed in West Germany for a certain period. During the period from the early 1960's until the mid-1970's, when almost as many new universities were founded in West Germany as had existed prior to this period, the first group of specialized colleges gained a status identical to that of multi-disciplinary universities, and most teacher training colleges were eventually integrated into universities. Only the colleges of the fine arts retained a special status because they have no research function and do not award doctoral degrees (W. Mönickes, 1993; B. Kehm, and U. Teichler, 1996; H. Peisert and G. Framhein, 1994).

When higher education in West Germany expanded beyond the traditional notions of an academic and professional élite, institutional diversification was back on the agenda. In 1970 and 1971, former engineering schools and higher vocational schools were upgraded to Fachhochschulen. In January 1998, the
Senate of the German Rectors’ Conference and the Standing Conference of Ministers responsible for higher education in the German states approved the term “universities of applied sciences” for *Fachhochschulen* to be used in all international contexts. The new term is supposed to provide more transparency for foreign students interested in studying in Germany and to ease the formulation of diploma-supplements in English (cf. Hochschulrektorenkonferenz Senat, 1998).

Universities of applied sciences have different admission prerequisites than universities (cf. 3.2), and the study period of four years includes as a rule a lengthy practical work placement in a related professional field. Most students are enrolled in engineering, business studies, social work, and public administration. Only persons already employed in public administration are entitled to enroll in universities of applied sciences specialized in this area.

Universities of applied sciences, as compared to regular universities, are expected to offer study programmes that are more applied and practical and to train their students more directly for their future work tasks. Although German higher education policy considers that the degree awarded by universities of applied sciences is higher than a Bachelor’s Degree, it is often considered in other countries to be equivalent to a Bachelor’s Degree. In the course of current reform debates, German universities of applied sciences are attempting to upgrade at least some of their degree programmes to Master’s Degree level and are involved in pilot projects to this effect.

As a rule, graduates of universities of applied sciences who transfer to universities will have to study one or two more years in order to achieve a Master’s Degree. No direct way to achieve a doctoral degree existed until recently. However, these strict delineations are currently dissolving, and many innovative impulses are coming from the universities of applied sciences. In particular, these impulses pertain to issues of internationalization, innovative study programmes in new inter-disciplinary and trans-disciplinary fields, the carrying out of increasing quantities of applied research, direct access to doctoral programmes in co-operation with universities, and new models of internal governance and participation (e.g., in the newly established university of applied sciences in Stendal, East Germany). However, professors at universities of applied sciences are not obliged to undertake research (cf. 5.2, and 5.4) and therefore have more than twice the teaching load of a university professor.

During the 1970's, efforts were undertaken in West Germany to merge all institutional types into comprehensive higher education institutions (*Gesamthochschulen*). They were expected to share resources and to provide students with the option of a shorter programme of the type offered at universities of applied sciences or of a regular university-type programme. Originally, comprehensive universities were envisaged as becoming the major
INSTITUTIONAL PATTERNS

institutional type of higher education institution in West Germany; however, only eleven such institutions were established in only two of the West German states. In the meantime, only a very small number of them continue to offer the option of graduation either at the level of a university of applied sciences or at university level. All of them have been upgraded to universities.

Since 1974, the Land of Baden-Württemberg has been establishing academies of higher vocational training (Berufsakademien) which, according to the state law, are part of the tertiary sector. Two other Länder (Berlin and Saxony) have followed this example by also establishing a small number of such academies. Course programmes, for the most part, are limited to such fields as business studies, technical sciences, and social work. Students may enroll in degree programmes having durations of two to three years but must also hold vocational training contracts with companies in their fields, so that practical periods and study periods are closely linked. Graduation is certified with a Diplom similar to that of universities of applied sciences but with an addendum to denote the institutional type that awarded it. The academies of higher vocational training have only recently been recognized outside Baden-Württemberg in Germany as tertiary sector institutions.

In 1990, 248 institutions of higher education existed in West Germany (cf. Table 3), among them fewer than 100 university-type institutions, more than 30 art colleges, and more than 100 universities of applied sciences.

### Table 3. Higher Education Institutions in the Federal Republic of Germany: 1960-1996

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<td>Universities a)</td>
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<td>34</td>
<td>41</td>
<td>49</td>
<td>55</td>
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<td>Theological seminaries</td>
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<td>Art academies</td>
<td>24</td>
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<td>26</td>
<td>26</td>
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<td>26</td>
<td>31</td>
<td>35</td>
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<td>46</td>
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<tr>
<td>Comprehensive universities b)</td>
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<td>1</td>
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<tr>
<td>Fachhochschulen c)</td>
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<td>-</td>
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<td>97</td>
<td>115</td>
<td>122</td>
<td>122</td>
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<td>213</td>
<td>229</td>
<td>240</td>
<td>248</td>
<td>273</td>
<td>62</td>
<td>335</td>
</tr>
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</table>

a) Including technical universities and special universities.
b) Since the late 1980's, most comprehensive universities are included in "universities" in statistical overviews.
c) Since 1975, including universities of applied sciences for Public Administration.

In 1989, there were altogether seventy institutions of higher education in East Germany: nine multi-disciplinary universities, twelve technical universities, twenty-nine institutions specialized in engineering, teacher training, fine arts, agriculture, etc., three medical academies, as well as seventeen institutions closely linked to specific political functions (party, police, trade unions, the military services, etc.). After the transformation of the East German higher education system, sixteen universities, eleven art colleges, one teacher training college, and thirty-one universities of applied sciences (among them nine for public administration) were established in the new Länder. In addition, there were eleven theological and private colleges (cf. G. Buck-Bechler, H. Jahn, D. Lewin, in, G. Buck-Bechler et al., 1997).

Currently, there are altogether 335 public institutions of higher education in the Federal Republic of Germany and altogether seventy-four private higher education institutions, among them twenty theological colleges and forty-three universities of applied sciences. The public institutions are distinguished according to seven types, of which universities and universities of applied sciences are the most common and dominating ones: universities (26.7 percent), universities of applied sciences (43.6 percent), comprehensive universities (0.3 percent), colleges of arts and music (13.7 percent), teacher training colleges (1.8 percent), special university level colleges for public administration (9 percent), and theological colleges (4.8 percent). Included in this institutional pattern are also one distance-learning university and two higher education institutions of the military forces (cf. Table 3).

The picture of the institutional pattern of German higher education would be incomplete if the existence of a distance-learning university in Hagen (West Germany) with open access and the recent establishment of the first virtual university project (also cf. 3.6) were not mentioned. In the winter semester of 1997-1998, altogether 54,759 students were enrolled in the Distance University. Students are divided into five categories: full-time students, part-time students, guest students, and students enrolled at other higher education institutions but either taking a full complementary course programme or single courses in the Distance University. In 1998, altogether 8,728 students (15.9 percent) were studying full-time and 31,285 students (57.1 percent) were studying part-time at the Distance University. Among these two categories of students, fewer than one percent (0.8 percent) had gained access by means of an entrance examination, i.e., without having previously earned the regular entrance qualification for studying at a higher education institution through an appropriate school leaving certificate. Students mostly study via correspondence courses and block seminars with face to face teaching in learning centres distributed throughout Germany as well as in Austria, Switzerland, and in some of the central and eastern European countries.

In addition, certain reform institutions of higher education have been set up in recent years or are in the process of being established. Among them should be...
INSTITUTIONAL PATTERNS

mentioned the Viadrina in Frankfurt/Oder with its strong inter-disciplinary approach and its specific aim to integrate German and Polish staff and students through its location on the German/Polish border. There is the refounding of the University of Erfurt according to a strongly élitist concept. The newly founded University of Applied Sciences, Fachhochschule Altmark in Stendal, was conceptualized as being a new model emphasizing innovative elements in the organization of teaching and studies as well as in the area of governance and management. The International University in Bruchsal should be mentioned. It is in the process of being established as a purely private university with tuition fees and industry sponsoring. Finally, there are the European Business School in Östrich-Winkel and the Otto Beisheim Graduate School of Management in Vallendar, both of them also private institutions, i.e., requiring payment of tuition fees, with an international and practical orientation and close links to business and industry.

3.2. Access and Admissions

Young people in Germany having passed the Abitur, the school-leaving examination, after thirteen years of schooling (four years of primary schooling and nine years of upper secondary schooling or other equivalent courses), are entitled to study at a university. In East Germany, prior to 1989, only twelve years of schooling were required for access to universities; however, with the transfer of the West German education system this situation was changed. Nevertheless, some of the new East German states held on to the former East German rule of twelve years; others are debating whether or not twelve years of required schooling for access to universities should be re-introduced. In addition, this debate has spread to the West German states as well, two of which have introduced pilot projects awarding the school leaving certificate required for access to higher education after twelve years.

As universities are not officially ranked in Germany according to quality or reputation, the majority of students choose the university nearest to their homes. In many fields of study, students may enroll freely and move from one university to another during their courses of study. However, certain fields of study (e.g., all the medical fields, architecture, business studies, psychology) have admission restrictions because the number of applicants clearly surpasses that of study places on offer. In these cases, national admissions procedures are applied. Applicants are selected by the Central Admissions Agency according to the grade average of their school-leaving certificates, waiting time, and social criteria (i.e., some places are reserved for students from abroad, for hardship cases, etc.). In another group of subjects, there are basically sufficient study places on offer, but students tend to select only some of the institutions offering respective programmes. In these cases, they also have to apply to the Central Admissions
Agency that will allocate applicants to individual universities. East German universities are still less crowded than West German universities in almost all subjects or even have a considerable number of vacant study places. Therefore, they try to attract an increased number of students so that their capacities will not be reduced in the medium term. In artistic fields, the individual colleges have their own procedures for assessing the artistic competencies of potential students wanting to enroll.

There are also some local admission restrictions in subjects which may change from year to year. Current reform debates targeted at granting more autonomy to higher education institutions include plans to introduce pilot projects allowing some institutions to select a certain proportion of new entrant students themselves. This practice is expected to contribute to further differentiation and to greater competition among institutions. However, there are no proper procedures established so far for such selections.

Persons wishing to enroll in universities of applied sciences must complete twelve years of prior schooling, either through upper secondary education or through a sequence of intermediate lower secondary education and two further years at a higher vocational school or any equivalent. Many students enrolling at universities of applied sciences will have completed full vocational training beforehand. Restricted admissions and stringent selection procedures are even more common at universities of applied sciences than at universities.

A description of admission regulations for higher education in Germany would be incomplete without mention of current debates and developments. In the course of current reform debates, in particular regarding issues of differentiation and competition, higher education institutions have demanded the right to select a certain percentage of new entrant students themselves. The policy of open admissions is adverse - so the argument runs - to governmental requirements of more quality and efficiency in higher education. It seems that in the near future and within the framework of experimental clauses newly introduced in some of the revised state higher education laws, a number of pilot projects will begin allowing some higher education institutions to select a certain percentage of newly enrolling students themselves.

The development in West Germany of the proportion of young people with an entrance qualification for higher education as a percentage of the respective age cohort (18- to under 22-year-olds) is portrayed in Table 4. In 1990, it passed the 30 percent margin in West Germany and was around 35 percent by the mid-1990's. The proportion of young people with an entrance qualification for higher education as a percentage of the respective age cohort in East Germany before 1989 increased from 8.8 percent, in 1960, to 15.8 percent in 1965, illustrating the early phase of higher education expansion. It was 16.1 percent in
1970 and peaked at 17.8 percent in 1973. Following that date, it decreased to 12.6 percent in 1980 and rose slightly again to 14.8 percent in 1985 and to 15.5 percent in 1989 (cf. Lischa, in, G. Buck-Bechler et al., 1997). In the mid-1990's, it had increased to around 25 percent, i.e., higher than in the former system but still lower than in West Germany (cf. K. Schnitzer et al., 1998). The 1994 figures in Table 4 cover both the old and the new German states.


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<tr>
<td>Academic track</td>
<td>55.4</td>
<td>51.7</td>
<td>89.2</td>
<td>125.5</td>
<td>168.0</td>
<td>230.3</td>
<td>199.8</td>
<td>216.0</td>
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<td>-</td>
<td>-</td>
<td>46.7</td>
<td>50.6</td>
<td>67.8</td>
<td>74.9</td>
<td>74.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>55.4</td>
<td>51.7</td>
<td>89.2</td>
<td>172.2</td>
<td>218.6</td>
<td>298.1</td>
<td>274.7</td>
<td>290.0</td>
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<tr>
<td><strong>Secondary school leavers as percentages of the corresponding age group</strong> a)</td>
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<tr>
<td>Academic track</td>
<td>5.6</td>
<td>7.2</td>
<td>10.9</td>
<td>14.7</td>
<td>17.2</td>
<td>21.5</td>
<td>21.9</td>
<td>25.6</td>
</tr>
<tr>
<td>Higher vocational track</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5.5</td>
<td>5.2</td>
<td>6.3</td>
<td>8.2</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5.6</td>
<td>7.2</td>
<td>10.9</td>
<td>20.2</td>
<td>22.4</td>
<td>27.8</td>
<td>30.1</td>
<td>34.5</td>
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</table>

a) 18-21 year-olds.


If one look at changes in the access to higher education of certain social groups, the most interesting figures pertain to the participation of women (cf. 3.3), the proportion of foreign students (cf. 3.7), and the proportion of young people with working class backgrounds (cf. 6.2). In Germany, the issue of mature students is less in the foreground than in other countries, because entrance ages vary to a significant extent and are usually higher than elsewhere. Provided the required school leaving certificate has been obtained or a special entrance examination has been successfully passed, mature students can be admitted to higher education without any problems and are treated in the same way as the other students. There are, however, a few universities in Germany that offer special study programmes for older people, i.e., after they have reached retirement age.
HIGHER EDUCATION IN GERMANY

3.3. Enrollment and Graduation

Table 5 portrays the proportion of the respective age group enrolling at institutions of higher education in West Germany. In 1950, in Germany, the proportion was only slightly higher than 5 percent. It increased to more than 8 percent, in 1960, and thereafter to about 20 percent, in 1975. Subsequently, it remained more or less constant until 1985 and then increased rapidly to more than 30 percent, in 1990. Owing to demographic changes, it decreased somewhat after 1993, but was 33 percent in 1995. In East Germany, the respective proportion was on the average between 12 and 14 percent from the early 1970's until 1989. In 1990 and 1991, it increased to almost 20 percent after which a slight decrease to 17.6 percent in 1994 can be observed. In 1995, the proportion increased again to 19.1 percent and is expected to rise further (cf. Lischka, in, G. Buck-Bechler et al., 1997).

Table 5. Participation in Higher Education in West Germany: 1960-1995

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<tr>
<td>Newly entering students (in thousands)</td>
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<tr>
<td>At universities a)</td>
<td>65.4</td>
<td>63.2</td>
<td>92.2</td>
<td>120.7</td>
<td>138.2</td>
<td>144.5</td>
<td>197.9</td>
<td>150.8</td>
</tr>
<tr>
<td>At Fachhochschulen b)</td>
<td>20.6</td>
<td>25.5</td>
<td>29.2</td>
<td>42.8</td>
<td>51.7</td>
<td>62.3</td>
<td>80.0</td>
<td>77.9</td>
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<tr>
<td>Total</td>
<td>86.0</td>
<td>89.7</td>
<td>121.4</td>
<td>163.5</td>
<td>189.9</td>
<td>206.8</td>
<td>277.9</td>
<td>228.6</td>
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<tr>
<td>Newly entering students in percentages of the corresponding age group b)</td>
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</tr>
<tr>
<td>At universities</td>
<td>6.6</td>
<td>8.8</td>
<td>11.2</td>
<td>14.2</td>
<td>14.2</td>
<td>13.5</td>
<td>21.7</td>
<td>- c)</td>
</tr>
<tr>
<td>At Fachhochschulen</td>
<td>2.1</td>
<td>3.7</td>
<td>3.6</td>
<td>5.0</td>
<td>5.3</td>
<td>5.8</td>
<td>8.8</td>
<td>- c)</td>
</tr>
<tr>
<td>Total</td>
<td>8.7</td>
<td>12.5</td>
<td>14.8</td>
<td>19.2</td>
<td>19.5</td>
<td>19.3</td>
<td>30.5</td>
<td>33.4</td>
</tr>
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</table>

a) Universities, comprehensive universities, art academies, etc.
b) 18-21 year olds; in 1995: 19 to below 21 year olds.
c) No statistics available.
d) Including predecessor institutions.

The proportion of women among all entering students in West Germany increased from 27 percent, in 1960, to 46.6 percent, in 1995. In East Germany, the respective proportion was 52.9 percent in 1995. In the whole of Germany, it was 47.6 percent in 1996. Traditionally, the German Democratic Republic had a much higher proportion of women in economics, engineering, and natural
science subjects than the Federal Republic of Germany owing to enrollment targets determined centrally by the government. In the years since 1989, the proportions of women students in the various fields of study in East Germany have approximated those in West Germany. The proportion of female students is highest at colleges of art and music, at universities, and at teacher training colleges. It is lowest at universities of applied sciences and at comprehensive universities (with the exception of course programmes in social work at universities of applied sciences and at university level colleges of public administration). In general, the highest proportion of female students can be found in the humanities, the liberal arts, and in teacher training.

The proportion of students newly enrolling at universities of applied sciences has gradually increased from about 25 percent in the early 1970's to about 30 percent in 1996. Over the last years, higher education policy in Germany has attempted to improve infrastructures at universities of applied sciences and to enable the creation of innovative and attractive study programmes in order to increase enrollments. The target envisaged is a distribution of approximately 60 percent of students newly enrolling at universities, and 40 percent, newly enrolling at universities of applied sciences. These plans are closely linked to concerns about the long duration of studies at universities and to student numbers in West Germany that exceed actual capacities. Thus, for example, the establishment of universities of applied sciences in East Germany, although mainly intended to introduce this type of higher education institution into the new East German states as such, because it did not exist there before, was also given preference to the establishment of more universities because higher education planning for the East German states envisaged an increase in the proportion of students studying at such institutions. The proportion of students newly enrolling at universities of applied sciences in East Germany as a percentage of all new entrant students in East Germany is now somewhat higher (35 percent in 1995) than it is in West Germany.

Between the 1970's and the 1990's, four major changes could be observed in West Germany as regards the transition from upper secondary to higher education.

The percentage of qualified school leavers ultimately enrolling at higher education institutions decreased from 89 percent in 1976 (94 percent men and 82 percent women), to 80 percent in 1995 (89 percent men and 71 percent women).

The average time span between completion of upper secondary education and eventual enrollment in higher education increased as did also the average age of new entering students, from 20.8 years in 1975 to 22.1 years in 1995, whereby the average age of entering students in the East German states - it was 20.4 years in 1992 - is clearly lower than that of entrant students in the West German states.
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Owing to improved transfer possibilities among the various types of upper secondary schools, the school type determined to a lesser extent the likelihood of transfer to higher education. Meanwhile, more than half the students enrolled at universities of applied sciences are qualified to enroll in universities.

The proportion of women with university entrance qualifications increased from 45.4 percent in 1975 to 47.5 percent in 1980, to 49.5 percent in 1990, and to 52 percent in 1996. In East Germany, it was around 52 percent in 1989 and around 58 percent in 1998.

It is difficult to measure the drop-out rate in Germany because a substantial proportion of students change their fields of study, the type of higher education institution, or the individual university (between 10 and 20 percent each), and no flow statistics are collected. According to estimates published recently (Wissenschaftsrat, 1996), about 25 to 30 percent of university students, i.e., around 60,000 annually, and almost 20 percent of students at universities of applied sciences in West Germany do not complete their studies. Comparable estimates for East Germany do not yet exist.

According to the Framework Act for Higher Education, universities and universities of applied sciences both have to qualify students academically and professionally. The educational programmes offered by a university of applied sciences are generally expected to be more strongly oriented toward practical experience (including integrated work placements) and applied research than those offered by a university.

Three types of first degrees are awarded at universities, all of which are regarded as approximately equivalent:

- a Diplom, being a somewhat professional-oriented title which dominates in natural sciences, engineering, and in social sciences;
- a Magister, being an academic title which is awarded predominantly in the humanities and the liberal arts;
- a (first) Staatsexamen (state examination), taken as a rule by prospective civil servants, i.e., teachers, lawyers, and medical doctors. These state examinations are administered jointly by academic staff and government representatives. They are not considered to be a final degree, even though they signify successful completion of a study programme. After a period of practical professional training, candidates must pass a second state examination in order to become active in the respective professional field and to acquire civil servant status.

Fewer than 1 percent of university graduates take the doctoral degree as their first degree (see also 7.2). Students graduating from universities of applied
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sciences are awarded a Diplom comprising the letters "FH" (for Fachhochschule) in brackets in order to distinguish it from a university Diplom. Graduates of academies of higher vocational training are also awarded a Diplom, but with the addition of "Berufsakademie" in order to distinguish it from an FH Diplom.

In the public sector, university degrees qualify one for higher level careers, and degrees from universities of applied sciences for advanced or upper level careers. The life-time incomes of graduates of the latter are about 20 percent lower than the incomes of graduates of the former. In the private sector, the career opportunities of graduates of universities of applied sciences overlap with those of university graduates, and average income is only about 10 percent lower.

Table 6 provides an overview of the numbers of graduates of higher education. The expansion of higher education in West Germany has led to high numbers of graduates. It is estimated that the percentage of graduates among the new labour force increased from about 5 percent in the 1950's to about 13 percent in the 1970's. The percentage of persons with higher education qualifications in the total labour force increased from about 4 percent in 1960 to about 10 percent in the early 1990's.


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<tr>
<td>Of universities(^{d})</td>
<td>27.9</td>
<td>40.5</td>
<td>47.3</td>
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<td>70.9</td>
<td>78.3</td>
<td>86.7</td>
<td>91.7</td>
<td>139.1</td>
</tr>
<tr>
<td>Of Fachhochschulen(^{d})</td>
<td>11.3</td>
<td>15.3</td>
<td>22.0</td>
<td>30.6</td>
<td>33.3</td>
<td>46.2</td>
<td>53.6</td>
<td>57.5</td>
<td>75.3</td>
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<td>55.8</td>
<td>69.3</td>
<td>101.3</td>
<td>104.2</td>
<td>124.5</td>
<td>140.3</td>
<td>149.2</td>
<td>214.4</td>
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<tr>
<td>Graduates in percentages of the corresponding age group (^{e})</td>
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<tr>
<td>Of universities</td>
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<td>4.3</td>
<td>7.2</td>
<td>9.6</td>
<td>8.9</td>
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<td>7.6</td>
<td>8.0(^{b})</td>
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<tr>
<td>Of Fachhochschulen</td>
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<td>1.6</td>
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<td>4.2</td>
<td>4.6</td>
<td>4.7</td>
<td>5.0(^{b})</td>
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<tr>
<td>Total</td>
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<td>5.9</td>
<td>10.5</td>
<td>13.7</td>
<td>13.1</td>
<td>12.4</td>
<td>12.3</td>
<td>13.0(^{b})</td>
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</tr>
</tbody>
</table>

\(^{a}\) Figures for 1993: West Germany only.
\(^{b}\) Figures for 1996: East and West Germany.
\(^{c}\) Total number of examinations, excluding doctoral examinations preceded by previous examinations.
\(^{d}\) Universities, comprehensive universities, art academies, etc.
\(^{e}\) 23-27 year-olds.
\(^{f}\) No statistics available yet.
Among the topics of debate in regard to the reform of West German higher education is that of the long duration of studies. Many school leavers decide to work for a period or to undertake professional training before enrolling in higher education. Others take a break, and many young men are drafted into the army or, instead, opt for the civil service, thus lengthening the period of their higher education even more. In 1995, beginning students at German universities were, on average, 21.4 years old. At universities of applied sciences, they were, on average, 23.5 years old. The average age of beginning students at East German higher education institutions is somewhat lower than at West German institutions, owing partly to the fact that some of the new Länder require only twelve years of upper secondary schooling to gain a university entrance qualification, but also partly owing to a higher proportion of young people who make a direct transition from school to higher education.

The average duration of studies in West Germany is about six years at universities and about 4.5 years at universities of applied sciences. As some students change their fields of study or interrupt their study activities, the average age of those successfully completing a university study programme was 28.3 years in 1996, and of those completing a programme at a university of applied sciences, 27.4 years. Again, duration of studies and average age at completion is lower in East Germany. Among the multitude of reasons explaining the long duration of studies and the relatively high age of graduates in Germany, two should be pointed out here. First, the decline in payments of student grants or loans has led to an increase in the number of students who are gainfully employed during study periods (cf. 6.3). Secondly, as there is no official status of part-time student in Germany, those students actually studying only part-time are counted statistically as full-time students (cf. 6.7).

Among the actions taken to reduce duration of studies, the most interesting one is probably the granting of permission to repeat examinations more frequently if an early first attempt has led to failure. This procedure has been introduced into some of the German states for law students who may make an attempt to pass their examinations before the end of the regular duration of their study programmes. If they pass, they are given special privileged conditions with regard to the repayment of their state loans for financial student assistance, and if they fail, this first attempt does not count. This procedure is quite strongly favoured by many political actors in higher education. They are calling for its more widespread introduction.

Another issue that is currently much in the foreground of German reform debates is the incompatibility of the traditional German structure of degrees in international contexts, especially when compared to the Anglo-American differentiation of Bachelor's and Master's Degrees. This issue has led to
considerable concern among political actors and institutions themselves. For example, while internationally a "diploma" may include all kinds of professional and vocational training below tertiary level, the German Diplom awarded by universities of applied sciences as well as by universities has always been considered to be above Bachelor's Degree level because it typically requires four years of study; nevertheless, a German Magister is a first academic degree, not a postgraduate degree. Owing to international preferences for the Anglo-American degree structure, German degrees have recently come under scrutiny as not being sufficiently attractive for foreign students. Within the Bachelor/Master Programme of the German Academic Exchange Service, a number of pilot projects are currently underway at a number of higher education institutions to award Bachelor's and Master's Degrees, while at the same time, attempts are being made to make the respective study programmes more attractive to foreign students (cf. 3.7). Within these pilot projects, qualified foreign students with a Bachelor's Degree are offered the opportunity to acquire a German Diplom or a Magister degree or even to earn a doctoral degree within a shorter period of time than usual. These projects are linked to a number of complementary measures, like developments towards modularization and a credit point system, courses conducted in English, new forms of certification, as well as more structured course programmes. With these pilot projects, a first attempt has been made in Germany to combine the rather horizontal structure of degrees with a more vertical stage structure as existing in international contexts. Interestingly, a vertical differentiation of degrees was originally inherent - at least to some extent - in the reform model of comprehensive universities which was more-or-less given up in the course of the 1980's. The fact that universities of applied sciences are currently attempting to get their Diplom recognized as comparable to a Master's Degree and are also involved in the new pilot projects to award the latter is an indication of a certain amount of academic drift.

3.4. Continuing Education

According to the Framework Act for Higher Education, one of the tasks of German higher education institutions is to provide for academic continuing education. Although many institutions have a central unit for continuing education and offer some courses, the practice has not become an established and widely accepted part of the general provision of higher education. The tradition of continuing education was much more firmly established and highly developed in the higher education system of the German Democratic Republic. In particular, there used to be a well established system of distance and evening studies that in 1970 offered 130 different course programmes for more than 10,000 participants. Over the 1970's, distance and evening studies in the German Democratic Republic were cut back; however, there were still 107 study programmes available towards the
end of the 1980's in which around 3,000 participants enrolled annually (cf. Adler and Lischka, in, G. Buck-Bechler et al., 1997).

The relatively high number of students in distance and evening studies in the German Democratic Republic was based on the principle of delegation through employers. Participation in continuing education was determined according to centrally fixed quotas rather than by social demand. It is, nevertheless, an undisputed fact that facilities and infrastructures for continuing education at higher education institutions in the German Democratic Republic were well developed and that its provision was an established part of the tasks of higher education institutions.

In contrast to the status of continuing education in the German Democratic Republic, the continuing education provision of higher education institutions in the Federal Republic of Germany was based on the principle of social demand. Although the number of provisions and of participants in academic continuing education was and still is higher in West Germany than in East Germany, the quality of provisions and their status at higher education institutions leave room for doubt. Still, the issue of academic continuing education provided by higher education institutions has been on the political agenda since the mid-1960's and has became one of the officially defined tasks of higher education institutions according to the first Framework Act for Higher Education in 1976. But provisions for regular students were always given primacy and institutions had difficulties in generating fees from continuing education provisions which they could re-invest or use for proper remuneration of the academic staff involved in teaching the courses in question.

With the transformation of the East German higher education system after 1989, the whole field of continuing education declined in importance and was cut back considerably in terms of regard to staff and material resources. Accordingly, not only its status was lost but also many interesting and innovative approaches that could have provided models to upgrade continuing higher education in West Germany in which prevailing conditions are not favourable for continuing education, and its prestige within institutions has never been very high.

It must be pointed out that the state of continuing education, that is, the provisions for lifelong learning in Germany are generally rather unstructured. There is a large and even confusing market composed of private and non-profit providers (Faulstich et al., 1991). Apart from the fact that lifelong learning is rather high on the political agenda nationally as well as on a European scale, German higher education institutions seem to be reluctant to become more active in the field. West German institutions, in particular, have often argued that without additional funds and in the face of continuously increasing student numbers they cannot commit themselves to additional tasks.
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There are three tasks of higher education institutions in continuing education, as defined by the Framework Act for Higher Education: (i) to provide for further educational studies; (ii) to participate in other forms of continuing education; and (iii) to promote the continuing education of their own staff, i.e., to provide for staff development (cf. B. Berendt, 1994). Further education studies can be structured study programmes of a certain duration, while other forms serve specific needs of participants and are often shorter workshop or course-type forms of provision. Both functions are primarily related to the professional or work requirements of the participants or to an updating or upgrading of qualifications.

As there is a broad market for private as well as for non-profit providers in Germany that also offers possibilities in academic continuing education, academic staff members often prefer to become active in teaching for such providers rather than in the framework of provisions at their own institutions because they will be remunerated much more generously by the former. As public higher education institutions are not permitted to pay market-level honoraria to their academic staff members who are involved in continuing education provisions at their institutions, some of the German Länder have provided opportunities for higher education institutions to form private limited companies in the framework of which continuing education is offered for market-level fees by staff members who are adequately remunerated.

The majority of continuing education possibilities offered by higher education institutions in Germany require payment of a small fee. In contrast, private providers charge relatively high fees. As public institutions, higher education institutions are neither structured organizationally and administratively in such a way that their provisions include a coverage of full costs, nor is there a homogeneous definition of the applicability of laws regulating competitive offers. In some Länder, the government might even require repayment to the state budget of the extra income generated by continuing education provisions. However, the problem of fees is not yet in the foreground of discussions because the share of higher education institutions on the market for academic continuing education was estimated in the early 1990's to be only between 5 and 10 percent (cf. S. Lullies, 1991).

A further aspect to be taken into consideration is that teaching in the field of continuing education does not serve to increase one's status or prestige within higher education institutions. Rather, it is regarded as a somewhat second rate activity compared to research and the teaching of regular students.

The status of students in continuing education varies among the German Länder. They might have a status as guest students, as special students in continuing education, or as regular full-time students. Certification is heterogeneous as well. Participants in a full-study programme will usually receive a certificate of participation or of achievement. Participants in individual
workshops, seminars, or courses will receive a certificate of participation. So far, however, employers have prevented the enactment of any official regulation to the effect that participants in continuing education will be entitled to an upgrading of their positions or to higher salaries.

Before 1989, East German higher education institutions had a well-established structure of provision in continuing education through direct as well as distance studies. These were either offered in the form of full course programmes or as shorter courses. The reduction of higher education staff and central units at East German institutions after 1989, however, led to considerable cut-backs in the capacities for continuing education. Nevertheless, participation was still sought to a considerably greater extent than in West Germany, partly owing both to the fact that a private market of providers did not yet exist to such an extent as in West Germany and to the fact that the social and economic transformation of East Germany required upgrading and updating of qualifications for large parts of the work force. In 1994, more than 19,000 participants were enrolled in various forms of continuing education offered by universities and universities of applied sciences in the new East German Länder (cf. Lischka, in, G. Buck-Bechler et al., 1997).

A survey carried out in 1994 among higher education institutions in East and West Germany regarding their provisions and their involvement in continuing education (cf. G. Graessner, and I. Lischka, 1996) led to the following conclusions:

- About two-thirds of the German universities and half of the universities of applied sciences are involved in continuing education in one way or another. In East Germany, such involvement is characteristic of practically all institutions of higher education.

- Contact persons for continuing education are located mostly in departments, but there are also central units responsible for continuing education at 58 percent of the universities.

- Some 57.6 percent of the West German higher education institutions and 41.7 percent of the East German higher education institutions included in the survey stated that staff capacities for continuing education were insufficient.

- Two general requirements are deemed necessary to improve the situation of continuing education at German higher education institutions: an improvement in the administrative framework and an intensification of institutional commitment. Further demands address the necessity to organize continuing education at higher education institutions within a central unit rather than in decentralized forms and a reduction of the regular teaching load for those academic staff members who become involved in teaching continuing education courses.
Overall, the provision of continuing education and of lifelong learning at German higher education institutions lags behind the possibilities available in many other industrialized countries. This situation is partly the result of the presence in the market of other providers and partly to the lack of prestige accorded to activities in continuing education at higher education institutions in Germany. According to Lullies (1991), the most important barriers preventing an improvement of this situation are: (i) the strong orientation of higher education institutions toward regular undergraduate and postgraduate studies; (ii) unsolved problems regarding issues of funding and fees; (iii) difficulties with respect to teaching and to motivation among higher education staff. These issues are recognized and acknowledged, and there is a general consensus among the actors involved in the field that the situation of academic continuing education at higher education institutions must be improved.

3.5. Co-operation with Industry

The co-operation of higher education institutions with enterprises and industry typically consists of three fields of activity: (i) practical placements for students; (ii) collaborative research and development projects or contract research commissioned by the private sector; (iii) transfers of know-how and technology. The temporary transfer of personnel occurs only rarely in Germany. Most German universities have established a central unit for technology transfer or a technology center. Often research institutes associated with a university (so-called "at-institutes" in contrast to institutes within) act as effective transfer channels. Although German higher education institutions have considerably increased their efforts in the domain of technology transfer over the last fifteen years, most transfer activities take place through extra-university research institutions, like the Fraunhofer Society, that works specifically in the field of applied research and technological development. But universities of applied sciences have also been very active in the field of technology and knowledge transfer owing to their usually well established co-operation with industry and business and their practical orientation.

There is, nevertheless, a long history of co-operation between German universities and industry, in particular with the aim of technology transfer, that began as early as the second half of the Nineteenth Century. In the 1870's, polytechnic schools were upgraded to technical higher education institutions, eventually becoming technical universities, owing to an increasing demand for skilled engineers. Toward the end of the Nineteenth Century, German university research in medicine, chemistry, and physics had achieved a level of world leadership, and many universities created separate departments and institutes with laboratories in these fields (H. N. Abramson et al., 1997). At the same time
also, technical universities started to establish laboratories, and professors began to act as consultants for enterprises.

At the beginning of the Twentieth Century, external research institutes were created by the state. These eventually became major actors in the field of technology transfer and applied research. During the two World Wars, university-industry co-operation was more-or-less halted owing to economic problems. It was taken up again with increased vigour in West Germany in the 1970's, motivated by a perception that West Germany was lagging technologically behind the United States (cf. H. N. Abramson et al., 1997). Increased public investment in R&D as well as industry support of universities (up by 25 percent, between 1970 and 1980, and by a further 44 percent, between 1980 and 1990) led to the establishment of an appropriate infrastructure for technology transfer in higher education institutions.

Co-operation between higher education and industry, specifically the transfer of research results, was high on the agenda of higher education policy in the German Democratic Republic from early on. As of the 1950's, research planning was oriented to the needs of the economy. In the course of the 1980's, East German higher education institutions developed a special infrastructure for co-operation with industry, which also served the purposes of transfers and the development of applied research. This infrastructure consisted of special agreements regarding the transfer of results and services, certain forms of institutionalization, i.e., joint research groups or departments, exchanges of staff members, application centres, etc., and finally, certain forms of temporary co-operation for specific purposes. In addition, contract research commissioned by industry was given special attention and promotion.

Toward the end of the 1980's, slightly less than half the research potential of the German Democratic Republic was located in micro-electronics, computers, and information technology, in bio-technology, in CAD/CAM, and in new materials sciences. Contract research, carried out mainly in the framework of co-operation and service agreements, existed to a large degree in the fields of electrical engineering and electronics, chemistry, and mechanical engineering. In 1987, about 1,300 such agreements existed in these fields (cf. Last and Schaefer, in, G. Buck-Bechler et al., 1997).

Between 1980 and 1990, the overall research budget of West German universities increased nominally by 59 percent, of which about half was related, in 1990, to natural sciences and engineering. In real terms, the institutional research budget of universities increased by 15 percent, and external funds, by 42 percent between 1980 and 1990. Thus, the share of external funds as a proportion of the overall research budget of universities became of increasing importance. According to data of the German Science Council, industry
contributed 15 percent of all external R&D funds in 1990, an increase of 80 percent from 1980. However, compared with the total research budget of universities, industry support, in 1990, represented a mere 7.7 percent share (H. N. Abramson et al., 1997). In 1995, the figure increased to 8.7 percent.

The Framework Programmes for Research and Technological Development of the European Union are less noteworthy for the amount of funding they provide for university-industry co-operation in research and technological development than they are for establishing emphases in certain fields. European Union funding amounted to about 130 million DM in 1995 or 2.7 percent of all external university funds. It must be pointed out that budgetary statistics can lead to an underestimation of the research activities supported by external funds. In the German system, external providers of funds typically pay direct staff costs and, to a limited extent, costs for facilities. Owing to the status of universities as public institutions, university budgeting does not, as a rule, facilitate the acquisition of funds for overheads or even the making of profits. Therefore, university research - commissioned or in collaborative form - is mostly co-financed (H. N. Abramson et al., 1997).

According to the available statistics and surveys, the highest increase in external funding has gone to computer science. The latter is followed by electrical engineering. The major channels of technology transfer are collaborative research with industrial partners funded through projects sponsored by the Ministry of Education, Science, Research, and Technology and contract research for industrial clients, the latter having the advantage of a more flexible use of funds.

But there are also advantages for industrial clients. Universities are not obliged to make their calculations on the basis of total costs (i.e., including overhead) and can thus offer their services at relatively low cost. However, collaborative and contract research are only part of a broad range of technology transfer mechanisms which include, for example, the presentation of research results at fairs, conferences, and in the framework of articles in scientific journals. In addition, the importance of personal networks should be pointed out here. Informal consultancy and practical placements of graduates are a frequent type of university-industry co-operation but also of co-operation between universities of applied sciences and industry.

Finally, technology transfer units established at most universities often serve as a catalyst to bring industrial clients and researchers into contact with each other. Other functions of these units include the systematic monitoring of industrial needs, the negotiation of contracts, and the provision of consultancy services. They often play a decisive role in establishing contacts with small- and
medium-sized enterprises (H. N. Abramson et al., 1997; see also Krull and Meyer-Krahmer, 1996; Röbbecke, 1997; Bundesbericht Forschung, 1966).

3.6. Multi-Media and the Challenges of the New Information and Communication Technologies

Although the application of multi-media technologies in higher education and the development of virtual university projects in the Federal Republic of Germany are lagging behind existing applications and developments in some other industrialized countries, a vast number of pilot projects and plans in this field can be identified. In one way or another, almost all the German Länder have established projects or programmes to support and to fund respective developments, and almost all higher education institutions, i.e., both universities and universities of applied sciences, are carrying out multi-media or virtual university projects or are involved in planning such programmes. For example, the state of Baden-Württemberg has established a programme providing more than 45 million DM for the support of virtual university projects in 1998 and an additional 40 million DM to introduce the respective new technologies into the libraries of higher education institutions. The distance university in Hagen is developing virtual course programmes and the University of Applied Sciences in Furtwangen offers a complete distance study programme via the Internet.

Apart from support programmes and pilot projects for the development of virtual study programmes established by the Länder and the Federal Government (cf. H. R. Friedrich, 1998), further funding is provided by various programmes of the European Union and of German enterprises and industry (e.g., German Telekom). These developments are being strongly promoted at national level as well, but as it is typical of German federalism, overall national policy or guidelines are only beginning to be developed, and activities are rather diverse and fragmented. Existing offers of virtual studies might be regular course programmes or course programmes in the field of continuing education. For some programmes, tuition fees have been introduced; others can be taken without paying such fees. Another interesting effect of these new developments is the creation of new course programmes that were previously not offered in Germany, such as multi-media design or media informatics.

A recent survey of the state of the art of multi-media applications at German higher education institutions drew the conclusion that there are about 1,000 multi-media projects being carried out at German higher education institutions involving about 89 universities and 103 universities of applied sciences (K. Lewin et al., 1996). But the survey showed as well that beyond the decentralized and fragmented organization of the field there are also qualitative differences in the study or course programmes being offered because there are no general
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norms, standards, or patterns (cf. K. Lewin et al., 1996; T. Sand, 1997; Hochschulrektorenkonferenz, 1997). Typically, multi-media or virtual university projects are initiated by the staff of computer centres at higher education institutions or by the staff of study programmes in informatics. However, in order to secure an appropriate quality for the respective programmes, it is necessary and at the same time difficult to combine competencies in all three areas involved: disciplinary or subject-related competencies, pedagogical competencies, and multi-media or technical and IT-related competencies.

In the spring of 1997, the joint Federal Government and States Commission for Educational Planning and Research Promotion developed conceptual perspectives and recommendations for studies in the information society and necessary further developments of distance studies (cf. Bund-Länder Kommission, 1997). These are aimed at focusing the activities for the promotion and the modernization of distance studies that have been supported in the framework of a special programme jointly financed by the Federal Government and the states. It has received ten million DM annually since 1993. An important aspect of the recommendations is that the emerging innovative potential of information and communication technologies be utilized for higher education in a more targeted way for further developments in the following areas:

- the planning and development of new offers for distance studies;
- the utilization of distance studies modules at regular higher education institutions;
- an improvement of the quality of teaching and learning through a more efficient use of computer centres and multi-media;
- the further development and more efficient use of existing infrastructures;
- the improvement of the legal framework;
- the increased participation of German higher education institutions in the development of distance studies at European level.

As a consequence of these recommendations, the Federal Government has established a programme to support new projects aimed at developing concepts for "virtual universities" and ideas for a better utilization of knowledge for education, further education, and the processes of innovation. It is hoped that these projects will eventually lead to a better linkage of distance and on-site modes in higher education teaching and learning, that is, the elaboration of so-called "dual mode higher education institutions", in order to ease the burden of teaching under conditions of mass higher education and an overload of students and to adapt study provisions flexibly to the individual study requirements of students.
3.7. International Relations

In Germany, as elsewhere, universities have always taken pride in the fact that science and scholarship are international and that international co-operation among institutions as well as among individuals are normal activities in academe. In Germany, four historical phases can be distinguished in the general development of the internationalization of higher education after the Second World War (cf. B. Baron, 1993 and 1996):

i) Between 1950 and 1975, mobility was predominantly regarded as being a part of foreign relations that contributed to the attempt to re-establish the international standing of Germany after the Second World War. The mobility of German students was mostly restricted to a small number of highly developed host countries, while there was a policy of "open doors" regarding students from abroad.

ii) In a second phase, between 1975 and 1987, a more regulated and differentiated approach was adopted in which the studying abroad of German students became of increasing importance and attempts were made to reduce barriers to mobility. In addition, the so-called "free mover mobility" was reduced in favour of integrated study abroad and promotion of study abroad in the framework of official exchange programmes. Study abroad was considered to be an important educational experience.

iii) The third phase, between 1982 and 1992, was characterized by the growing importance of European Union mobility and exchange programmes in higher education. The ERASMUS Programme became the most successful mobility, co-operation, and exchange programme among the European Union programmes. During this period, the mobility of staff and students began to concentrate on European countries, and Germany soon became a member of the "golden triangle" of European member states (including France and the United Kingdom) among which the highest number of students was exchanged. Nevertheless, Austria, Switzerland, the United States, and Canada remained popular as host countries for German students studying abroad for a limited period.

iv) After 1992, with the Maastricht Treaty and the Memorandum on Higher Education of the European Union, a fourth phase began which is characterized by a growing professionalization in the organization of student and staff exchanges and international co-operation. In the framework of special programmes for the support of the internationalization of higher education, the Federal Government has undertaken the following: It has provided funds to improve the institutional
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infrastructure for international co-operation at higher education institutions. It has established international offices at universities of applied sciences and has taken other measures to this effect. In addition, attempts were made - mostly through the creation of special programmes channeled via the German Academic Exchange Service - to promote co-operation and exchanges with countries other than European Union member states and the United States, e.g., Latin America, Asia, and the Pacific Rim countries, in order to counterbalance the trend in favour of a concentration of mobility and exchanges on a limited number of countries.

In 1960, the proportion of foreign students in higher education institutions in West Germany was 7.5 percent (22,000). It dropped to 5.5 percent in 1970 (28,000), after which it remained more-or-less constant for some period, and eventually increased to 7.0 percent, in 1992 (125,000, including those in the new East German Länder). In 1996, foreign students represented 8.2 percent of the total enrollment in the Federal Republic of Germany (about 150,000 students). Of the 150,000 foreign students studying in Germany in 1995, 81.6 percent were enrolled at universities and art colleges, and 18.4 percent, at universities of applied sciences.

At first sight, the figures indicating the proportion of foreign students are comparable to those of many other OECD and other industrialized countries. However, among the foreign students enrolled at German higher education institutions, about one-third were either born in Germany or had received their schooling in Germany. In other words, they are children of migrant workers living in Germany, many of whom are from Turkey, but also from Italy and Spain. If such students are not counted, the proportion of foreign students in Germany, 5.5 percent, has remained almost unchanged for the last twenty years. About half of the foreign students studying at German higher education institutions come from other industrial countries. Currently, there is considerable political concern that studying in Germany has become less attractive to foreign students, and attempts are being made to ease regulations and to improve the offers of study programmes and of certification.

One is probably justified in saying that around the beginning of 1997 a fifth phase began. It has been characterized by growing political concern about a perceived decline in the attractiveness of the German higher education system for foreign students. Criticism has been voiced that study programmes are overly long and not sufficiently transparent, that German degrees are not internationally compatible, and that the infrastructures for the guidance and the orientation of foreign students are underdeveloped. In addition, the figures indicate that the numbers of foreign students from countries other than the member states of the European Union wanting to study in Germany are declining or stagnating, at
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least with regard to students from those countries that are expected to become increasingly relevant by such means as student exchanges, for German investors and future economic co-operation and are also target countries of German cultural policy abroad. It is currently feared that Germany might lose its international competitiveness in globalizing markets if it cannot attract more students from countries other than the European Union member states. Therefore, two pilot programmes and a number of supporting measures have been introduced to redress the situation.

One pilot programme which began in the winter term of the 1997-1998 academic year is called "Study Programmes Oriented to Foreign Students". It provides funds for the development of new study programmes in economics, engineering, and natural sciences and is intended to:

- contribute to reforms in the structure of studies by organizing conditions and possibilities for successful completion of a degree course within the standard period of study;
- increase and demonstrate the attractiveness to highly qualified foreign students of studying at German higher education institutions;
- combine professional education and training with multilingualism and international co-operation.

Twelve proposals were selected for funding and began to function in October 1997. A further eight were planned to begin to function a year later, i.e., in October 1998. In each of the new study programmes, about half the students will be from abroad and the other half from Germany.

As a rule, three indicators serve as a yardstick to measure the degree of internationalization of an institution or of a system as a whole: (i) the mobility of staff and students; (ii) the number of foreign students; and (iii) the number of institutional co-operation agreements.

In the framework of the second pilot programme called "Bachelor-Master-Programme", eight study programmes have been selected to provide highly qualified foreign students holding the Bachelor's Degree with the opportunity to study for a German Diplom or an international Master's Degree or even to take up doctoral studies and to complete the programme within a relatively short period of time (two to three years).

In addition, a variety of measures have been currently introduced to make studying in Germany more attractive to foreign students. These are the following:

- improvement of conditions for the access of foreign students to German higher education institutions;
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- improvement of possibilities for the study of foreign languages and of German as a foreign language;
- improvement of information about study opportunities in Germany in order to increase transparency;
- introduction of a credit point system to ease recognition and the transfer of study achievements;
- the offer of a larger proportion of courses in English and the opportunity to submit course work and written examination papers in English;
- wider introduction of Bachelor's and Master's Degrees;
- improvement of certification, including an option to receive an English translation of the certification;
- improvement of academic guidance and counseling for foreign students.

The higher education institutions of the German Democratic Republic had most of their co-operation agreements with institutions in other central and eastern European countries, in the Soviet Union, and in certain developing countries with leftist and communist regimes (e.g., African and Asian countries). Fortunately, the co-operation with central and eastern Europe could be kept going, to a considerable extent, after 1989, so that many East German higher education institutions today perform a bridging function to other eastern European countries. Overall, the proportion of co-operation agreements with higher education institutions in Europe, including central and eastern Europe, has clearly increased over the years to the disadvantage of such arrangements with all other regions of the world (B. M. Kehm and B. Last, 1997).

Table 7 portrays the co-operation agreements of West German higher education institutions according to region in 1987 and of all German institutions (East and West) in 1993. The Table indicates the growing importance of German co-operation with central and eastern Europe and with the member states of the European Union, a co-operation that has clearly displaced the United States from its formerly dominant position. The almost fivefold increase in the number of co-operation agreements with partner institutions abroad in only six years can be explained by the following factors:

- an increase in the number of German higher education institutions after unification in the course of which the East German institutions not only continued their existing co-operation agreements, but also tried to establish agreements with western institutions;
- the opening up of the central and eastern European countries and their orientation to Western Europe and to other industrialized countries;
- the policy of the European Union to foster and to promote co-operation among higher education institutions in the respective member states;
- a generally increased importance given to international co-operation and the internationalization of higher education at the national level.

Table 7. Co-operation Agreements of German Higher Education Institutions by Region

<table>
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<th>Year</th>
<th>Western Europe</th>
<th>Central &amp; Eastern Europe</th>
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<th>North America</th>
<th>Latin America</th>
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<td>1993</td>
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a) West Germany only.
b) West and East Germany.
c) In a different publication, the German Rectors’ Conference notes a lower number of agreements (minus 20) pertaining mainly to Poland and Hungary (cf., Hochschulrektorenkonferenz, ed., Hochschulen auf gemeinsamem Weg (Cologne, 1993), pp. 13).

Sources: Westdeutsche Rektorenkonferenz, ed., Kooperationsvereinbarungen zwischen deutschen und ausländischen Hochschulen (Cologne, 1987), and Hochschulrektorenkonferenz, ed., Kooperationsvereinbarungen zwischen deutschen und ausländischen Hochschulen (Bonn, 1993).

The picture is somewhat different if one looks at the most frequent host countries that German students choose for studying abroad, as portrayed in Table 8. Here the proportion of students opting to study abroad in the United States increased only slightly but retained its first rank between 1985 and 1995, while the proportion of German students going to the United Kingdom and to Northern Ireland more than quadrupled. This trend is certainly the result of the European exchange and mobility programme, ERASMUS.

Although the number of German students studying abroad almost quadrupled between 1975 and 1995 (from 10,700 to almost 42,000), the proportion as a percentage of all German students is rather low, namely 2.5 percent. Therefore, in addition to increasing the attractiveness of studying in Germany for foreign students, it is German policy to encourage German students to study abroad in a variety of ways.

Foreign students in German higher education institutions (cf. Table 9) come mainly from European countries (about 55 percent in 1992). These include a considerable number of students from countries that are not European Union member states, e.g., Turkish students having been born or having received their schooling in Germany and also students from central and eastern Europe. Asia
is the second largest region of origin of foreign students in Germany (28 percent); however, most of the students from this region come from only a few countries. In 1985, these countries were Iran, Korea, and Indonesia. Since then, the number of students from Indonesia has more or less stagnated, while the number of students from China has increased almost fivefold.

Table 8. The Eight Most Frequentiated Countries that German Students Choose for Studying Abroad

<table>
<thead>
<tr>
<th>Host country</th>
<th>Students Numbers</th>
<th>Percent</th>
<th>Host country</th>
<th>Students Numbers</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>4,730</td>
<td>(19.0)</td>
<td>USA</td>
<td>9,017</td>
<td>(21.6)</td>
</tr>
<tr>
<td>Austria</td>
<td>4,636</td>
<td>(18.6)</td>
<td>U.K.</td>
<td>8,233</td>
<td>(19.7)</td>
</tr>
<tr>
<td>France</td>
<td>3,776</td>
<td>(15.2)</td>
<td>Austria</td>
<td>5,955</td>
<td>(14.2)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2,978</td>
<td>(11.9)</td>
<td>Switzerland</td>
<td>5,350</td>
<td>(12.8)</td>
</tr>
<tr>
<td>Italy</td>
<td>1,902</td>
<td>(7.6)</td>
<td>Italy</td>
<td>4,560</td>
<td>(10.9)</td>
</tr>
<tr>
<td>U.K.</td>
<td>1,874</td>
<td>(7.5)</td>
<td>Canada</td>
<td>1,350</td>
<td>(3.2)</td>
</tr>
<tr>
<td>Canada</td>
<td>1,102</td>
<td>(4.4)</td>
<td>Spain</td>
<td>1,250</td>
<td>(3.2)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>776</td>
<td>(3.1)</td>
<td>Other</td>
<td>6,303</td>
<td>(15.1)</td>
</tr>
<tr>
<td>Other</td>
<td>3,126</td>
<td>(12.6)</td>
<td>Other</td>
<td>1,060</td>
<td>(3.0)</td>
</tr>
<tr>
<td>Total</td>
<td>24,900</td>
<td>(100)</td>
<td>Total</td>
<td>41,828</td>
<td>(100)</td>
</tr>
</tbody>
</table>

a) Figures for West Germany only.

b) Including Northern Ireland.

c) Estimate.


For purposes of education and training, students from the Asian-Pacific growth regions prefer to go to the United States, recently also to Australia and Japan (Hochschulrektorenkonferenz, 1996a). In the context of a new emphasis on the Asian-Pacific region and - to a lesser extent - Latin America, the German government is especially interested in recruiting students from these regions and in reducing the focus on only a few countries of origin (B. M. Kehm and B. Last, 1997). Although the proportion of students from African countries has increased since 1985, this region still remains under-represented in the total of foreign students in Germany (about 8 percent).

The changes in the proportions of countries of origin are also reflected in the support offered to research fellows by means of scholarships granted by the
Alexander von Humboldt Foundation. In 1995, the Foundation awarded a total of 1,349 research scholarships to scholars and scientists from eighty-nine different countries. Among these countries, almost half (49 percent) were western European and almost one-third (32 percent) were central and eastern European. Fellows from the Commonwealth of Independent States (CIS) were most strongly represented (159), followed by research fellows from the United States (149), China (133), India (91), and Japan (87). A large majority of German fellows supported by the Foundation went to the United States (272), followed by Japan (51), France (18), the United Kingdom and Canada (11 each), and Australia (10). The remaining 10 percent of German Humboldt fellows went to a further twenty-five countries (Alexander von Humboldt Foundation, 1996).

Table 9. Regions of Origin of Foreign Students in German Higher Education Institutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of foreign students</th>
<th>EU (in absolute numbers and in percentages)</th>
<th>Other European countries</th>
<th>America</th>
<th>Asia</th>
<th>Africa</th>
<th>Australia/Pacific Rim</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>74,574</td>
<td>18,352</td>
<td>21,318</td>
<td>7,600</td>
<td>21,667</td>
<td>4,310</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(24.6)</td>
<td>(28.6)</td>
<td>(10.2)</td>
<td>(29.0)</td>
<td>(5.8)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>1995</td>
<td>146,471</td>
<td>87,455</td>
<td>46,059</td>
<td>9,084</td>
<td>34,051</td>
<td>13,555</td>
<td>275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(59.7)</td>
<td>(31.4)</td>
<td>(6.2)</td>
<td>(23.2)</td>
<td>(9.3)</td>
<td>(0.2)</td>
</tr>
</tbody>
</table>


A special form of international relations with developing countries has been promoted over the last 35 years by the Federal Ministry for Economic Cooperation and Development (BMZ). In view of the importance of higher education institutions within the education system as a whole and their role in economic and social problem solving, German development co-operation has supported and continues to support higher education, in addition to basic education and vocational training, as an important part of its co-operation strategy. In 1997, assistance for higher education in developing countries amounted to more than 66 million DM. The objective of such co-operation in this area is to enable higher education institutions as centres of education, cultural, academic, and scientific life to make a significant contribution to development in the respective country. The upgrading and the more efficient use of existing capacities is usually given preference over the creation of new capacities.

Technical as well as financial assistance projects are concentrated in most cases on the strengthening of higher education institutions in their teaching,
research, and consultancy functions in disciplines considered of particular relevance to the development of the country. This co-operation includes the sending abroad of long-term and short-term lecturers and other experts, the provision of equipment, scholarships for further staff development and exchange programmes, frequently as part of long-term partnership arrangements between one or more German universities and universities in the respective developing country. As part of the overall endeavour to internationalize German higher education and to make German universities more attractive to foreigners from developing countries, the Federal Ministry for Economic Co-operation and Development has recently increased its share of the funding of scholarship programmes of the German Academic Exchange Service and the Alexander von Humboldt Foundation. In addition, some practice-oriented postgraduate or post-experience programmes of German universities with well established links with universities in developing countries have also triggered institutional changes in order to achieve more flexibility and practical orientation, in particular for students from abroad.

Moreover, the Federal Ministry of Economic Co-operation and Development supports scientific research in developing countries with about 3.5 million DM annually and research co-operation between German and foreign scientists and scholars with an additional one million DM. In addition, there are programmes for guest lecturers from abroad. The Federal Government has recently started to focus existing scientific and technological co-operation with Argentina, Brazil, Chile, and Mexico as well as with a few other countries in Latin America more strongly on users of technology, in order to promote the participation of German enterprises in their technology programmes (Federal Ministry for Economic Co-operation and Development, 1998).

In addition to being the most important organization through which government as well as EU funding for international mobility and exchange in higher education is channelled, the German Academic Exchange Service (DAAD) has offices in many foreign countries and supports altogether 440 young German lecturers and 80 long-term fellowships for overseas study worldwide. The DAAD was founded as early as 1925, and after its dissolution in 1945 was re-established in 1950. It is an organization of German higher education institutions and as such is a part of the academic self-governance structure. At the end of 1997, its membership consisted of 230 higher education institutions and 129 student organizations.

The task of DAAD is to promote the relations of German higher education institutions with higher education institutions abroad through exchanges of scholars, scientists, and students. The framework of more than 100 programmes and projects encompasses the following: short-term exchanges of academic teachers and researchers as well as longer term doctoral scholarships for
graduates from developing countries; the organization of information visits for foreign higher education experts; regional programmes to improve higher education provision and facilities in developing countries; and a multitude of other projects and scholarship programmes. Exchange and co-operation is organized with all countries, in all disciplines and subject areas, and for Germans as well as for foreigners.

In short, international mobility, exchange, and co-operation, the promotion of the international relations of higher education institutions, and the internationalization of research, teaching, and studies at German higher education institutions are the main fields of activity of DAAD. In 1997, the budget of DAAD for programmes and projects was more than 330 million DM of which almost 60 percent were spent within the framework of mobility programmes; slightly less than a quarter on institutional and project related scientific co-operation abroad; almost 12 percent for the lecturer programme to promote German language and area studies abroad; and 5 percent for publication, information, counseling, consultancy, and alumni work (cf. Deutscher Akademischer Austauschdienst – DAAD, 1998).

Although it can be said that a multitude of initiatives have been started in Germany to make studying more attractive to foreign students, the Federal Government in a recent assessment of the situation of the international co-operation of higher education in Germany came to the conclusion that the advantage of no tuition fees in German higher education was counterbalanced by language problems, recognition problems, and problems with respect to the international compatibility of German degrees. Therefore, more must be done, in particular with regard to the marketing of German higher education abroad.
Chapter 4

GOVERNANCE AND ADMINISTRATION:
THE INSTITUTIONAL LEVEL

4.1. Legal Status and Functions

Apart from a few exceptions, all higher education institutions in Germany are state institutions and are defined as "corporations under public law". The classical function of the German university - still valid today - is twofold: teaching and research based on the principle of their unity. Two other functions which have been added over time, namely services and continuing education, clearly play a minor role in terms of status, prestige, and actual delivery, even though there are a number of regionally oriented higher education institutions in Germany for which services to the community are of greater importance. These, typically, are institutions that were established in the reform phase between the mid-1960's and the mid-1970's.

The Framework Act for Higher Education complements the unity of teaching and research by establishing an additional link between academic education and professional practice. It defines the functions of German higher education institutions as follows:

According to their specific functions, the institutions shall contribute to the fostering and development of the sciences and the arts through research, teaching, and studies. They shall prepare students for occupations which require the application of scientific findings and scientific methods or creative ability in the artistic fields (Framework Act, Section 2.1, quoted in H. Peisert and G. Framhein, 1994).

In addition, universities in Germany also serve to educate and to train future academic staff members and researchers for all disciplines and all areas of society. The purpose of research is defined in the Framework Act as follows:

Research at higher education institutions shall serve the purpose of gaining scientific knowledge and of laying the scientific foundations for furthering the advancement of teaching and studies. Research at institutions of higher education may, according to the function of the institution concerned, cover any scientific field as well as the practical application of scientific findings, including the impact which such application of scientific findings may have (Framework Act, Section 22, quoted in H. Peisert and G. Framhein, 1994).

Finally, the purpose of teaching and study is defined as follows:

Teaching and study are to prepare students for a profession in a certain field of activity, imparting to them the particular knowledge, skills, and methods required in a way appropriate
to each course so as to enable them to perform scientific or artistic work and to act responsibly in a free, democratic, and social state governed by the rule of law (Framework Act, Section 7, quoted in H. Peisert and G. Framhein, 1994).

West German universities tend traditionally to be depicted by the strong link between research and teaching, underscored by the fact that all professors have to undertake both teaching and research. This link was considerably less strong in East Germany. Although research was carried out at universities to some extent, higher education institutions emphasized their teaching and training function, while basic research was predominantly located in the Academies of Sciences. Qualified school-leavers in West Germany were and still are, in principle, free to choose the institutions and the fields of study that they like and can move from one institution to another (cf. 2.2). In East Germany, these possibilities were more limited before 1989 because of central guidance and of steering of school-leavers and graduates according to principles of manpower planning and demands from industry.

Officially, degree programmes at German higher education institutions require four to five years of study, but students are relatively free to set their own pace. Universities have the right to award doctoral degrees - either based on graduate education or on individual research undertaken under the supervision of a professor - and the so-called Habilitation, i.e., a formal post-doctoral degree qualifying one for the position of university professor.

Although universities of applied sciences have acquired some research functions, especially in applied fields, their task is to provide practice-oriented professional education and training. Study programmes are somewhat shorter than at universities and usually include one or two periods of practical training through work placements. These institutions do not offer the full spectrum of disciplines but are concentrated in economics, engineering, and social work. In recent years, a number of new inter-disciplinary study programmes have been developed at various universities of applied sciences combining engineering with management and technology with ecological issues.

The first Framework Law for Higher Education, originally passed in 1976 and extensively revised in 1985, established the basic guidelines for the organization and the functioning of higher education institutions in Germany. The laws of Länder on higher education must be adjusted, if necessary, to conform to the general guidelines of the Framework Act. A new Framework Act was finally adopted in August 1998. Its passage by the legislative bodies was delayed by disagreements over the question of the introduction of tuition fees and by a few other issues.

The new Framework Act for Higher Education aims at laying down directions for comprehensive higher education reform and modernization in
Germany. The new law provides higher education institutions in Germany with increased flexibility and leeway to identify and to elaborate individual solutions for their problems and reform needs and thus, possibly, to contribute to further institutional differentiation.

4.2. Institutional Representation of Interests

The institutional representation of interests in the political arena is one of the main tasks of the German Rectors' Conference (Hochschulrektorenkonferenz - HRK), that was founded in April 1949, at that time under the name of West German Rectors' Conference (WRK). In 1974, the rectors of the universities of applied sciences were admitted as members of the WRK, even though their own Rectors' Conference continued to exist within the WRK/HRK until March 1995 when it was finally dissolved.

Rectors and Presidents of German higher education institutions collaborate within the framework of the German Rectors' Conference (HRK) with the aim of improving the accomplishment of their tasks and of representing their interests to the public. The work of the HRK involves the following:

- the promotion of co-operation among higher education institutions;
- informing member institutions about developments and problems in the field of higher education policy;
- the formulation of positions and opinions on issues related to higher education and science policy;
- the representation of the interests of member institutions to the public and in the political sphere;
- the fostering of international relations.

Among the 240 member institutions of the Hochschulrektorenkonferenz there are 82 universities, 107 universities of applied science, six teacher training colleges, 35 colleges of art and music, 9 theological colleges, and 1 other higher education institution. The membership meets once a year in an annual forum. In between, there are meetings of the plenary group, the Senate, and various working groups and standing committees, e.g., for planning and organization, teaching and studies, research, student affairs, international relations, etc. The Executive Board consists of a President and five Vice-Presidents. Day-to-day business is conducted by a Secretariat which is headed by a Secretary-General (cf. Bode, 1996).

Apart from the Hochschulrektorenkonferenz which is the most important and influential body in the field, there are also a number of smaller and specialized
rectors' conferences dealing with issues and problems pertaining to the interests of specialized higher education institutions. These institutions include university level colleges for public administration, colleges of art and music, and theological colleges.

4.3. Models of Governance and Patterns of Authority and Participation

The self-governing bodies of higher education institutions in the Federal Republic of Germany have always been an important element of the institutional autonomy by which internal academic affairs are regulated. Originally, these self-governing bodies were centered exclusively around the full professor. They became collegiate bodies in the course of the reforms that occurred during the 1960's and 1970's, including not only non-professorial academic staff but also representatives of students and the administrative and technical personnel.

The internal governance of higher education institutions is organized according to a three-tiered structure: the departments or faculties are headed by deans; the deans are supervised by the rector or president, who in turn is responsible to the ministry of education or of higher education of the respective Land.

As a rule, each higher education institution in Germany is headed by a President or a Rector (cf. 4.4) who is supported by a head of administration, called a Kanzler, a position similar to that of a bursar, i.e., the person responsible for questions of finance and of budgeting as well as for the administrative staff. In recent years, universities have experimented with new forms of governance, i.e., collegiate bodies made up of a president and of two or three vice-presidents responsible for various areas of institutional governance. Current debates centering around issues of deregulation and more institutional autonomy include a number of considerations to strengthen and to professionalize institutional management, including the positions of dean, by giving the persons involved a greater degree of decision-making power, in particular regarding issues of budgetary allocations, incentive payments, and discretionary funds, as well as the hiring of staff, including professors.

The regulations concerning the self-governing body of a department or of a departmental or faculty assembly vary according to the Land. As a rule, such a body is a collegiate unit headed by a dean and consisting of all the professors and of the elected representatives of other academic staff, students, and non-academic personnel. Professors hold a majority of the votes in certain academic matters concerning teaching and research. The dean is elected by the assembly for a limited period - usually for two years - from among the group of academics. In most cases, the office is held by a full professor who receives a reduced
teaching load in order for him or her to carry out the administrative tasks linked to the office. The departmental or faculty assembly deliberates issues of departmental work. In particular, it supervises the teaching provision so that the courses required by the syllabi of all study programmes are covered. In addition, budgetary issues are resolved, and search committees are established if a professorial chair becomes vacant or other regular positions have to be filled. The dean has an intermediary and coordinating function regarding the organization of departmental work, including the establishment of course programmes and the elaboration of study and examination regulations.

As is the case of the office of the rector or the president, recent reform considerations are seeking to strengthen the position of the dean by extending his or her term of office and by professionalizing the office as such.

The two self-governing bodies linking the departmental level with the central institutional level are the Senate and the Council which is sometimes also called the Convent. Both these bodies are chaired by the Rector or President. The Council or Convent of a higher education institution is the highest and most important body of self-governance. It consists of representatives of all groups holding membership in the institution: professors, non-professorial academic staff, students, and non-academic personnel, again with a majority of votes reserved to the professors in certain academic and research related matters. The Council or Convent is responsible for the election of the President or Rector who in turn is accountable to this body regarding issues of management and governance. After election, however, the respective ministry of the respective Land has to acknowledge the elected person and to officially appoint the new Rector or President to his or - rarely - her office. So far, there have been only very few cases in which the ministry has refused to acknowledge and appoint the elected person. The Council or Convent also deliberates the institutional statutes which must also be approved by the respective Land ministry.

The Senate of a higher education institution consists of the deans of all departments and faculties and the representatives of the professorate, of other academic staff, of students, and of non-academic personnel. It is responsible for all institutional affairs going beyond departmental or faculty issues. Usually, a senate establishes various commissions in which special areas of decision-making, e.g., budget, research, teaching and studies, etc., are discussed, and recommendations, made. In specific fields, the senate or its commissions also have decision-making powers.

Up to the mid-1960's, three characteristics dominated the organization and the administration of West German universities: the rather weak and mainly representational function of the rector, the division between academic self-regulation and general governmental administration, the representative of which
within the institution was the bursar (Kanzler), and an influential and powerful professorate. In the second half of the 1960's, a series of legal acts of the governments of the Länder prescribed more detailed regulations. The student protests occurring between 1967 and 1970 were a further factor leading to changes in and reforms of the traditional structure of internal governance. The demands for reforms eventually led to the participation of non-professorial groups in the self-governing bodies, i.e., the councils and the faculty assemblies. In some cases, professors suddenly found themselves in a minority. Finally, in 1976, the First Framework Act for Higher Education established certain common elements to be adhered to in the higher education laws of the Länder.

The most important changes during this period were the following:

i) The short-term (two-year) representational office of the rector was given a longer term (four to six years) with increased power and additional functions in administration and in the self-governing bodies. Thus, academic and administrative issues became more unified, and the office of the rector or president took on a more professional character. Changes in the statutes of some universities during this period led to the possibility of electing a person from outside the institution as its head (president) rather than from among the full professors within an institution (rector).

ii) The non-professorial academic staff (including junior academic staff), students, and non-academic personnel received a substantial proportion of the seats in the self-government bodies at institutional and departmental level. However, a Constitutional Court decision in 1973 guaranteed a majority of 51 percent of the votes for full professors with regard to all important issues of research and a 50 percent majority in regard to issues of teaching. There is no tradition in Germany of including public representatives as members of these self-government bodies. Only very recently have some pilot projects been started to introduce boards of trustees as governing and supervisory bodies of universities.

iii) In order to strengthen and to extend the capacities of institutions to coordinate issues of teaching and research, the traditional and rather large faculties were divided into smaller departments headed by deans. A department typically consists of several institutes organized around a director and one or more professorial chairs occupied by full professors. While the personal income and additional resources of full professors used to be negotiated between the professor, the president or rector, and the respective ministry of the Land, additional resources (including support staff) were now to be negotiated between the professor, the department, and the central institutional administration. The department exercised control over these budgets (cf. 4.5).
iv) Since the 1960's, the academic staffing structure has been the object of various reforms. Legal acts passed in 1985 defined the categories of professors at universities and at universities of applied sciences. The highest professorial rank, called C4 according to the respective level on the pay scale, can be found only at universities. Professors of this rank usually hold chairs and are not only life-time tenured civil servants, but are also distinguished by a higher level of support in the form of junior academic staff and administrative and technical personnel, assigned to assist them as well as a substantial proportion of material resources. The two other professorial ranks, called C3 and C2 respectively, are mostly tenured civil service positions as well and can be found at both universities and at universities of applied sciences. The C3 category is the highest professorial rank at universities of applied sciences. The C2 category is more typical of universities of applied sciences than of universities because no new C2 positions have been created at universities since the mid-1980's. There are some exceptions to the tenure rule in the C2 category because this rank can also include temporary positions.

More than 95 percent of the professors in universities and in universities of applied sciences are tenured civil servants. In contrast to their relatively secure positions, more than two-thirds of the other, i.e., non-professorial, academic staff members are temporarily employed or are civil servants on fixed-term contracts. The considerable distance between professors and other academic staff is typical of the German higher education system because most non-professorial positions are considered to be junior staff positions in relation to the professorate, sometimes regardless of the age of the persons holding such positions.

4.4. Finance: Two Kinds of Budgets

The basic resources for each higher education institution are provided by the respective Land according to a highly differentiated budget that is negotiated annually between the responsible ministry and the institution. Basic resources cover staff salaries, the maintenance of buildings and facilities up to a certain sum, and material resources. As both teaching and research are defined duties of academic staff members for which they receive their salaries, the institutional budget is not differentiated according to these two fields. Additional resources for research are provided by the German Research Association, by foundations, by industry and the state, as well as by the Federal Government on a competitive and project-based scale (cf. 2.3).
The traditional form of funding for higher education institutions in Germany is based on line-item budgets that are negotiated according to a very complex procedure between the individual higher education institution, the ministry responsible for higher education, and the Treasury of the respective Land. Each year, the institution submits a detailed budget proposal to the Parliament of the Land in question that then reaches a decision about it. Once the budget is accepted in general by Parliament, it is decreed by the ministry responsible for higher education, usually with additional cuts decreed by the Treasury and further restrictions concerning the availability of actual funds or temporary restrictions on spending. The typical cameralist pattern of line-item budgets strictly regulates available resources and expenses according to a detailed and prescriptive model. Every single item in the budget of an institution is earmarked, usually two years in advance of the actual budget year, in the form of an extrapolation of existing needs and expectations.

The budget is divided into "chapters", "title groups", and "titles". There are approximately 700 "titles", i.e., individual items of expenditure in the budget, each of which must be spent within the framework of a budgetary year. As a rule, the transfer of funds from one budgetary year to the next as well as the reciprocal coverage of two or more "titles" are not possible. Thus, if resources are not spent for the intended item, they can neither be used for another item nor saved for the next year. Instead, they either have to be given back to the Ministry or - as happens frequently - must be spent quite randomly shortly before the end of the budgetary year, a practice which, in Germany, is called "November fever". The consequence of not spending allocated funds is to receive less money for that item or "title" in the next year.

In recent years, reform debates have concentrated on issues of greater transparency, efficiency, and innovation in higher education institutions. Many political actors assume that by giving institutions greater financial autonomy a number of problems in these areas might be solved. In addition, two further effects could be achieved. On the one hand, a higher degree of financial autonomy could only be granted in exchange for greater accountability and a shift from strict input and process control to increased elements of output control. On the other hand, conflicts concerning the allocation of scarce resources could be shifted back to the institutions themselves. Therefore, some Länder governments (in particular, Lower Saxony and North-Rhine-Westphalia) have introduced pilot projects with lump sum budgets, also called "global budgets" in Germany.

Lump sum budgeting as a new form of financial autonomy for higher education institutions has a different pattern than line-item budgeting. Compared to the expenditure-oriented extrapolation of financial requirements in line-item
GOVERNANCE AND ADMINISTRATION

budgeting, lump sum budgeting is characterized by a cost-oriented application for a budget according to demand. Lump sum budgeting is assumed to offer three advantages: greater institutional autonomy as regards internal distribution and allocation of funds, increased efficiency in financial administration, and greater transparency of expenditure. The characteristics of lump sum budgets in contrast to line-item budgets are the following:

- Each faculty, department, institute, or central unit is accountable for its own budget that is determined on the basis of a financial plan and proper and actual cost accounting.
- In co-operation with the Senate, the central level of the institution develops a comprehensive economic plan that takes the financial plans of the individual units into account and serves as a basis for later decisions about resource allocations.
- A consensual model is required for the allocation and the disposition of resources. The central level is responsible for controlling the overall budget. It is usually supported by commissions or committees that grant permission for expenditures.
- Lump sum budgeting strengthens the power of the central level as well as that of the deans and heads of units in their managerial capacity and requires a high degree of professionalization.

Lump sum budgeting requires regular accounting and the balancing of books in order to make individual cost units and types of costs transparent. It entails improvement of financial planning and easier resource allocation. Those higher education institutions participating in pilot projects with lump sum budgeting generally appreciate the following opportunities:

- that of building up and pooling resources for larger projects;
- the possibility of obtaining intra-institutional financial credits, including discretionary funds used for incentive payments;
- the possibility to transfer resources from one budget year to the next;
- the possibility of achieving reciprocal coverage of certain types of costs or parts of unit costs.

Although lump sum budgeting leads to the requirement that administrative staff members be retrained, it may give rise to intra-institutional conflicts regarding budget allocations, requires increased transparency and accountability in the spending habits of departments, institutes, and central units, and in general will give rise to difficulties that must be mastered. Those institutions that have experimented with lump sum budgeting seem to be sufficiently successful with it that they might ultimately replace the traditional line-item budgets with
lump sum budgets. In the long run, however, such a change would also entail a change in the legal status of higher education institutions.

4.5. Quality Control and Evaluation

The German system of higher education has always been characterized by close state control and the decentralized steering of inputs and processes. Typical forms of monitoring and control are based on *ex-ante* evaluations, like the special procedures for filling professorial chairs, peer review in research, state approval of study programmes and examination regulations, and qualitative access control. Thus, the evaluation and the quality monitoring of teaching was deemed unnecessary, given that there were established mechanisms of peer assessment for academics applying for research grants and aiming to publish in major academic journals. In recent years, several factors have contributed to a change in this outlook.

First, there was the immense evaluation exercise of the East German system of higher education and the institutes of the Academy of Sciences in 1990-1991 in which many West German academics became involved. This involvement gave rise to difficulties on the part of West German academic staff members in their efforts to resist evaluation of their activities. They had jealously guarded their independence, buttressing their arguments with reference to the principles of the freedom of teaching and research.

Second, several ranking exercises of West German higher education institutions carried out by mass media journals not only led to widespread criticism of the approaches and methods chosen but also started to break the taboo concerning the general homogeneity of the system.

Third, growing public and political dissatisfaction with the assumed inefficiency of higher education institutions regarding teaching and the output of graduates has led to increasing criticism of the quality of teaching and the status of teaching in the hierarchy of academic values.

As has been the case in other higher education systems, the relationship between higher education, the public, and higher education politics has changed. Demands for more accountability and stronger "client orientation" characterize the new climate in which a growing "evaluation market" is developing, on the one hand, and higher education policy is promoting internal evaluation, a higher degree of institutional autonomy, and increased financial restrictions, on the other. So far, no clear structures or generally acknowledged agencies and procedures have been developed for the public evaluation of the teaching and research performance of individual academics or of departments.
and higher education institutions, even though some of the German Länder have prescribed an obligation for the compilation of teaching reports. Nevertheless, higher education institutions are succumbing to a growing competition for public reputation which is intensely scrutinized and increasingly taken up in a proactive manner by higher education institutions and political actors in the field.

Although the German Rectors' Conference seems to favour a system-wide approach, possibly with a national accreditation agency, and is working on the development of a general set of performance indicators, institutional and governmental approaches to evaluation are rather decentralized and vary considerably. Looking at the prevailing procedures, one currently finds a coexistence of traditional peer review and the accompanying research on and evaluation of pilot projects, institutional evaluations and site visits by external experts, teaching reports and departmental or institutional self-evaluations, questionnaire surveys of students, secondary analyses of aggregate statistical data, and bibliometric indicators. Differences continue to exist with regard to the weighting of input, to process and output information, and to the compatibility of underlying concepts (e.g., quality and efficiency) and expected impacts (e.g., to prove or to improve). Overall, the German discussion about evaluation of higher education is rather fragmented. There is difficulty in achieving a consensus among all the actors involved.

Beyond the problems of operationalization, evaluation is an irritating element at various levels of the German system of academic self-governance. One cause of this irritation is that some elements of the traditional patterns of allocation of reputation and (to a lesser extent) of resources are becoming externalized and thus partially uncontrollable because new yardsticks for comparison are being introduced. In this context, a number of questions are still open (cf. B. M. Kehm, J. Enders, and U. Schimank, 1998):

- In what ways will elements of evaluation be permanently implemented at the various levels of the German higher education system?
- What kinds of relationships will be developed for the internal monitoring of performance, for benchmarking, and for externally organized public comparisons of performance?
- Can a balance of objectives be achieved as regards criteria and purposes (e.g., legitimation versus quality enhancement) of evaluation exercises?
- To what extent will evaluation be linked to a regulation of (departmental and institutional) resource flows and salaries?
- Will evaluation lead to an erosion of the homogenizing factors of the German higher education system?
And finally, what type of actors will be responsible for carrying out evaluations?

Higher education institutions have opted mostly for a pro-active approach, organizing evaluation processes themselves and thus trying to control outcomes rather than being subjected to scrutiny by external experts. In some cases, several higher education institutions within a region are co-operating within the framework of a self-organized evaluation agency. As a rule, outcomes are kept confidential as far as possible and only fed back to the departments concerned. Still, institutional or departmental capacities for improvement not only of evaluation methods and approaches as such but also for action according to outcomes and results are often underdeveloped or even missing. The existence of institutional support services to carry out evaluations or well-developed information systems is still an exception.

A gradual process is currently underway in Germany of testing different instruments, techniques, and approaches to evaluation with no overall systematic design. An integrated evaluation policy may never emerge, for there are too many players in the "game" that is "played" in a decentralized system of decision-making and coordination. Nevertheless, it should be pointed out that the evolving pluralistic evaluation policies may allow for innovation and experiments and lead to an incremental process of knowledge acquisition which may be superior to unified systems of evaluation and national agencies. Such an approach would not only be more in keeping with the character of the German federal system but would also be able to take into consideration different criteria, perspectives, view points, interests, and time frames. Given the limited power of each actor in the arena, institutional arrangements might provide the best possibilities for developing higher education institutions into learning organizations (cf. G. M. Hellstern, 1995; H. Brinckmann, 1998; D. Carstensen, 1997).
Chapter 5

FACULTY STRUCTURE AND ACADEMIC WORK

5.1. Structure of the Academic Staff

The structure of academic staff at German higher education institutions tends to be complex because various attempts to reform existing staff structures since the 1960's came to a halt in mid-stream and frequently resulted in the co-existence of old and new staff categories at any one institution or in new regulations for some staff categories and no changes at all for other categories (cf. J. Enders, 1996).

In spite of substantial changes, the structure of university staff established in the early Nineteenth Century by the Humboldtian university reforms continues to shape current debates in Germany. The university staff structure was and still is to a considerable degree focused on the position of the full professor who is appointed by the minister responsible for higher education in the respective Land upon the recommendation of the respective university department and the president or rector.

Apart from being the sole and independent representative of his or her field and of enjoying the special status of a tenured civil servant who is assured freedom of teaching and of research, the successful candidate used to negotiate his or her salary as well as staff requirements, equipment, and additional financial support for teaching and research resources with the President or Rector and the Land ministry. Apart from the full professor, the traditional German university also had "extraordinary" professors occupying less influential but paid positions and covering fields that were considered less important than those of an "ordinary" professor. Then there was the private lecturer or reader, a position for persons having successfully completed the Habilitation (cf. 7.2) but not holding a university position as such and whose remuneration originally came from student fees.

The Nineteenth Century witnessed the emergence of the chair structure and institute structures, the latter being in charge of research. An institute was usually headed by a full professor. A chair might be allocated an assistant, a laboratory, or a small library. Junior academic staff members were badly paid and not permitted to do any teaching.

With the expansion of higher education in the 1960's and 1970's, substantial changes in this traditional pattern took place. The most important of these were the following:
i) an increased number of chairs with various specializations or even more than one chair for the same field, thus offering more choices to the growing number of students;

ii) the promotion of co-operation among professors giving way to larger departments or faculties headed by the professorial members on a rotating basis (office of the dean);

iii) larger research units incorporating permanent professional staff with the consequence of an increasing diversification of the types of research staff positions;

iv) improved positions for all scholars and scientists who had successfully completed their Habilitation as well as fully paid positions for other permanent teaching staff members;

v) in the wake of a growing demand for teaching staff to cope with increasing student numbers, the creation of permanent teaching positions for persons not having the Habilitation. They could engage in research but were not obliged to do so and had a much heavier teaching load than professors. Also assistants and junior academic staff took over a certain amount of the teaching, only nominally supervised by full professors.

This growing diversification of academic teaching and research positions has led to a high ratio of junior to senior positions. Opportunities for the promotion of junior staff are limited. Today, large numbers of junior academic staff are employed on the basis of part-time and temporary contracts with frequent periods of unemployment between appointments. In 1995, the total number of regularly budgeted positions for academic staff at higher education institutions was slightly smaller than 90,000 in West Germany and somewhat more than 23,000 in East Germany. At universities, fewer than a third of the academic staff hold professorial positions. At the universities of applied sciences, more than 90 percent of academic staff hold professorial positions, albeit at lower rank than full university professors with chairs.

This difference arises from the fact that the universities of applied sciences, as a rule, do not train junior academic staff - some exceptions exist in the framework of recently established pilot projects - and hardly any basic research is carried out at these institutions for which junior academic staff would be needed as support staff.

Little by little, the reform models of the 1970's, that established the increased participation and influence of the non-professorial members of academe in the self-government bodies of institutions, were taken back or cut back. Since the 1980's, efforts are being made to increase the direct supervision of junior academic staff members, linking their positions and their tasks more closely, once again, to given chairs. Also, a greater emphasis has been placed on differences among the various ranks of professors in terms of titles, functions, and privileges.
The structure of academic staff that developed in the German Democratic Republic differed from that in West Germany to a considerable extent. Between 1965 and 1989, the number of academic staff members in the German Democratic Republic more than doubled, from 18,000 to almost 39,000. The largest increase in staff numbers took place in the second half of the 1960's, while in the decade between the mid-1970's and the mid-1980's, increases in staff numbers were lower, however, with an above average proportion of additional staff in medicine, teacher training, and engineering. The proportion of professorial positions among all academic staff positions did not change considerably between the mid-1960's and the end of the 1980's, varying between 17 and 20 percent. On average, each professor had three to four academic support staff members, a ratio that was clearly higher than in West Germany but also resulted in a lower proportion of professors among the total number of academic staff members.

Another characteristic feature of the staff structures in the German Democratic Republic was a relatively high proportion of highly qualified, tenured, and independent assistants and senior assistants (around 40 percent of all academic staff). Postgraduate and post-doctoral qualification periods were spent mostly in positions for temporary assistants and junior academic staff with temporary contracts.

Finally, the high proportion of non-academic and academic-related staff must be mentioned. This category comprised about 63 percent of all staff at East German higher education institutions in 1989. Altogether, there were 38,909 academic staff in 1989, among whom 7,516 professors and 31,393 non-professorial academic staff, as well as 65,376 non-academic and academic related staff (including nurses at hospitals and medical units) (Burkhardt and Scherer, in, G. Buck-Bechler et al., 1997).

Table 10 provides an overview of the evolution of the numbers of academic staff over the years in West Germany and the staff to student ratios. The actual number of academic staff members employed at higher education institutions is about ten percent higher than the number of budgeted positions, owing mostly to work sharing and to part-time positions or contract researchers paid from external funds. In the early 1960's, the numbers of academic staff members at West German universities were doubled in order to improve the quality of teaching and research. In fact, the student to academic staff ratio declined from 15 to 1 to 9 to 1 during that period. The subsequent duplication of staff positions from the mid-1960's to the mid-1970's kept pace with the growing number of students. Since 1975, fewer positions were created for academic staff because of expected demographic changes leading to lower enrollment numbers in the long-run.

This down-turn never occurred, and the policy of "open doors" in the face of continuing increases in enrollments led to a staff to student ratio in 1990 that was back to the level of that at the beginning of the 1960's in West Germany. A similar
development can be observed for the sector of the universities of applied sciences. Here the staff to student ratios deteriorated in a much more visible way.

There are also considerable differences in the staff to student ratios of the various German Länder. For example, the staff to student ratio at universities of applied sciences in the West German Länder varies between 1 to 24 and 1 to 39; at universities of applied sciences in the East German Länder, between 1 to 13 and 1 to 19 with the exception of East Berlin where it is 1 to 25. The slight improvement of staff to student ratios at universities of applied sciences reflects an increased number of positions for junior academic staff members as well as academic support staff which have been created not only to improve staff to student ratios but also in order to build up applied research at universities of applied sciences.

Table 10. Academic Staffing at Higher Education Institutions and Staff to Student Ratios in the Federal Republic of Germany: 1960-1995

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<td>Universities a)</td>
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<td>Professors</td>
<td>5.2</td>
<td>8.8</td>
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<td>17.8</td>
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<td>Other academic and creative arts staff b)</td>
<td>11.7</td>
<td>24.1</td>
<td>34.8</td>
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<td>65.6</td>
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<tr>
<td>Total academic staff</td>
<td>16.9</td>
<td>32.9</td>
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<td>82.6</td>
<td>82.6</td>
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<td>Academic staff: student ratio</td>
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<td>1:9</td>
<td>1:10</td>
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<td>Professors</td>
<td>0.3</td>
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<td>7.2</td>
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<td>Other academic and creative arts staff</td>
<td>1.9</td>
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<td>Total academic staff</td>
<td>2.2</td>
<td>3.6</td>
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<td>10.3</td>
<td>10.3</td>
<td>11.0</td>
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<tr>
<td>Academic staff: student ratio</td>
<td>1:22</td>
<td>1:20</td>
<td>1:19</td>
<td>1:18</td>
<td>1:22</td>
<td>1:29</td>
<td>1:34</td>
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Compared to the figures shown in Table 10, the higher education system in the German Democratic Republic had a very favourable staff to student ratio of 1 to 5. This characteristic is considered to have been one of the very positive features of the East German system. However, in the restructuring process this ratio was considered to be a luxury that could no longer be afforded. In relation to the West German situation, it was even interpreted as serious over-staffing. Many central units were dissolved; departments were closed down and re-opened under West German "foundation deans", and East German staff members, having survived the evaluation process and having been given clearance in regard to political integrity, had to re-apply for positions, only this time in competition with West German academic staff members who were unemployed or in unsatisfactory positions.

Academic staff to student ratios in both universities and universities of applied sciences are still considerably more favourable in the new East German Länder than they are in West Germany, with the exception of East Berlin. In most of the new East German Länder, the under-utilization of existing capacities in terms of study places are a cause for serious concern, and higher education institutions are trying to attract more students through advertising and the development of innovative course programmes.

The proportion of women among academic staff members in higher education institutions in Germany varies to a considerable extent. Among professors it was 8.2 percent in 1995, but only 4.8 percent in the highest category of C4 professors. Among lecturers and assistants, the proportion of female academic staff was 24.7 percent in the same year. In the ranks of junior academic staff and academic support staff for teaching and research, the proportion of women was 27.2 percent, and among the teaching staff for special tasks, it was 37.6 percent. The overall proportion of women among the total academic staff in German higher education institutions in 1995 was 22.6 percent. The typical pattern is the lower the level the higher the proportion of women, and vice-versa.

The situation of women academic staff members in higher education in the German Democratic Republic was considerably better than that in West Germany, not the least because of different forms of promotion of women in higher education including the provision of facilities for the care of children. The large proportion of East German women appropriately qualified for professorial positions also led to a high proportion of women being called into such positions after 1989. The overall proportion of women professors and lecturers with the Habilitation in the German Democratic Republic in 1989 was 9.3 percent. In 1995, it had increased to 11.7 percent in East Germany. In the same year, the percentage of women professors was highest in the arts (25.9 percent), followed
by philological and cultural sciences, including sports (21.1 percent) and economics, law, and social sciences (14.8 percent). It was lowest in engineering (5.3 percent), and medicine (5.4 percent) (cf. Burkhardt and Scherer, in, G. Buck-Bechler et al., 1997).

5.2. Career Paths and Employment

In a typical academic career, a student will earn his or her first university degree after about six years of study. Less than one out of seven graduates will head for a doctoral degree. During a period of three to five or six years, he or she might be a doctoral candidate, possibly supported by a scholarship, a part-time position as an academic support staff member, or as a research staff member paid through external research grant funds (cf. 7.2).

Upon successful completion of the doctoral degree, again one of seven will eventually become a university professor. He or she might be a university assistant, a member of the research staff paid through external funds, or have been granted one of the few post-doctoral fellowships, and eventually attain the Habilitation after another six to eight years. It might take some more years until he or she finally receives a call to a professorial position.

In order to provide better opportunities for this highly qualified group of academics, amendments in 1985 to the First Framework Act for Higher Education created the positions of "senior assistant" or "senior engineer". These are temporary civil service positions equivalent to the lower ranks of C2 professors. Prospective teachers at universities of applied sciences are not required to go through the process of Habilitation, but have to gain a minimum of five years of practical experience, among them at least three years of professional activity outside higher education upon completion of a doctoral degree.

The recruitment and appointment procedures are more or less the same at universities and at universities of applied sciences. Vacancies for professorial positions are made known publicly through advertisements in newspapers and in scholarly or scientific journals. Having identified the most qualified candidates, the department or faculty concerned will submit a ranked list of the three candidates it considers suitable for appointment to the position to the Rector or President of the institution who in turn will submit this list along with a recommendation to the responsible Minister of the given Land. Usually, the Minister will appoint the person at the top of the list. Sometimes, however, in, for example, particular cases of conflicts about the candidates or issues of equal opportunity, the second or third candidate will be appointed; or, in exceptional cases, the Minister might ask for a new list or even appoint someone who was not proposed.
FACULTY STRUCTURE AND ACADEMIC WORK

At universities, there are two professorial categories, called C4 and C3 according to their respective level on the pay scale for this particular group of civil servants. The C2 category still exists at universities, but is gradually being replaced by the "senior assistant" and the "senior engineer" positions. The highest professorial rank is C4 and exists only at universities. In addition to differences in salary, a C3 professor at a university usually has a smaller infrastructure and fewer support staff members than a C4 professor. At universities of applied sciences, the professorial positions are C3 and C2, with the C3 rank being the highest one. Professorial positions at universities of applied sciences are not considered to be chairs and can be temporary or permanent.

At universities, there are no promotion schemes for professorial positions. As a rule, it is impossible to become a professor at the same university from which one is awarded the venia legendi. Only candidates from other universities or qualified persons without employment can be called to a chair or selected for one of the other professorial positions at universities.

These regulations were established in order to promote mobility and to prevent "in-breeding" and favouritism. But the mechanism also opens up an opportunity for salary negotiations that would otherwise not be available. If a professor receives a "call" from another university after having applied for a position at that institution, he or she can negotiate salary supplements or additional resources in order to stay at his or her old university or as a precondition for accepting the offered position. In contrast to this situation, persons occupying a lower professorial rank at a university of applied sciences can be promoted to a higher position without having to change institutions. However, the holders of the highest professorial ranks at universities of applied sciences are not entitled to negotiate salary supplements or additional resources.

More than 95 percent of professors at universities and at universities of applied sciences are tenured civil servants. In contrast to their relatively secure and rather privileged situation, more than-two thirds of the other academic staff are temporary employees or civil servants with limited periods of appointment. Although professors are supposed to cover most of the necessary teaching for undergraduate as well as for postgraduate studies, their assumed neglect of teaching duties in favour of research has been frequently criticized in recent years, in particular at West German universities (cf. 5.4).

Teaching provisions have been extended in various forms beyond those provided by academic staff holding regular positions at higher education institutions. The most frequent provisions are the following:
- University staff funded through external (research) resources may receive part-time contracts as lecturers.
- Practitioners from professional fields outside higher education institutions may also be hired as part-time lecturers.
- Recent graduates or doctoral candidates may receive short-term contracts for service as teaching and research assistants.
- Persons of high professional, public, and academic esteem may be appointed as honorary professors with an obligation to teach without remuneration.

A substantial proportion of academic staff is involved in contract research and development, consultancy, and professional activities or continuing education outside the institution apart from their major functions within it. All full-time academic staff members, including professors, must declare this extra income on their income tax returns and need the approval of their employing institutions to undertake this additional work.

Among the non-professorial academic staff, there are further differences not only regarding income but legal status, rights, and privileges as well as, for example, the right to conduct examinations or to do independent research, the number of teaching hours per semester week, the type of seminar that can be offered, and the amount of additional resources available, including secretarial assistance work and office space.

5.3. Representation of Faculty Interests

There are basically two possibilities by which the academic profession may represent its corporate interests, a more political organization, on the one hand, and membership in a disciplinary association, on the other.

The German Hochschulverband (higher education association) is an organization the members of which are predominantly university professors. It was founded in 1950 in West Germany based on the traditions of a similar organization that was dissolved in 1936. Today it has around 16,000 members and claims to represent the corporate interests of its membership beyond party politics and disciplinary boundaries. On the basis of the principle of freedom of teaching and research, the Hochschulverband considers that one of its main tasks is to become involved in all issues touching upon the tasks and the responsibilities of university professors and their status in state and society.

The professional organization of professors at universities of applied sciences is called the Hochschullehrerbund (association of teachers in higher
education). It was founded in 1972 and currently counts about 4,000 members. The Hochschullehrerbund defines the unity of teaching, practice, development, and research as the paradigm of universities of applied sciences and formulates demands for the creation of appropriate framework conditions so that the tasks linked to this paradigm may be accomplished. According to the Hochschullehrerbund, this paradigm calls for the reduction of the teaching loads of professors at universities of applied sciences, the institutionalization of sabbaticals in order for professors to carry out research and to engage in practical development, the provision of adequate personnel and material resources for universities of applied sciences, and appropriate incomes for professors at such institutions. In this context, universities of applied sciences are defined as equal to but different from universities. This definition is linked to demands for better funding of universities of applied sciences.

Apart from these two guild-like organizations, unions exist that represent the interests of employees in German higher education and research institutions. The two main unions are the Gewerkschaft Öffentliche Dienste, Transport und Verkehr (ÖTV, the Union of Public Services, Transportation, and Traffic) and the Gewerkschaft Erziehung und Wissenschaft (GEW, the Union for Education and Science). ÖTV with 1.7 million members primarily organizes the technical and administrative staff. GEW includes among its 300,000 members about 18,000 members from higher education and research institutions, mostly academic staff but also some academic-related and technical staff. Both unions are engaged in the processes of collective bargaining for higher salaries, lower work loads, and improved working conditions (e.g., part-time and short-term contracts). The work of GEW includes activities designed to enhance the quality of teaching, learning, and research, the improvement of structures and processes of academic self-governance, and the development of new forms of participation. In the discussion of the relationship between state, society, and the academic world, both unions argue that academic freedom should be viewed in the context of social responsibility.

From a professional point of view, the disciplinary associations, such as the German Association of Sociology and the German Association of Education, are probably the most important organizational bodies. They are concerned mainly with the promotion of new developments in their respective disciplines. As a rule, they are subdivided into standing working groups or sections covering special fields within the discipline. These meet in-between the large biennial organization-wide conferences. Associations like these that exist for each of the academic disciplines deliberate on issues related to the standing of their respective disciplines in higher education and society. Membership in the association of one's discipline is fairly common for most staff categories of the academic profession, not the least because of the importance of the networking that takes place within all such associations.
Finally, there are also organizations representing the interests of various functional or administrative groups within higher education institutions, such as deans (differentiated by discipline) and bursars.

5.4. Academic Work: Teaching and Research

Beyond the core tasks of teaching and research, academic staff members and in particular professors are more or less obliged to take an active interest in departmental as well as in institutional activities and policies, i.e., taking turns serving as deans, participating in assemblies and committee meetings of departments, or becoming members of institutional committees. In addition to these duties, there is a certain amount of counseling, supervision, and administration to be done that varies according to the number of students attending the classes, the number of students for whom one has accepted to serve as the main examiner for first-degree examinations or as the supervisor of doctoral dissertations, and the number of research support staff members.

In 1992, the Carnegie Foundation initiated an international survey on the academic profession in which fourteen countries participated. The German part of the survey (cf. J. Enders and U. Teichler, 1995), in which 2,800 academics from West German higher education institutions participated, gave rise to some interesting results concerning the various elements of academic work and their weight in the time budgets of professors at universities and at universities of applied sciences as well as the work of junior academic staff at universities.

University professors spend on average nine hours teaching in class during the periods that classes are in session. Those who are strongly research-oriented spend about one hour on teaching-related activities (i.e., preparation of classes, student guidance, examinations, etc.) for each hour they actually teach. In contrast to this situation, university professors who are strongly teaching-oriented spend almost four hours on teaching related activities for each hour they teach. Accordingly, the proportion of work time spent on research varies between 22 and 47 percent. Junior academic staff at universities spend less time teaching but display similar variances regarding the time they allocate to teaching-related activities and even greater variances regarding their involvement in research projects and publication activities.

In contrast to the situation of university professors, the time spent by professors at universities of applied sciences on teaching-related activities varies only to a very limited extent according to their orientation in terms of teaching or research. However, the more research-oriented professors at universities of applied sciences are, the more hours per week they work.
altogether. As the actual teaching load is much higher for professors at universities of applied sciences (up to 18 hours per semester week) than it is for university professors (8 hours per semester week), the former spend on average little more than one hour on teaching-related activities for each hour of teaching (J. Enders and U. Teichler, 1995).

Although the unity of teaching and research is still regarded, in German universities, as desirable in principle in order to assure cross-fertilization and reciprocal stimulation of both tasks, a great deal of concern is currently being expressed in regard to this principal unity. Thus, the tendency for the teaching and the research function to be drifting apart in universities has been identified and there is increasing concern about the possibility of maintaining a realistic link between both functions. In the face of continuously increasing student numbers and stagnating staff resources, the quality of teaching has been subjected to severe criticism. In addition, the assumed wretched state of teaching is often based on the argument that within universities the focus is on research anyway and that teaching is neglected so that the relationship of tension and competition between the two is resolved in favour of research. Still, the fear of restrictions on and the obstruction of research as the result of increased tasks in teaching and administration belongs to the established repertoire of recurrent debates about working conditions and the performance of academic staff members at higher education institutions in Germany. Complaints about lack of time for research are underpinned by the results of various surveys in which academic staff members stated that they wanted to have more time for research and to spend less time on administrative tasks.

Empirical surveys, however, also show that the proportion of time spent for research in the time budget of university professors has increased slightly over the last twenty years (J. Enders and U. Teichler, 1995; Schimank, 1995). The survey of academic staff at West German higher education institutions that was carried out in 1992 within the framework of the Carnegie study resulted in the following time budget when classes are in session (and when classes are not in session). University professors use, on average, 43 (20) percent of their working time for teaching or teaching related activities, 29 (53) percent for research, and 16 (12) percent for administration. The remaining proportion of working time, 12 (16) percent is spent on academic services and other activities. Academic staff in non-professorial positions at universities spent 26 (12) percent of their working time on teaching and teaching-related activities, 49 (61) percent on research, and 9 (8) percent on administration. The proportion of academic services and other activities is highest in this group with 14 (18) percent of the time budget. Professors at universities of applied sciences use 69 (44) percent of their time for teaching and teaching related activities and 12 percent each for research (33) and administration (9). Academic services and other activities take 8 (15) percent of their time budget (J. Enders and U. Teichler, 1995).
Moreover, a majority of professors do not admit to any decline in their research productivity. This result raises the question of what kind of individual and collective strategies serve to deal with increasing student numbers and a heavier teaching load while at the same time protecting research from being reduced in the time budget. Students have asserted that under the conditions described above teaching suffers more than research. Their complaints have been taken up not only by the mass media but also in public and political opinion and have triggered a multitude of evaluation and quality assurance and improvement exercises (cf. 4.5) in Germany. In the face of such massive dissatisfaction, a zero sum game in the competition between teaching and research could now begin which would end to the disadvantage of the latter (B. Kehm, J. Enders, and U. Schimank, 1998).

It should be pointed out, nevertheless, that East German higher education institutions which do not have to cope with such high student numbers as West German institutions and have also been able to preserve to some extent the tradition of the German Democratic Republic of giving teaching a more central focus than research are advertising this quality as an advantage to attract more students.
Chapter 6

THE STUDENTS

6.1. The Evolution of Student Enrollments

The evolution of student enrollments in the various types of higher education institutions from 1960 to 1990 in West Germany and total student numbers in 1996 in both the old and the new Länder are shown in Table 11. In West Germany, student numbers have increased continuously over the last thirty-five years, doubling at intervals of approximately twelve years.

After the first phase of expansion of student numbers in the German Democratic Republic, which took place somewhat earlier than in the Federal Republic of Germany and peaked in 1973, enrollment was strictly subjected to central planning criteria and kept more or less constant from that time onwards. The total number of students in East Germany was about 130,000 in 1989. Student numbers increased by about 25 percent after unification and the transformation of the higher education system in the new Länder, not in the least owing to changed access regulations.

The proportion of students enrolled in universities of applied sciences in 1995-1996 was sightly higher in East Germany than it was in West Germany. This difference serves as an indicator of the success of this type of higher education institution that was newly established in East Germany after 1989. In West Germany as well as in East Germany, the proportion of young people enrolling in higher education has continued to rise since 1990. The percentage of 19-to-under-26-year-olds studying in higher education in West Germany was 22.0 percent in 1990 and 30.2 percent in 1995. It was only 8.5 percent in East Germany in 1990 and 16 percent in 1995. Overall, the proportion, in 1996, for the whole of Germany was 28.3 percent.

Similar developments can be found with regard to the proportion of women among all students studying in higher education. The figure was 38.3 percent in West Germany and 45.3 percent in East Germany in 1990 and 40.9 percent in West Germany and 47.6 percent in East Germany in 1995. The overall proportion of women students for the whole of Germany was 42.5 percent in 1996.

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<td>69,418</td>
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</table>

a) Including teachers' colleges and theological seminaries; for 1995-1996 including comprehensive universities.

b) Including predecessor institutions.

c) Included in figures for universities and universities of applied sciences.

Table 12. Students in Respective Fields of Study in Universities\(^{a)}\) (Uni) and in *Fachhochschulen* (FH) in the Federal Republic of Germany: 1960 – 1996

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<td>289.4</td>
<td>320.3</td>
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<td>145.5</td>
<td>188.3</td>
<td>250.1</td>
<td>311.5</td>
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<td>149.3</td>
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<td>Total</td>
<td>Uni</td>
<td>214.7</td>
<td>280.2</td>
<td>421.2</td>
<td>695.9</td>
<td>842.0</td>
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<td>1,212.2</td>
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<tr>
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* Including comprehensive universities, teachers' colleges, theological seminaries, and art academies.

The development of student numbers in West Germany and, since the early 1990's, also in East Germany in various disciplines at universities of applied sciences and at universities is shown in Table 12. Between 1970 and the early 1990's, the absolute number of university students in most disciplines more or less doubled. The numbers increased to a lesser extent in the humanities, notably in teacher training owing to bad employment prospects, and in the medical fields, owing to access restrictions. At universities of applied sciences, the proportion of students enrolled in engineering - traditionally the largest group - declined while that enrolled in the social sciences, notably business studies, increased.

Table 12 portrays a number of interesting differences between East and West Germany:

- Even though, for East Germany, they represent a completely new type of higher education institution, the universities of applied sciences, with their somewhat shorter and more practice-oriented course programmes, seem to be an option which is chosen by almost the same percentage of students here as in West Germany. In some disciplines (e.g., the social sciences), a higher percentage of students in East than in West Germany is enrolled in universities of applied sciences even though this type of institution has existed in West Germany since the beginning of the 1970's.

- Students in East Germany choose the natural sciences less frequently than students in West Germany.

- East German students choose medical and agricultural subjects more frequently than West German students.

- The percentage of East German students in engineering degree courses at universities is somewhat higher than the respective percentage of West German students, while it is considerably lower in respective degree courses at universities of applied sciences.

Developments in East Germany before 1989 reflected the central planning and guidance, typical of the system, of newly entering students according to field of study. For example, the highest proportion of study places was available in engineering and economics, while at the same time, student preferences for these subjects among newly entering students was lowest. In 1988, 6.2 percent of newly entering students were geared to take up their studies in mathematics and natural sciences; 33.5 percent in engineering; 7.1 percent in medicine; 5.3 percent in agriculture; 14.9 percent in economics; 6.2 percent in philosophical and historical sciences as well as law; 5.5 percent in cultural sciences (including literature, languages, and arts); and 21.3 percent in teacher training (Lischka, in, G. Buck-Bechler et al., 1997).
6.2. Student Social Background

Looking at the structure of the mass of students from the angle of social class origin, the proportion of university students of blue-collar backgrounds in West Germany increased from 4 percent in 1952 to 16 percent in 1985. This trend was reinforced by political and social campaigns in the 1960's and 1970's promising equal educational opportunities for all social classes and trying to encourage those parents who traditionally kept a certain distance from the higher education sector to send their children to upper secondary schools. These campaigns became known by the motto, "exhausting all reservoirs of talent".

After the mid-1980's, the proportion of students of working class backgrounds decreased to 13 percent in the early 1990's, mainly owing to the decrease in the proportion of blue collar workers in the labour force. Table 13 gives an overview of the changes occurring between 1952 and 1990 in the social backgrounds of students at universities of applied sciences and at universities in West Germany and compares the social backgrounds of students at both types of higher education institution in East and West Germany in 1991 and 1994.

Other than the reduced proportion of blue-collar workers in the labour force, the decrease in the percentage of students from blue collar backgrounds in West Germany between the mid-1980's and the mid-1990's is also assumed to be related to the deteriorating possibilities for students to receive financial assistance from the state (cf. 6.3.) and to be able to finance their studies. The accumulation of debts during one's periods of studying is less popular and usual for persons from blue collar families than it may be for persons from white collar families. The former does not generate sufficient income to easily cover the expenses of a student son or daughter.

The social background of university students in East Germany is somewhat different from that of West German students. In particular, there are a considerably higher percentage of students whose fathers are salaried employees but also more students from blue-collar families. The fact that students whose fathers are civil servants are less represented in both types of higher education institution than in West Germany might be explained by the fact that during the ongoing transformation phase, many positions for civil servants were either phased out or filled, at least temporarily, by West Germans, whereas East Germans often became salaried employees in the Civil Service.

The official doctrine in the German Democratic Republic claimed to promote access to higher education specifically for children of workers, peasants, and lower social strata. Children from such families were not only favoured in access
THE STUDENTS

decisions, but also recruited in a targeted way, in particular in the early years of the German Democratic Republic. By 1955, the proportion of students from the families of workers and peasants among all students in higher education was 55 percent. However, these developments also reflected to a considerable extent the actually existing social structure because the proportion of middle and upper class families was lower than in the Federal Republic of Germany. Also, a disproportionate number of these families tended to migrate from East to West Germany.


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<td>Total</td>
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<td>-</td>
<td>-</td>
<td>31</td>
<td>32</td>
<td>37</td>
<td>-</td>
<td>38</td>
</tr>
<tr>
<td>Self-employed</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>19</td>
<td>20</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Manual worker</td>
<td>-</td>
<td>-</td>
<td>27</td>
<td>27</td>
<td>26</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>-</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Regular surveys on "Das soziale Bild der Studentenschaft".

This situation changed in the course of the 1970's. A revision of economic strategy led to a reduction in the number of available study places and consequently the number of young people wishing to enroll in higher education but who were rejected increased. Furthermore, the proportion of middle and upper class families had increased through the first expansion phase of higher education, and their children wanted to study. At the same time, children of peasant and worker background continued to be favoured for access. In order to solve the resulting social tensions, affiliation to social class was politically defined and determined, a situation which led to the paradox that children of parents with specific functions in government, the party, or other state related positions were declared - per definitionem - as working class children. Thus, official statistics continued to indicate that more than half of all East German students were of working class or peasant backgrounds.
During the 1970's and 1980's, the actual social structure of the student body included a disproportionate percentage of children with highly qualified parents. However, in terms of social security and income, workers and peasants frequently continued to be better off financially than higher education graduates. Along with the high standard of vocational training, this situation contributed to the fact that upper secondary school and higher education were less attractive to these social strata, and their social demand for higher education was not as high as it might have been (cf. Lischka, in, G. Buck-Bechler et al., 1997).

6.3. How Students Finance Their Studies

Higher education at German public institutions is free of tuition charges. Only in the small sector of private higher education and for various forms of continuing higher education in Germany are tuition fees charged. Although the general introduction of tuition fees is an issue, which is heatedly and controversially discussed, it has not yet occurred. Controversy over the question delayed passage of the new Framework Act for Higher Education of 1998.

Students, nevertheless, will need financial means in order to cover their living costs, books and other study materials, health insurance, and registration fees when reporting back to their institutions each semester.

There are basically four ways to finance one's studies at German higher education institutions: (i) through a grant or a loan provided by the state through the Federal Education and Training Assistance Act (BAföG); (ii) through a scholarship provided by a private or a public foundation; (iii) through support by parents; (iv) by more or less regular work or part-time jobs. A fifth possibility that is, however, statistically negligible is to finance one's studies through private means.

The Federal Education and Training Assistance Act (BAföG) was originally (in 1971) devised to provide needy students with non-repayable state grants, the level of which was dependent on one's own and one's parental income. These grants were later changed to a combination of grant-assistance (50 percent of the assistance provided) and interest-free loans (50 percent of the assistance provided), the latter having to be repaid within twenty years, beginning five years after graduation. The funds for BAföG are provided by the Federal Government (65 percent) and by the Länder (35 percent). They are administered and disbursed by the German Studentenwerk (cf. 6.4).

The overall sum provided under the Federal Education and Training Assistance Act, including the sums provided for loans to students in upper secondary schools, amounted to 2.3 billion DM in 1985, but fell to less than 1.9 billion in 1989. After German reunification, a large number of East German students
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became eligible for financial assistance under the BAföG Act causing the amount to increase to almost 3 billion DM in 1992 (L. Giesecke, 1987). Equally, the proportion of BAföG recipients among all students enrolled in higher education decreased from 37 percent in 1982 to less than 23 percent in 1988 in West Germany. After an increase in 1991 to about 28 percent, it fell again to slightly more than 24 percent in 1994. The most important cause of this decrease is considered to be the increased parental income in West Germany. In 1997, the proportion of students receiving BAföG assistance among all students enrolled was 18.7 percent for the whole of Germany (17.0 percent in West Germany and 30.7 percent in East Germany) (cf. K. Schnitzer et al., 1995 and 1998).

The proportion of BAföG recipients in the new East German Länder fell from 88.2 percent in 1991 to 54.8 percent in 1994, owing to improved incomes and earnings. As is the case with West Germany, only a minority of students receives financial assistance under the BAföG Act independently of the incomes of their parents (22 percent of all BAföG recipients).

Table 14 indicates the amount of financial assistance provided to students at universities and at universities of applied sciences, in 1996. The average level of individual assistance per month is considerably lower than the maximum level of support available which is currently slightly below 1,000 DM. Full assistance is provided to 36.0 percent of BAföG recipients at universities of applied sciences and 30.7 percent of BAföG recipients at universities. The proportion of BAföG recipients is higher in East Germany than it is in West Germany and higher at universities of applied sciences than at universities.

Table 14. State Financial Assistance in 1996, under BAföG for Students Enrolled in German Higher Education

<table>
<thead>
<tr>
<th></th>
<th>Universities a)</th>
<th>Fachhochschulen</th>
<th>Total/average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall financial assistance (in thousand DM)</td>
<td>1,344.3</td>
<td>671.1</td>
<td>2,015.4</td>
</tr>
<tr>
<td>Average individual assistance per month (in DM)</td>
<td>620</td>
<td>651</td>
<td>635.5</td>
</tr>
<tr>
<td>BAföG recipients (average monthly numbers and proportion among all students)</td>
<td>180,655</td>
<td>85,914</td>
<td>266,579</td>
</tr>
<tr>
<td>(20.8)</td>
<td>(31.1)</td>
<td></td>
<td>(23.3)</td>
</tr>
<tr>
<td>Proportion of women among BAföG recipients (%)</td>
<td>49.4</td>
<td>36.7</td>
<td>45.2</td>
</tr>
</tbody>
</table>

a) Including comprehensive universities.

Among the various ways of financing studies, the most important one is support by parents, followed by earnings through employment and savings. State assistance under BAföG comes third. Typically, several sources of support and income are combined in order to finance studies. Fewer than one-fifth of students finance their studies through one source only, 43 percent have two sources; and still 30 percent use three sources. Ten percent of the students dispose of more than three sources of income (K. Schnitzer et al., 1995). Table 15 provides an overview of the various sources of income used by students to finance their studies and the percentages of students drawing upon these sources.

Table 15. Sources of Student Financial Support as Expressed in Percentages of Participation and of Average Monthly Support: 1994

<table>
<thead>
<tr>
<th>Sources</th>
<th>West Germany</th>
<th>East Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students (%)</td>
<td>Average monthly support (DM)</td>
</tr>
<tr>
<td>Parental</td>
<td>83</td>
<td>780</td>
</tr>
<tr>
<td>Self-earned means (part-time and summer employment)</td>
<td>67</td>
<td>557</td>
</tr>
<tr>
<td>BAföG</td>
<td>30</td>
<td>604</td>
</tr>
<tr>
<td>Savings accumulated prior to study period</td>
<td>20</td>
<td>216</td>
</tr>
<tr>
<td>Support provided by relatives / friends</td>
<td>16</td>
<td>139</td>
</tr>
<tr>
<td>Orphan benefits</td>
<td>6</td>
<td>424</td>
</tr>
<tr>
<td>Supported by partner / spouse benefits</td>
<td>3</td>
<td>316</td>
</tr>
<tr>
<td>Scholarships awarded by private / public foundations or by industry</td>
<td>2</td>
<td>618</td>
</tr>
<tr>
<td>Bank loan or third party loan (other than BAföG)</td>
<td>2</td>
<td>389</td>
</tr>
<tr>
<td>Other sources</td>
<td>6</td>
<td>464</td>
</tr>
</tbody>
</table>


With the deterioration of state financial assistance to students, the structure of student income has changed over the years. As fewer and fewer West German students become eligible for BAföG, the percentage of those students who rely on it as their main source of income declines and increasing numbers of students either receive financial support from their parents or are forced to take up part-time jobs. The fact that an increasing number of students have to work in order to finance their studies has also influenced statistics on the duration of studies, because no official part-time student status exists in German higher education. If a person is enrolled as a regular student, he or she is considered to be a full-time student even...
though actual study activities might only be part-time. Recent statistics have shown that some 69 percent of all students have to earn money in one way or another to finance their costs of living at least partially. Almost one-quarter of all university students and almost one-fifth of all students at universities of applied sciences are constantly engaged in gainful employment in parallel with their studies during periods when classes are in session (cf. K. Schnitzer et al., 1998).

6.4. Social Welfare: The Role of the German Studentenwerk

Apart from the statutory health insurance scheme which students over twenty-five years of age have to pay for themselves, that is, from that age onwards, they are no longer automatically insured within the insurance scheme of their parents, the economic and social welfare of students is looked after by a special organization, called the German Studentenwerk, which is the umbrella organization of sixty-five local or regional Studentenwerke in Germany. This organization emerged from a student self-help movement that came into being after the First World War aimed at redressing the economic needs of students (provision of food, housing, and jobs; care for students who were ill). The first national umbrella organization of these self-help initiatives was formed in 1921. During the period of National Socialism, the Studentenwerk lost its independence and became part of the Nazi organizations. Non-Arians were excluded. However, once higher education institutions reopened after 1945, local Studentenwerke took up their work again. A new umbrella organization was formed in 1950. Since November 1990, there are also fifteen Studentenwerke in the new East German Länder.

The German Studentenwerke are corporate institutions under public law; however, legal status, statutes, and guidelines for their work may vary locally. The overall income of the German Studentenwerke was around 1.7 billion DM in 1994, and there were about 16,200 employees. Basically, income is generated by four different items: (i) the revenues of the organization (i.e., rents for student residence halls, interest, turnover: 59 percent in 1994); (ii) contributions from students: 9 percent in 1994; (iii) funding by the governments of the Länder: 25 percent in 1994; (iv) reimbursement for administrative services: 7 percent in 1994.

The most important task of the German Studentenwerk is the administration and payment of the student loans and grants provided in the framework of the Federal Education and Training Assistance Act (BAföG) (cf. 6.3). In 1994, altogether 2.45 billion DM were provided to more than 352,000 students. Other responsibilities include the operation of subsidized student dining halls and student residence halls, measures for the promotion of health among students, the provision of advice and counselling services (social and psychological counselling, advice for disabled students and advice in legal matters), and often an agency for
short-term student employment, some clubs and cultural facilities, as well as kindergartens. In addition, support is granted to international meetings of students, and working groups have been set up for the development of future perspectives (M. V. Mutius, 1996). Last but not least, every three years the Studentenwerk commissions one of the most important surveys, at national level, about the social situation of students in the Federal Republic of Germany.

6.5. Representation of Student Interests

The interests of the students as a whole, at any one institution, are represented by the general board of students (the Allgemeiner Studentenausschuss). Upon enrollment, all students automatically become members of the corporate body of students in their university and must pay a contribution each semester for the work of the general board of students representing this corporate body. Various political student organizations compete during elections which take place approximately every two years for seats in the student parliament and may form coalitions in order to gain a majority in the general student Board. The Board itself is divided into a main committee and various subcommittees representing the interests of particular groups of students, for example, foreign students, women, disabled students, gays and lesbians, or of particular fields of interest, such as culture, the social situation of students, international relations, etc. Traditionally, the general student Boards at each higher education institution were linked at Land and at national levels.

Since the end of the 1960's, however, there have been recurrent disputes about the political activities and the political mandate of the general student Boards that have sometimes ended up in court. Two of the West German Länder finally legislated that compulsory membership should end. Consequently, the general student boards at the universities concerned as well as the automatic corporate membership of students in them in these Länder came to an end. Both were replaced by student representation that does not consist of one particular corporate body. In recent years, the corporate organization and representation of student interests has increasingly disintegrated, and participation in the elections for the student parliaments has been relatively low. Accordingly, the influence and weight of the voice of students in the self-governing bodies of higher education institutions and the public sphere have been weakened. Only in cases of pending political reform, for example, changes in the scheme of financial assistance for students or changes in the Framework Law for Higher Education will large numbers of students make themselves heard publicly through strikes or demonstrations. The link between general student boards and student representation at Land and national level is organized within the framework of the Free Association of Students (Freier
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Zusammenschluss der Studentenschaften). However, not all higher education institutions have delegated student representatives to this body.

Student councils representing the interests of students also exist at the departmental or faculty level. As a rule, members of these councils act as student delegates in departmental assemblies. The main tasks of departmental student councils, however, are linked to the provision of information to and the counselling of fellow students, the organization of political, cultural, or social activities, including an exchange of study material, written essays, and examination papers or test preparation material, as well as to the handling of student complaints about teachers. In recent years, the departmental student councils also increasingly have become involved in evaluation exercises for teaching quality and in issues of quality improvement.

In addition to the fact that the Union of Teachers and Scientists offers membership to all students in teacher training, there is a number of other student organizations and associations of a political, social, cultural, international, artistic, and ecclesiastical nature. At some universities, notably the older ones, one can also find the traditional student fraternities with their old boy networks. These are almost exclusively male organizations with special traditions and rites. Some of them still engage in dueling and fencing (L. Giesecke, 1987).

The higher education institutions themselves also offer a broad range of activities with regard to the social and cultural interests of students. Language courses, a broad range of sports, often dancing, exhibitions, theatre, and concerts (choir and orchestra) are on offer for active or passive participation. These possibilities are less widespread than in countries in which most student social life is centered on campus.

The forms of accommodation offered to German students are dependent on a number of factors including age, income, marital status, sex, etc. Finding a place to live has become more and more difficult for students over the years, particularly because West German higher education institutions provide only a few residence halls, and rents have increased considerably. In the German Democratic Republic, the provision of residence halls for students was more widespread, but since these accommodations were not very comfortable they were not very popular. The general trend for a majority of new entrant students in Germany is to choose the higher education institution that is nearest to home and to live at home (cf. 6.3, 6.4).

6.6. The Transition to Employment

In contrast to established procedures in the German Democratic Republic, higher education institutions in the Federal Republic of Germany were never officially
given the task of organizing, in any way, the transition of their graduates to working life and employment. This question was and still is considered to be, more or less, a private affair of the graduates themselves, regardless of the fact that professors might use their informal networks and connections to provide their best or favourite students with job opportunities or favourable references. Consequently, there is no equivalent of a career service unit in German higher education institutions. Instead, this task is considered to be the responsibility of a special department for highly qualified persons in most of the local labour offices.

In East Germany, before 1989, access to higher education and to specific fields of study as well as transition to employment took place according to detailed and centrally planned manpower requirement approaches. Basically, the central steering of the transition of graduates into employment served two functions: (i) to guarantee the constitutional right to work; (ii) to provide the economy with highly qualified labour. Already upon enrollment, students had to sign an official agreement that they would accept the employment offered to them after graduation. As a rule, they were obliged to keep this particular job for three years.

Owing to national economic, in particular, technological targets set between the mid-1960s and the mid-1970s, a high proportion of newly entering students was directed into engineering and natural sciences. In other planning cycles, more students were directed, for example, into economics and teacher training. In the course of their study programmes, students were subjected to social processes aimed at bringing individual student interests into conformity with those of society and the economy.

All higher education institutions had special commissions, which included representatives of industry, that organized the transition of graduates to the world of employment. Students were informed about the job, the work tasks, and other aspects of the future employment envisaged for them and to a limited extent also had the opportunity to reject offers or to make some choices. At the beginning of the last year of their study programmes, they signed employment contracts.

This pattern of manpower planning, however, had some flaws. First, the long-term determination of manpower requirements could not take into account the discontinuous economic development of the German Democratic Republic. Second, existing labour shortages forced enterprises to satisfy their demands for labour through the employment of higher education graduates in what was not necessarily the "right" posts. Third, financial assistance for and delegation contracts with students served the purpose of committing students to specific enterprises or businesses, a practice which central planning and steering could not take into account (Stein, in, G. Buck-Bechler et al., 1997).
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In West Germany, the factors facilitating or hampering transition from higher education to work are more complex and difficult to specifically identify. Although universities are producing graduates for a broad range of private and public sector positions, they still consider that the education they offer is more strongly academic than practical. In contrast, the universities of applied sciences were established in Germany with the intention of providing a more practical and vocationally oriented option for qualified school leavers and are considered to serve a terminal pre-career function, with a strong leaning toward the conveying of tools and knowledge for applied research and development. Comparing the prestige of the two main types of German higher education institutions, namely universities and universities of applied sciences, several indicators allow one to make statements about issues of standing and prestige even though there is no official ranking of institutions in Germany.

In the Federal Republic of Germany, the claim is frequently made that study at universities of applied sciences has become increasingly popular. Recent figures, however, do not support this view. The proportion of newly entering students at universities of applied sciences (including those of Public Administration) as compared to all newly entering students at higher education institutions was 27.6 percent in 1971, 26.2 percent in 1975, 28.9 percent in 1980, and 33.2 percent in 1987. In 1990, it was 28.8, thus displaying a clear decrease. Finally, in 1995, it was 31.5 percent in both the new East German and the old West German Länder (30.8 percent in West Germany and 35.4 percent in East Germany).

A more differentiated view is made possible by comparing enrollment rates in economic and engineering fields offered by both universities and universities of applied sciences. In 1976-1977, the proportion of new entrant students in economics was 29 percent for universities of applied sciences and 71 percent for universities (figures for West Germany only); in 1996-1997, it was 44 percent for universities of applied sciences and 56 percent for universities (figures for East and West Germany).

The reverse picture can be found with regard to the field of engineering. In 1976-1977, there was a proportion of 59 percent new entrant students enrolling in this field at universities of applied sciences and 41 percent enrolling at universities (figures for West Germany only). In 1996-1997, it was 60 percent for universities of applied sciences and 40 percent for universities (figures for East and West Germany).

Another factor which seems to play a role with regard to institutional preference and prestige is the social background of students. Official statistics have shown that a larger proportion of students from blue-collar backgrounds can be found among students at universities of applied sciences in West Germany. Worsening employment prospects in a range of fields for university graduates may play an additional role in inducing students to choose short, practice-oriented
course programmes at universities of applied sciences. This factor might also be important for the increasing numbers of East German students who are choosing to enroll in universities of applied sciences. The unemployment rate of graduates of universities of applied sciences is somewhat lower than that of university graduates; however, if measured by field of study, the unemployment rates hardly vary according to institutional type (B. M. Kehm and U. Teichler, 1995).

Table 16 provides an overview of the development of unemployment in West Germany, by level of qualification, between 1982 and 1993. Unemployment among higher education graduates is lower than average. However, unemployment among women higher education graduates is higher than among men graduates.

Table 16. Unemployment Rates by Sex and Level of Qualification in West-Germany: 1982-1993

<table>
<thead>
<tr>
<th>Level of Qualification</th>
<th>1982</th>
<th>1985</th>
<th>1990</th>
<th>1993</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Men</td>
<td>Women</td>
<td>Total</td>
</tr>
<tr>
<td>Completed vocational training</td>
<td>5.4</td>
<td>4.7</td>
<td>6.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Higher education graduates of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- universities</td>
<td>4.0</td>
<td>3.3</td>
<td>5.7</td>
<td>5.1</td>
</tr>
<tr>
<td>- Fachhochschulen</td>
<td>3.9</td>
<td>3.3</td>
<td>5.0</td>
<td>5.4</td>
</tr>
<tr>
<td>No formal qualification</td>
<td>4.4</td>
<td>3.3</td>
<td>8.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Total</td>
<td>13.7</td>
<td>14.5</td>
<td>12.9</td>
<td>17.2</td>
</tr>
</tbody>
</table>


Another survey has indicated that satisfaction with and use of acquired competencies for professional work and career paths is higher among university graduates than among graduates of universities of applied sciences in the same fields. The latter stated with greater frequency that they could hardly make use of their acquired qualifications or could not do so at all. An additional indicator supporting the higher prestige of universities is that university graduates can expect better career opportunities and a higher income than graduates in the same field of universities of applied sciences. Finally, lifetime earnings of university graduates are estimated to be about 10 to 15 percent higher than those of graduates of universities of applied sciences. Some of the results of the survey mentioned above are indicated in Table 17.

The conclusion that one can reach is that the use of acquired qualifications or competencies and the relationship between education and position can say...
more about differences between universities and universities of applied sciences than about unemployment rates.

Table 17. Graduate Perception of the Relation between Study and Work: Use of Competencies Acquired during the Course of Study and Suitability of Position

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Mechanical Engineering</th>
<th>Economics</th>
<th>Social Work</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uni a)</td>
<td>FH a)</td>
<td>Uni</td>
<td>FH</td>
</tr>
<tr>
<td>Expected use of competencies, at graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly/partly</td>
<td>81</td>
<td>77</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>Hardly/no</td>
<td>15</td>
<td>19</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>Don't know</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Two years after graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly/partly</td>
<td>86</td>
<td>75</td>
<td>80</td>
<td>82</td>
</tr>
<tr>
<td>Hardly/no</td>
<td>14</td>
<td>25</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Four-five years after graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly/partly</td>
<td>82</td>
<td>69</td>
<td>79</td>
<td>76</td>
</tr>
<tr>
<td>Hardly/no</td>
<td>18</td>
<td>31</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>Relation between education and position as expected at graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suitable</td>
<td>59</td>
<td>57</td>
<td>65</td>
<td>62</td>
</tr>
<tr>
<td>Not (fully) suitable</td>
<td>27</td>
<td>25</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td>Don't know</td>
<td>13</td>
<td>17</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Two years after graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suitable</td>
<td>74</td>
<td>54</td>
<td>63</td>
<td>55</td>
</tr>
<tr>
<td>Not (fully) suitable</td>
<td>26</td>
<td>46</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>4-5 years after graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suitable</td>
<td>73</td>
<td>64</td>
<td>67</td>
<td>55</td>
</tr>
<tr>
<td>Not (fully) suitable</td>
<td>27</td>
<td>36</td>
<td>33</td>
<td>45</td>
</tr>
</tbody>
</table>

a) Uni = university graduates, FH = university of applied sciences graduates; surveys conducted from 1983 to 1988.

Chapter 7

THE SYSTEM OF STUDIES

7.1. Organization of Studies and Degree Programmes

In the Federal Republic of Germany, university studies generally take place over two semesters per academic year, each semester lasting six months. During the winter semester, teaching takes place from mid-October to mid-February, and during the summer semester, from mid-April to mid-July. As a rule, the semester periods at universities of applied sciences are somewhat longer, and a few institutions have introduced the "academic year" structure. When classes are not in session, academic staff members are supposed to be doing research and to be preparing seminars and lectures, and students are supposed to be writing extended essays for credit, carrying out independent study, and keeping up with their reading. However, many students also take on employment during these periods.

The main types of classes are the following:

i) Lectures: The professor lectures on a given theme often providing a comprehensive overview, while students are expected to listen, to take notes, and to do additional reading. Attendance is voluntary, and neither examinations are taken, nor are certificates or credits awarded.

ii) Exercise classes: Students participate actively in discussing the subject matter, preparing handouts, or giving short presentations on particular aspects of the subject. Achievement is frequently assessed by a written paper or examination at the end of the semester. Exercise classes often accompany or complement lectures.

iii) Seminars: The structure is similar to that of exercise classes, except that more advanced or more in-depth knowledge (including methodological issues) is conveyed and discussed. Achievement will be assessed by extended essays submitted for grading and possibly oral contributions. Seminars play an important role in the advanced stages of course programmes.

iv) Introductory seminars: Again, the structure is similar to that of exercise classes and seminars, but the subject matter is introduced as
methodology or in order to convey an overview and to familiarize students with the relevant questions and issues. Achievement is assessed by essays or by written examinations. Introductory seminars are offered during the first stages of study or degree programmes and are often required as prerequisites for participation in seminars.

v) Study groups or tutorials: These may be provided additionally at universities, notably in areas covered by lectures which are attended by large numbers of students. Frequently, junior academic staff members or senior students are in charge of such classes.

vi) Practical courses or laboratory work: These are common in the natural sciences, engineering, and the medical fields. Students learn experimentation and practical skills in a supervised setting. They receive certificates or credits based on reports submitted.

vii) Field courses and excursions: Students in agriculture, architecture, geography, etc., must participate in such classes in order to explore special fields of interest outside the institution and to learn practical skills. The status of field courses Is similar to that of exercise classes.

Apart from these varied types of classes, the universities of applied sciences and the comprehensive universities require their students to explore prospective professional fields for a certain period of time (up to two semesters). These explorations often take place in the form of practical work placements in companies or businesses or in sectors of public services and are an obligatory part of course programmes. In various fields of study (e.g., engineering, architecture, teacher training for vocational education, etc.) universities also require their students to spend practical periods in occupational fields related to their studies. These practical periods are either completed prior to the beginning of studies or during semester holidays.

An undergraduate study or degree programme is basically divided into two parts. The first four semesters serve to familiarize the student with the subject matter and methodology of the chosen discipline and are typically completed by a written or oral intermediate examination. Students in degree programmes leading to a diploma (Diplom) typically take "pre-diploma" (Vordiplom) examinations at that point (cf. 7.2). The second half of the programme is dedicated to more advanced and also more independent studies with a higher proportion of choices in terms of specialized fields. Study and examination regulations for each course programme prescribe the number of classes and the proportion of required and optional courses to be taken by each student before he or she can take the final examination (cf. 7.2).
7.2. Student Assessment, Learning, and Examinations

The number of course hours students take per semester week varies according to subject and institutional type. It is, for example, higher in the medical fields, the natural sciences, in engineering, and at universities of applied sciences than it is in the humanities and the social sciences. According to a survey conducted in 1994-1995, students at West German universities take an average of twenty-one course hours per week (of forty-five minutes duration each) in the medical fields, eighteen course hours per week in the natural sciences, law, and engineering, and fourteen to fifteen course hours per week in the humanities and the social sciences.

Students in East German higher education institutions take a higher average number of course hours per week than do students in West Germany. At West German universities of applied sciences, students take an average of 23.7 course hours per week. At East German universities of applied sciences, the figure is 26.3 course hours per week. Students in universities take an average of 17 course hours per week in West Germany and 21.7 course hours per week in East Germany (Bargel et al., 1996).

Studies at universities of applied sciences as well as studies in the natural sciences and in engineering are usually highly structured. Attendance is monitored strictly, and assessment is intensive and continuous. There is also an increased number of mandatory classes to be taken and more regulations as regards the overall curriculum.

In contrast, course programmes in the humanities and some in the social sciences rely heavily on independent study and grant their students a high degree of choice in putting together courses of study, according to individual interests. In general, it is typical for classes of the seminar type in the natural sciences and in engineering at both types of institution to end the semester with a written test called the Klausur. If a student fails this test, he or she must either re-take the test or repeat the whole class. If a student takes and fails three times the written test of a seminar that is a mandatory part of the study programme, he or she is barred from further study in that specific programme. Classes or seminars in the humanities can also end with a Klausur, but the more typical form of assessment is an extended essay, which must be submitted by the student towards the end of the term or after it has ended, on one of the topics that was discussed in class during the semester.

The study and examination regulations usually prescribe in a more or less detailed way how many certificates or credits students have to accumulate and
which areas of the chosen subject or subjects have to be covered before they may start taking examinations. Upon first enrollment, students usually have to opt for one or possibly more than one subject which they want to study up to the degree level in a specific degree programme. A Diplom degree is granted in only one major discipline (possibly including one or more minors). For teacher training (first state examination), students must enroll in two subjects, and for the Master's Degree, they are usually required to have studied three subjects.

A few universities offer an optional phase of general transdisciplinary studies, called studium generale, before or parallel to specialization. These general studies are based mostly on lectures, seminars, or exercise classes in the liberal arts and humanities or cultural sciences and attempt to link a broad range of social and cultural issues to highly specialized subject matter. Generally, however, upper secondary schools are expected to provide a broad outlook so that specialization can start immediately upon enrollment at a higher education institution.

As a rule, there is an intermediate assessment after the first half of a course programme. In the case of Diplom degree studies, a certificate is awarded, called a pre-diploma, that serves only the internal procedures of the system. In some disciplines, e.g., engineering or economics, students have to pass a number of written examinations in order to be awarded this certificate which entitles them to take advanced undergraduate classes. In other disciplines, mainly teacher training in the humanities, the first half of the degree course is completed by a so-called "intermediate examination". This examination is not necessarily a regular examination but might simply be a person-to-person talk with a professor about achievements and study plans as well as a demonstration of having earned a sufficient number of certificates or of credits to be accepted for participation in advanced undergraduate seminars.

The "pre-diplomas" or "intermediate examinations" also offer the best opportunity for a change of institution or a period of study abroad. Since, within Germany, the achievements and credits from one institution are generally recognized by all other institutions of the same type, students are encouraged to take advantage of a certain degree of mobility. Change of institution is possible at every stage of an undergraduate course programme. However, surveys have shown that only about 15 percent of students actually change institutions, and most of them who make a change do so only after the first halves of their courses of study have been successfully completed.

In the German system of higher education, successful graduation and the award of a degree is not based on continuous assessment or on the accumulation of credit points, even though some pilot projects are currently underway to introduce this procedure, often in combination with first attempts at
modularizing studies. As a rule, in each field or subject a number of classes must be successfully completed before the final examination can be taken. However, not all the classes completed count as part of the degree as such, only those which emphasize the outcome of the final thesis and the written and oral examinations at the end of the degree course. Students are mostly free to choose the supervisors whom they wish to have for their final theses. These persons, in turn, must accept the students as examination candidates.

A supervisor will discuss a topic for a thesis with the student and conduct some of the written and oral examinations. Examiners from the student’s minor subjects and from other subject areas of the major subject will only conduct written and oral examinations. An exception to this pattern can be found in medicine in which examinations are centrally organized and set in the form of multiple choice tests in the various disciplinary fields.

7.3. Curricular Innovation

Curricular innovation in higher education institutions in the Federal Republic of Germany can take three different routes depending on how it was initiated: through the department offering the respective course programme, through the Land, or through national bodies.

A department wishing to revise a curriculum might propose new study and examination regulations. The university Senate would discuss the proposal and comment on it, but would have no formal power of approval or rejection. This power lies with the Ministry of Education or of Higher Education of the Land in which the institution is located. The Ministry to which the draft is submitted might reject the proposed examination regulations considering them to be incompatible with the degree framework regulations of the respective field of study. Up to 1985, the Land was also in charge of the general approval of study regulations. Since then, however, the responsible Ministry only examines their formal and legal soundness.

The Land Ministry responsible for higher education might initiate curricular reform as well. For this purpose, academic representatives of the respective field will be invited to informal meetings and hearings, and a study reform commission will be established with the remit to develop framework regulations for curricula of the respective field of study.

Finally, there is the possibility of establishing framework regulations for course programmes at national level. The Standing Conference of the Ministers of Education of the German Länder and the Rectors’ Conference jointly form a General Commission for the Coordination of Studies and Examinations. This
Commission will decide, among other things, which discipline commissions for individual fields of study should be established. In addition, the Assembly of the Deans is consulted.

Typically, a national study reform commission for an individual discipline or field of study consists of four professors, one junior academic staff member, one student representative, two representatives of Länder governments, and - in an advisory capacity only - one representative each of the Federal Government, of the employers, and of the unions. Such a commission will draw up a curricular framework and might establish sub-commissions for universities, on the one hand, and universities of applied sciences, on the other, in the process. The regulations eventually recommended will indicate specifications according to the type of higher education institution. Finally, the Standing Conference of the Ministers of Education of the German Länder will reach a decision as to the draft.

From 1978 until the implementation of the 1985 revisions of the Framework Act for Higher Education in the late 1980's, two different mechanisms for curricular innovation and coordination existed at national level in West Germany: the Study Reform Commissions in charge of curricular innovation, on the one hand, and the Joint Commissions of the Standing Conference and the Rectors' Conference responsible for the development of framework regulations for university degree course programmes, on the other. These two types of commissions have merged into a new setting which has also strengthened the role of higher education institutions in curricular innovation vis-à-vis the government.

It can be noted that currently curriculum innovation not only takes different routes in East and in West Germany, but also varies among the different Länder. Many institutions in East Germany are trying to attract more students and have initiated a number of new and innovative, often interdisciplinary, study programmes that they are advertising as a factor of added value. In particular, the newly established East German universities of applied sciences have been active in this field.

Curricular innovation in West Germany is being promoted along somewhat different lines. Typical issues here are the internationalization of contents and the teaching of classes in languages other than German, reform of the classical structure of German degree programmes including the respective course programmes (i.e., Bachelor's and Master's Degree structures), and - in the context of debates that are beginning around a new concept of élite promotion and privatization - a stronger orientation toward the practical usefulness of qualifications acquired and closer co-operation between higher education and industry. The various German Länder are also displaying a tendency to drift apart in their approaches to curricular innovation. Although methods and instruments vary, it can be noted that a shared concern is a reduction of the
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duration of studies through curricular reforms and changes in the study and examination regulations.

The formal role of the employment system in curricular innovation is weak so far as the private sector of the economy is concerned. Before the establishment of Study Reform Commissions in 1978, representatives of the employment system were not formally involved in the decision making process, even though they might have played a strong informal role in fields such as engineering, chemistry, pharmacy, and architecture, i.e., the classical professions outside the civil service. As far as the public sector is concerned, governmental influence is very strong. Decisions concerning relatively strict framework regulations for medical education, law, teacher training, public administration, social work, etc., are made on the basis of specific formal procedures in which the ministries supervising the respective occupational sector of mainly the Civil Service dominate.

7.4. Postgraduate Training and Education

The pattern of graduate studies at higher education institutions in Germany consists basically of two types: programmes offering additional, supplementary, or further education (cf. 3.2) and programmes or paths leading to a doctorate or to a Habilitation.

Universities not only train candidates for their own future staff needs, but also for extra-university research institutions, for departments of research and development in enterprises, and for other highly qualified positions in the labour market. In some subjects, for example in chemistry and medicine, the doctorate is the typical degree required to start a career outside the university. However, as a rule it counts as the first stage of qualification for future academic staff.

The number of doctoral degrees awarded in West Germany rose from 11,418 in 1975, to 20,038 in 1992 (including medicine), i.e., the number almost doubled. During this period, the number of doctorates awarded to women rose from 1,799 in 1975, to 6,178 in 1992; i.e., it more than tripled, thereby bringing up the proportion of women with doctoral degrees from 15.8 percent to 30.8 percent. In 1996, the number of doctoral degrees awarded was 22,849 in the Federal Republic of Germany (East and West), of which 7,104 (31.1 percent) were awarded to women.

The process by which one earned a doctoral degree in the German Democratic Republic was called Promotion A in contrast to Promotion B that equaled the formal process for earning the West German Habilitation. The paths by which one earned a doctoral degree varied to a considerable extent, and
even though nine out of ten doctoral degrees were awarded, in 1989, by universities, seven different ways existed for doing so. These included research scholarships, élite promotion, external studies, and a small percentage of doctoral candidates who did their research in industry.

By the end of the 1960's, a basic system for the promotion of junior academic staff through postgraduate programmes had been established in the German Democratic Republic. Between 1968 and 1970, the awarding of doctoral degrees increased by two-thirds, from less than 2,900 to more than 4,700. During the same period, the proportion of women who were awarded a doctoral degree increased from 18.5 percent to 30.3 percent. Between 1970 and 1974, the number of doctoral degrees awarded increased again (to 17,130) and then decreased somewhat, during the next five year period (to 15,519). In the next two five-year periods (1980 to 1984 and 1985 to 1989), the number of doctoral degrees awarded in the German Democratic Republic rose again to 18,514 and to 21,767.

The proportion of women who were awarded doctoral degrees during these periods changed to a considerable extent. In the first period (1970 to 1974), it was 20.3 percent having gone down more than 10 percent if compared to the preceding three-year period. Following that period, it increased again steadily to 23.7 percent (1975-1979), to 32.9 percent (1980-1984), and to 37 percent in the period between 1985 and 1989. The highest proportion of women being awarded a doctoral degree in the German Democratic Republic in 1989 could be found in languages and cultural sciences (54.4 percent), followed by the arts (51.6 percent) and medicine (50.8 percent). In the same year, about one-third of the doctoral degrees in sports, law, economics and social sciences, agriculture, forestry, food sciences, and veterinary medicine as well as more than one quarter of the doctoral degrees in mathematics and natural sciences were awarded to women. Finally, 9.4 percent of the doctoral degrees in engineering were awarded to women, a figure which considerably surpassed that for West Germany (cf. Burkhardt and Scherer, in, G. Buck-Bechler et al., 1997).

Between 1989 and 1992, the number of doctoral degrees awarded at East German higher education institutions fell by one-third owing to ongoing transformation processes and exchanges of academic staff. However, since 1993 the situation is improving, and the number of doctoral degrees awarded is again increasing.

In 1995, altogether 22,387 doctoral degrees were awarded in both the old and the new German Länder, of which 7,049 (31.5 percent) were awarded to women.

Differences in the various fields can be observed by comparing the proportion of students successfully completing a doctoral degree with the number of students
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successfully completing first degree studies in the same discipline. For West Germany, the proportions vary between 50 percent in medical fields and chemistry and less than 10 percent in theology, psychology, pedagogy, law, economics, and architecture. One of the reasons for this divergence is that in some disciplines with high proportions of doctorates it is almost impossible to gain employment in the given field if one does not hold the doctorate.

In some disciplines, mainly in the liberal arts and the humanities, the proportion of doctorates awarded in West Germany declined between the mid-1970's and the mid-1980's, notably because with the end of expansion in higher education, academic career prospects stagnated or even became next to non-existent. The proportion, however, has risen slightly again since then. The general decline in the percentages of those continuing on to a doctoral degree, having completed their first degree studies, may also be a reflection of the fact that, according to estimated research expenditures, the proportion of research conducted at West German higher education institutions has decreased from more than 18 percent of all basic research in 1975, to 13 percent in the late 1980's, while there has been a considerable expansion of research and development outside universities (B. Krais and J. Naumann, 1991).

Between 1977 and 1996, the average age upon completion of the doctorate in West Germany rose from 31 years to 32 years with considerable differences among the various disciplines. In 1996, it was lowest in the medical fields (31 years) and highest in physical education and sports (35.9 years), in the philologies and the cultural sciences (35.3 years), and in the fine arts (34.6 years). The average age upon completion of a doctorate in mathematics and natural sciences, in 1996, was 31.3 years (Statistisches Bundesamt, 1996).

The traditional pattern for the acquisition of a doctorate may vary not only according to the field or discipline in which study and research are undertaken, but also according to the university by which the degree is eventually awarded. As a rule, a highly successful first degree with good grades is a prerequisite. Once a candidate has been accepted by a professor who is willing to supervise his or her work and once both have agreed on a topic for the thesis, called a dissertation, research or experimental work can start. This work is planned to run between two and three years, but the actual amount of time needed is often up to five or six years, depending on a number of external conditions, e.g., quality of supervision, access to computers and laboratories, the financial situation of the candidate, etc. Candidates normally do not have to fulfill special course requirements. Their work is considered to be guided and supervised, but is generally independent research.

Frequently, candidates work on subjects in the fields of expertise or research of their supervisors. They may also participate in special small group seminars, in
which the work in progress is discussed. Doctoral candidates work either on the basis of a part-time and temporary teaching and research assistantship or on the basis of a scholarship. They may also have some other kind of part-time job. The need to earn money leads to a lengthening of the time required to complete a dissertation. There are no data about drop-out rates, but these are considered to be very high. Doctoral degrees in the medical fields are an exception to this pattern. Candidates in medicine do supervised research, often during their internships in hospitals, and publish the results in the form of a short paper for which the doctoral degree is usually awarded after an additional oral examination.

Upon the recommendation of the Science Council, more than 200 organized graduate programmes, called Graduiertenkollegs, have been established, since the end of the 1980's, to speed up graduate training through the successful completion of degrees and to make the training more efficient than in the past. An initial trial phase during the second half of the 1980's, in which only a few of these programmes were established as pilot projects, led to the realization that an improved organizational framework, more intensive supervision and counseling, as well as more exchange and communication among candidates in the same field might not only reduce the length of time for completion of the thesis but also the number of drop-outs.

As a rule, universities wishing to set up such programmes must submit an application, on a competitive basis, for the establishment of organized graduate programmes that then goes through the machinery of the approval system of the German Research Association. Upon approval, the respective university, having guaranteed facilities and professorial commitment, can offer research grants, provided by the German Research Association, for two to three years to prospective candidates. Frequently, these graduate programmes are interdisciplinary and consist mainly of doctoral candidates. Some also offer a few post-doctoral fellowships for candidates working on their Habilitation, the formal post-doctoral qualification required in Germany to become eligible for professorial positions at universities.

Many of these graduate programmes have been quite successful in offering a more structured graduate education and in producing successful graduates in a relative short period of time. At the beginning of the 1990's, the financial burden of unification and the costs required for restructuring the East German higher education system led to financial cut-backs in the funding of West German graduate programmes through the German Research Association. A number of programmes was discontinued, and the number of available scholarships for doctoral and post-doctoral candidates was reduced. Currently, some 330 programmes are supported, of which 58 are located at East German higher education institutions (17.6 percent) and 272 at West German institutions (82.4 percent). However, these programmes are not meant to be substitutes for
the traditional paths leading to a doctoral degree through part-time teaching and research positions or through scholarships, but rather to supplement them.

As a rule, universities are autonomous in establishing regulations for their doctoral degrees because these are considered to be academic titles. Generally, the dissertation has to be submitted for grading to two referees, one of whom being the supervisor. If the referees disagree about the grade, a third reviewer will be appointed. One of the referees can be a professor from another university. In addition, the dissertation has to be made public in the respective department, so that every professor can comment on it. Once the dissertation is accepted, the candidate has to undergo an oral examination consisting, in most cases, of a public defense of his or her thesis. In some cases, an oral examination in at least three disciplines can be substituted for the dissertation defense. Candidates are required to publish their theses before having the right to use their titles. A doctoral degree usually certifies the ability to do independent research and is one of the main prerequisites for an academic career.

As is the case with doctoral degrees, a large proportion of Habilitationen are completed in medical fields. The number of Habilitationen completed each year has risen continuously and amounted to 1,607 in 1996 of which 208 (12.9 percent) were submitted by women, and 562 (35 percent) were completed in the medical sciences. Although the promotion of women in academic careers is an issue in Germany, the proportion of women gaining access to the highest academic positions has not increased to any great extent.

For the promotion and qualification of future professors, a number of scholarships are available for individual research projects or for research teams. The main path for completing a Habilitation is, however, a temporary academic position of six to eight years, called an assistantship, held at a university. The status of this position has changed twice as a consequence of various reforms. During the reform phase following the student movement, it was turned into an independent position but was again linked to a full professorship or a chair in later reforms of academic staff structures.

An assistant has certain teaching obligations and is supposed to assist the professor in his or her research, but devotes at least half of the time available to research for the Habilitation.

The Habilitationschrift consists of a substantial piece of original research which has to be evaluated by three full professors upon completion. In addition, an oral defense and a public lecture are required. If this procedure is successfully completed and accepted by the department, the right, called the venia legendi, is granted to give public lectures. This award, however, does not necessarily mean an entitlement to a professorship or to any employment at all.
As the average age at completion of the Habilitation has also risen to around 40 years, some debates are currently going on in Germany as to substitutes for the long process of Habilitation with its social and employment insecurity at a relatively advanced age. Other forms of proof of qualification and performance are being considered. Some models being discussed are closer to the American structure of assistant, associate, and full professor, with regular reviews of performance (cf. Daxner, 1996). Increasingly, nowadays, proof of teaching experience and qualifications are required of candidates for professorships; however, preparation for an academic career is still largely based on research performance.

The quantitative development of the Promotion B in the German Democratic Republic, although equivalent to the West German Habilitation, differed from that of Promotion A. The number of persons being awarded this postdoctoral degree between 1967 and 1970 increased by 150 percent from 323 to 485. The proportion of women remained under 10 percent and even decreased slightly. Most of these degrees were awarded in mathematics, natural sciences, and medicine. However, between 1971 and 1989, the situation changed. In the face of an expected high proportion of retirements among professors, junior academic staff members were needed having adequate qualifications to replace them. Thus, the number of Promotion B awards tripled between 1970 and 1989. In the same period, the proportion of women successfully completing a Promotion B rose from 6.1 percent to 14.4 percent (Burkhardt and Scherer, in G. Buck-Bechler et al., 1997).

In contrast to the number of doctoral degrees being awarded at East German higher education institutions, the situation with regard to the number of Habilitationen has not improved. Between 1989 and 1994, it has decreased continuously from 790 to 92, i.e., by more than 80 percent.
Chapter 8

GERMAN HIGHER EDUCATION AT THE TURN OF THE MILLENNIUM: PROBLEMS, ISSUES, AND PROSPECTS

8.1. Introduction

Following controversial debates, many reform experiments, and the founding of many new institutions of higher education in the late 1960's and early 1970's, the West German higher education system had moved into quiet waters by 1977. As already mentioned, agreement was reached that higher education institutions should absorb a demographically determined overload of students for about a decade and, that in turn, structural, curricular, and administrative experimentation during that period should be limited or even stop completely.

In the late 1980's, it became obvious that the number of students was not likely to decline to the level expected a decade earlier. Rather, the proportion of entering students of the respective age cohort increased. In addition, the average duration of study had become considerably longer, while staff and material resources continued to stagnate. The feeling spread that the various problems of West German higher education tended to get worse. These phenomena lent support to the view that higher education in the Federal Republic of Germany was faced with a decline in quality because the available time for research was reduced and study conditions had worsened.

The debates about the weaknesses of West German higher education and about the need for improvement almost completely lost momentum during the course of German unification in 1990. For a few years, almost the full attention of politicians, planning committees, and experts was absorbed by issues concerning the transformation of East Germany.

In the case of East German higher education, attention was now focused on efforts to overcome outdated technological standards, over-staffing, the segmentation of research and teaching, as well as the political biases of higher education and research. Such structural discrepancies in the new East German Länder as twelve years of prior schooling (rather than thirteen years as in the West), enrollment rates half as large as those in the West, the lack of institutions equivalent to universities of applied sciences (Fachhochschulen), and the
concentration of research in academies were on the agenda. All Western experts emphasized, more or less, that some elements of the old system in East Germany should be preserved, for example, the prior schooling of twelve years, the lower staff to student ratios, and the avoidance of substantial prolongation of study duration. Most efforts, however, focused on the rapid transplantation of the rationales of the West German system of higher education into the East, where lack of resources and the abundance of staff, many of whom were recruited and promoted for reasons of loyalty to the former regime, were regarded as the crucial obstacles. No matter how the situation and activities to redress it were assessed in detail - nobody challenged this priority in general.

In the second half of the 1990’s, the pending issues in West Germany were put back on the agenda, with, however, a somewhat different shape and thrust. One of the major issues is that of the long average duration of studies and the relatively high age of graduates. Several models for a solution to this problem have been developed and are being widely discussed (cf. 8.6). A second issue that is attracting close attention in debates about higher education reform is that of management within higher education institutions. It is composed of several themes (cf. 8.3). A third issue, namely that of evaluation and quality of teaching, has become more prominent in current reform debates owing to the substantial as well as substantive evaluation and screening exercise of East German higher education and research carried out by West German experts. In the past, the argument was made that the West German system of higher education could rely on standardized and formal procedures for ex-ante evaluations in staff appointments and promotions, approval of course programmes and examination regulations, as well as on an established system of peer review for the award of research grants. The comprehensive assessment of East German higher education and research has contributed significantly to a more critical scrutiny of the work and functioning of departments and of the quality of teaching (cf. 8.6).

In an interpretation of this state of affairs, it would be inappropriate to recall, on the one hand, the stereotypical external claims made about the inertia of higher education institutions, and on the other hand, the typical justification that dynamic changes take place in the contents of research and studies, whereas formal elements have to be stable to ensure innovation within the disciplines.

Rather, three major causes can be cited for the reluctance to undertake a substantial reshaping of higher education in West Germany. First, the academic freedom of the individual professor is well guaranteed. This guarantee reflects, among other things, the experience of the period of National Socialism and therefore will not easily be changed in the name of "accountability" and "efficiency". Second, the experience of a high degree of experimentation in higher education in the late 1960’s and during the 1970’s still reinforced a widespread skepticism in the first half of the 1990’s in regard to changes in the

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structure of the system, institutional governance, etc. Third, the network of Federal Government and Land responsibilities, of planning and advisory bodies, of negotiations between institutions of higher education and Land governments, and of formalized decision-making within the higher education institutions, originally designed around 1970 for the purpose of stimulating reforms, turned out to neutralize all efforts at innovation once a minimal consensus on higher education reforms was lost and controversies increased about scarce resources. In addition, as far as the role of governmental steering of higher education is concerned, the Land-Federal Government structure makes it difficult for political actors to reach a consensus and to eventually change the system (B. M. Kehm and U. Teichler, 1998).

Overall, it can be said that, after a considerable period of reform inertia, followed by a lack of consensus about the direction of reforms in higher education, things are finally starting to move. An atmosphere of renewal and innovation has been created, and it can be felt at the national, the Land, and the institutional levels. Although a consensus has not yet been achieved, in regard to all issues pending, among the relevant actors involved, it seems that a new phase of higher education reform is beginning with the aim of modernizing German higher education and making it increasingly competitive and attractive. The following sections will present the most important issues currently under discussion.

8.2. Governmental Steering and Deregulation

In international comparisons, the system of higher education in the Federal Republic of Germany is traditionally regarded as being characterized by close state control and regulation. Although the "internal" affairs of higher education institutions are part of the institutional self-governance mechanisms, the "external" affairs (e.g., funding, staffing, organization) are subject to relatively detailed, albeit decentralized, state regulations. An important reason for this supervision is the constitutional guarantee to provide equal living conditions in all the German Länder and opportunities for national mobility without any risk of recognition problems. State regulation has given rise to the legal homogenization of all institutions of one type and consequently to the rejection of institutional ranking.

In recent years, however, growing criticism of institutional inertia and inability to reform, predominantly in West Germany, has prompted political actors to search for new solutions in terms of innovation and more flexible mechanisms to deal with problems. The Federal and the Land governments are currently trying to reduce "over-regulation" and to introduce competitive elements into a rather homogeneous system. Deregulation and differentiation
are the key concepts in the context of these attempts (cf. B. M. Kehm, J. Enders, and U. Schimank, 1998).

Changes in the pattern of funding (e.g., lump sum budgets and considerations concerning indicator-based formula funding) or experimental clauses in the higher education laws of various Länder are assumed to result in a greater degree of institutional autonomy that can be used for innovation and differentiation. Some observers view these developments as withdrawal of the state from one of its most important tasks which, at one time, was considered to be the basis for higher education expansion and equal opportunity in higher education. Others argue that there are no market mechanisms in German education and higher education, that artificially created markets will only lead to an artificial competition of higher education institutions among themselves, and that the resulting situation will be a further stimulus for the state to withdraw from its responsibility to finance higher education. A third set of arguments, finally, welcomes the combination of governmental deregulation and institutional differentiation as an overdue break with the fiction that all higher education institutions of one type are basically equal, i.e., that they offer the same standard in terms of study and degree programmes (cf. Daxner, 1996). Overall, the multitude of projects to develop institutional profile building and various approaches to reduce governmental steering in the German Länder seem to indicate the trend that institutional homogeneity is to be abandoned in favour of differentiation.

At first glance, the reaction of the higher education institutions themselves to these new developments appears paradoxical. The activities of the German Rectors' Conference with regard to profile building and institutional differentiation, on the one hand, are welcomed and supported, while institutional rankings and comparisons carried out in studies commissioned by the mass media are widely rejected, on the other, even by those institutions that occupy favourable positions in such exercises. The underlying trend, however, is to keep external stakeholders as much as possible outside these newly emerging attempts at structural reform and differentiation and related debates and rather to discuss respective changes - including those in the concept of quality - within trusted circles of peers and recognized experts.

The ambivalent attitude, that can currently be noted, of many actors in higher education and higher education policy vis-à-vis issues of deregulation and differentiation is possibly best explained by the following four factors influencing not only debates and decisions but also actual changes:

i) Concepts of market and differentiation continue to be rather unfamiliar to the German higher education system, and most actors have hardly any experience in terms of the respective procedures and processes.
ii) There is no consensus concerning the character of indicators on which
differentiation could be based:

iii) So far, political actors in the field of higher education have not clearly
indicated that they are aiming at renouncing the principles of legal
homogeneity and basic equality of all institutions of one type.
Furthermore, there are no suggestions in terms of what might happen to
the potential losers in a system of competition and differentiation.

iv) The first attempts at institutional profile building currently taking place are
still rather timid because no experiences with strategies of self-marketing
and of niche-marketing have been accumulated. Possibly, the recent
UNESCO World Conference on Higher Education will prompt some large-
scale efforts in this respect.

8.3. Institutional Autonomy

In the framework of current debates about a "legitimation crisis of German higher
education institutions", one finds a complex pattern of reciprocal reproaches and
perceptions of acute crisis among the actors involved which is difficult for foreign
observers to analyze. If one examines the current reasoning and arguments, one
notes that as compared to the last large-scale reform phase between the end of
the 1960’s and the mid-1970’s, the parameters according to which performance,
quality, and relevance of higher education are assessed have changed
considerably. In contrast to the previously dominant inner-directed scientific and
academic criteria, an increasing number of criteria for relevance in teaching and
research are being postulated by external stakeholders. Basically, the debates are
centered around four themes within which certain concerns are expressed.

First, there is a widespread feeling that higher education institutions should
become more efficient and would do so if academic freedom would cease to
include the provision that professors can hardly be made accountable for their
activities and that only the extreme misuse of rights and privileges can be
redressed.

Second, the belief in the virtues of a more or less homogeneous higher
education system is eroding. The development of specific profiles for individual
universities and universities of applied sciences, however, will require a strong
managerial power within the individual institutions.

Third, governmental planning was less successful in the past than it had
been hoped and expected. As in other countries, a shift of the balance of power
towards the institutions themselves is frequently advocated.
Fourth, most observers agree that academic self-governance - regardless of whether it is run more or less exclusively by professors or shaped by participatory models - tends to avoid far-reaching decisions concerning priorities. Thus, reduction of governmental involvement and control seems to be feasible only if the professorial guild and the committees in higher education institutions transfer some of their powers to presidents and deans who then become managers and acquire a more professional role in this respect.

In the face of continuously increasing student numbers, stagnating or even declining material and staff resources, and growing societal demands and requests for services, higher education institutions have been confronted with an increasing discrepancy between what they feel they can do and what is expected of them that has rapidly turned into a perception of deep crisis. The growing public and political criticism concerning their lack of efficiency and quality has aggravated the situation to one in which a crisis of funding and a crisis of legitimation have become intricately woven together. On the side of the responsible political actors, efficiency and legitimation tend to be in the foreground of debates, while higher education institutions emphasize the funding issues. Problem solving is made difficult because of these radically divergent views (cf. B. Kehm, J. Enders, and U. Schimank, 1998).

The new relationship between efficiency and legitimation is expressed most clearly in the debate about an increased institutional autonomy. Two sets of measures are supposed to provide favourable conditions for reforms and institutional innovation in this context.

First, a withdrawal of the state from certain areas of higher education which are traditionally characterized in Germany by a high degree of regulation and detailed control is being publicly discussed and advocated as an increase in institutional autonomy. However, a close look at respective models and pilot projects may indicate that these new areas of autonomy are not granted unconditionally. In fact, there are numerous indications that state control and regulation are moving into areas that previously were not or were very little subject to such control. New forms of institutional accountability are being introduced in order to provide proof of a responsible use of resources and newly acquired leeway. The phenomena can be characterized best by the notion of "conditional autonomy" that is granted in the framework of a shift of state control and regulation from inputs and processes to outputs.

Second, a strengthening and a professionalization of institutional management, including the experimental introduction of boards of trustees, is expected to enable higher education institutions to improve their capacity for strategic planning, to build up an individual profile which can be used for purposes of marketing, and to coordinate their organizational and administrative
processes in an improved and a more flexible way. Still, some observers of these trends fear that such measures will lead to an end of the principles of collegiality in academic self-governance and the participatory model of the group university.

But the developments that can be observed with regard to a higher degree of institutional autonomy and flexibility also have a number of productive and innovative effects beyond further institutional differentiation, for example, changes in administrative procedures or opportunities to generate additional institutional income. Overall, such changes can be noted not only in the relationship between higher education institutions and the state but also in terms of a general opening up of the system to external and international modes of operation.

8.4. Securing and Expanding Resources

Education, science, and research belong to those areas of governmental responsibility in Germany which were forced to accept considerable cuts in funding in the face of the immense costs incurred through German unification and the growing general stringency of the public purse. Higher education institutions have therefore begun to search for opportunities to diversify their funding bases in order to improve resources and income. In some of the German Länder, pilot projects are currently underway that are experimenting with lump sum budgets and the introduction of regular accounting procedures. In addition, models of indicator-based formula funding are under consideration in some of the German Länder.

Ambivalent signals are coming from those institutions that are involved in projects that are introducing lump sum budgets. On the one hand, the potential is welcomed for strategic, i.e., medium-term and long-term, financial planning as well as for a higher degree of flexibility in the allocation of funds within institutions. On the other hand, allocation conflicts previously solved in direct negotiations with the responsible state ministries have been shifted into the institutions themselves because lump sum budgets have not led to an increase in funding, sometimes not even to state allocations of funds at the same level as in the past. At the same time, substantial changes in institutional administration are necessary, and staff members have to be retrained in order to be able to deal with the new patterns of accounting. Allocation conflicts can also lead to a higher degree of competition among departments and among the various status groups within the higher education institutions, an effect which might be politically intended but might also threaten the patterns of internal governance and self-governance. Such a threat is all the more a possibility as there are no generally or even widely accepted and valid criteria for the allocation of funds. Experts in
various countries have emphasized that academic standards of quality and economic criteria of efficiency cannot be linked in any single set of indicators.

The model of lump sum budgeting predominantly serves the purpose of administering and allocating, in a more flexible way, those financial resources for higher education institutions that are determined and provided by the government. In addition, governmental policy seeks to introduce a certain dimension of performance-related funding into the pattern of higher education funding. This differentiation can be undertaken fairly easily on the basis of lump sum budgeting, because a certain percentage of the overall funds can be provided on the basis of performance and thus constitute an incentive. In contrast to government funding, the attempts of higher education institutions to generate income themselves serve the purpose of improving and extending an existing resource base. In recent years, a multitude of forms and ways to generate additional income has emerged. These include professorial chairs that are financed by industry, the requirement that overhead costs be paid in cases of research that is carried out for and financed by third parties, and the establishment of joint ventures with enterprises to develop research results up to marketable or patentable levels. Such developments are widespread but are still often in a trial phase. No serious controversies are associated with the issue of income generation through a diversification of funding, except for certain problems in financial administration and accounting in regard to such income in the majority of those institutions that still have line item budgets.

The issue of tuition fees is probably the greatest controversy currently underway in German higher education. Many actors openly or secretly advocate the introduction of tuition fees, both for reasons of an appropriate and legitimate contribution of students to the costs of their education or for reasons of compensation for being able to have higher income in later working life. Sometimes the introduction of tuition fees is also regarded as a contract of generations or - in the form of transferable vouchers - as a means for promoting greater competition among higher education institutions. Most institutions would welcome the introduction of tuition fees in order to improve their financial resources, but they have rejected them so far because they fear that the Land governments would indirectly appropriate the additional funds through cut-backs in the provision of basic resources. The majority of students reject tuition fees as an additional disadvantage for children from low income families that disregards the principle of equality of opportunity in education, because substantial improvements of the BAföG-system and an expansion of the range and number of available scholarships are currently not envisaged. The governments of the Länder hope that the introduction of tuition fees will not only ease the financial burden of higher education funding, but also promote more competition among higher education institutions. The models and calculations that have been presented so far are as manifold as the arguments for or against the introduction of tuition fees.
Although the general principle of free access to all public education institutions - provided the required entrance qualifications can be met - has already been broken in many ways, the current controversy seems to be preventing an introduction of tuition fees into German higher education in the near future. Nevertheless, a safe assumption can be made that the issue will remain on the agenda until the barriers are removed and some kind of compromise can be found. In the long run, an introduction of fees will probably take place, possibly, at first, in only some of the German Länder. For the time being, however, the new Framework Law rejects any idea of tuition fees.

8.5. Evaluation and Quality of Teaching

In principle, the unity of teaching and research continues to be an important aspect of the idea of the German university. However, one can also note that there is a visible trend whereby the teaching and the research functions are drawing apart because a sensible relationship between the two cannot be guaranteed any longer in the face of increasing student numbers and stagnating resources, and because the character of mass higher education in which the vast majority of students are no longer trained for research and other tasks in science and scholarship makes adherence to the unity of teaching and research in universities increasingly meaningless. The changed expectations of the economy and of society regarding the qualifications of higher education graduates are further contributing to the trend that the unity of teaching and research as a principle of university education is less in the foreground than demands for an enhanced degree of practical orientation. In the relevant literature, these issues are typically discussed as questions of academic versus vocational drift in higher education.

The German debate in this context is once again controversial. Professors and other academic staff members are confronted with criticism that they do not take sufficient interest in teaching and thus neglect this function in favour of research because they believe that prestige and reputation can only be gained through success in research. In turn, professors and other academic staff members complain about being overloaded with teaching and administrative duties that do not leave them with sufficient time to engage in research even though this activity is a part of their duties. Among students, but also in public debates, the common assumption is that given existing conditions, the quality of teaching suffers more than that of research. Better teaching performance is demanded, and the demands are supported by campaigns for increased evaluation and quality assessment and improvement. Proof of qualification in teaching has become an important part of the process of Habilitation.
Apart from general dissatisfaction with the quality of teaching at German higher education institutions, in particular at universities, mass higher education coupled with stagnating staff resources has also tended to be regarded as an important factor in the increasingly long duration of studies and relatively high drop-out rates. In recent years, several models to reduce the duration of studies have been proposed, even though, so far, none of them has been properly implemented or has displayed any visible success.

First, there was the claim that a clearer structure for degree programmes, i.e., a curricular reform, would lead to a shortening of study durations. However, until recently, experiences with curricular reform have indicated that such reform entails long and complex procedures in which consensus or even decisions are not easily reached. Therefore, the study commissions that were set up at Land and at national level have lost much of their importance for curricular reform, and institutional initiatives have gained weight.

Second, it was said that rather than internal factors, external factors were responsible for the long duration of studies in West German higher education. In particular, it was thought that since employment prospects had worsened, many students preferred to remain enrolled and to have student status rather than being unemployed and not being entitled to collect unemployment benefits. In addition, the worsening conditions by which one becomes eligible for financial assistance from the state has led an increased proportion of students to work and to study part-time. Thus the introduction of an official part-time student status has been proposed.

Third, various groups of actors have promoted the idea that students who do not take their examinations after a pre-determined period of study should be penalized by having to pay tuition fees. This suggestion has met with protests from students who have argued that the government should first interest itself in, for example, assuring proper conditions of study by solving the problem of understaffing, rather than making students suffer because of something that they feel is not their fault.

In 1996, the German Rectors’ Conference as well rejected the proposal to introduce tuition fees because its membership feared that the Land governments would deduct the sums earned by collection of tuition fees from the regular provisions for basic resources provided by the state. In the summer of 1998, the new Framework Act for Higher Education that had been designed in 1997 was finally passed by Parliament, even though some of the German Länder refused to grant their consent to it because the proposed Act did not include an explicit prohibition of tuition fees. It was finally signed by the President of the Federal Republic of Germany on 20 August 1998 and became law on 25 August 1998.
Fourth, the attitudes and duties of academic teachers are criticized in terms of the low value given to teaching as compared to research and in terms of the availability of teachers to students for advice and supervision. In this context, the character, shape, and quality of teaching have been repeatedly scrutinized in numerous evaluation and quality assessment exercises, and residential duties have been monitored very closely. Currently, the first models of incentive and performance related payments are being introduced into some institutions in order to upgrade the status of teaching at universities.

Nevertheless, academics continue to build up their scholarly and scientific reputations via the scientific communities of the respective disciplines and through research and publication. Various surveys have shown that in comparison to the role of the scientific community, the identification of individual academic staff members with the employing higher education institution plays only a subordinate role. Equally, standards of scientific quality are determined mostly through peer review, while an assessment of the quality of teaching takes place in the framework of many decentralized and often departmentally or institutionally initiated approaches without an established consensus about adequate criteria and indicators. A homogeneous system to improve or assure the quality of teaching, as is the case in many other countries, for example in the form of central or national evaluation agencies or commissions, is not likely to be established in Germany because of the federal structure of the educational and the higher education system.

In the face of substantial criticism about the quality of teaching in higher education, many institutions - alone or in co-operation with other institutions in the region - have decided to become pro-active by developing their own evaluation procedures and approaches. These bottom-up initiatives are also serving the purpose of preventing the state from introducing evaluation procedures and possibly to involve external evaluators.

Self-initiated internal evaluations tend to be less threatening and to have consequences that can be more easily estimated. The Länder and the Federal Government, however, are also discussing the setting up of general guidelines as to the quality of teaching and to the spending of funds provided by the special programme for higher education development for this purpose.

As a first step, the Federal Government and the Länder have approved a project to be carried out by the German Rectors' Conference and its Secretariat and to be funded annually with one million DM. In the framework of this project, the Rectors' Conference has started to organize workshops and an exchange of experience about the multitude of evaluation exercises and models that are being carried out by the higher education institutions. The aim of the project is to
develop a general model or pattern for the evaluation and quality assurance of teaching in higher education on the basis of the experience gained.

All the discussions and controversies about the quality of teaching in German higher education should not deceive the observer about the necessity of a reform of the contents of teaching and of studies, even if evaluation practices might provide an added legitimization effect, and departments have often welcomed the additional effect of a more or less systematic reflection of their organization and work.

8.6. Internationalization of Higher Education

Traditionally, higher education institutions have emphasized the international, even universal, character of science and scholarship and have fostered international co-operation and relationships, the latter being an activity which is also included in the higher education laws of the German Länder as part of the institutional responsibilities of higher education institutions. Exchanges of students and of academic staff members is organized mostly in the framework of bilateral partnership and co-operation agreements, and institutions are free to select partners and to set their own priorities. In addition, the programmes of the European Union to promote co-operation and mobility in higher education have contributed to a strengthening of the international and European aspects of teaching, research, and studies. Since the start of these programmes in the second half of the 1980's, the Federal Republic of Germany, along with the United Kingdom and France, have belonged to the "golden triangle" of those member states of the European Union among which the highest number of students and academic staff are exchanged. In recent years, the issue of a better geographical balance of co-operation among higher education institutions has further expanded the range of partners, in particular with regard to developing countries.

At first, the added value in terms of personal experience and a broadened outlook due to an exposure to different cultures and life-styles were in the foreground of student motivations to offer themselves a period of study abroad, even if it meant a longer duration of the overall period of studies. However, as the previously valid parameters and criteria for quality, performance, and success of higher education and higher education studies have changed considerably in recent years, international co-operation and mobility have come to be scrutinized more and more within the context of their contribution to the international competitiveness not only of higher education as such but of the economy as well, i.e., to medium- and long-term wealth creation. Thus, the experience of study abroad has become an important key qualification for the successful transition of graduates to working life.
In 1996, serious concern was voiced by the Federal Government and by other political actors that studying in Germany had become increasingly unattractive to foreigners. Higher education institutions, it was said, were neglecting to pay attention to the relevance and attractiveness of their curricula to foreign students. The duration of studies was too long. German degrees were incompatible internationally and not much accepted and recognized, and the organization of course programmes and contents were said to be non-transparent. Finally, higher education institutions were criticized for not providing sufficient advice and counseling to foreign students.

This critique tended to disregard not only the multitude of existing possibilities of co-operation but also the successful participation of German higher education institutions in European programmes for the promotion of international co-operation and mobility in higher education. Instead, the issue of a decrease of foreign applicants for higher education studies in Germany from the Asian and Pacific regions as well as some of the more prosperous Latin American countries was moved into the foreground. It was feared that the future leaders and managers of these target countries would be less inclined to provide opportunities for export and investment to German enterprises if they studied elsewhere, and thus, competitive disadvantages for the German economy could be expected.

At the end of 1996, the Federal Government and the Länder created a number of pilot projects at higher education institutions in the framework of which Bachelor's and Master's Degree programmes are currently being introduced and course programmes developed that are being specifically addressed to the qualification needs of foreign students. German higher education institutions have not ignored these new opportunities. The number of applications to carry out such projects surpassed by far the number of projects which could actually be supported. What still remains unclear, however, is whether or not a more widespread introduction of internationally recognized degrees will modify the binary system of universities and of universities of applied sciences in Germany in the long run and whether or not this answer to the existing pressure for innovation will lead to less cost-intensive short-cycle higher education finishing with a Bachelor's Degree for the majority of students and a Master's Degree for an élite.
8.7. The Practical Orientation of Studies and Qualifications

In the dominantly binary pattern of the German higher education system, universities of applied sciences are assigned the task of providing practice-oriented higher education for a number of professions and social and technical occupations, while universities have traditionally served the purpose of educating and training junior academic staff, future researchers, and leaders of the state, the economy, and society. This differentiation between the two types has become blurred to some extent in the course of the movement toward mass higher education.

Nowadays, universities are also expected to provide students with useful and relevant qualifications for their later occupations, and many course programmes have included practical periods or work placements. Although universities have been criticized for not sufficiently taking into account the changed conditions of the labour market and graduate employment, the question as to whether or not they could have done so in the face of the continued existence of the functional differentiation between the two institutional types remains. Moreover, the future employers of graduates have never been able to formulate the qualifications that they require in a more specific way that goes beyond a list of key qualifications.

On the way to a highly qualified or a knowledge society, continuing education has therefore become an issue which is moving increasingly into the foreground. However, the structures and facilities existing for continuing education at higher education institutions are not highly developed, even if they are clearly better developed in East German institutions than in West German ones. In addition, the greater prestige of research than of teaching and of academic teaching than of continuing education at universities does not contribute much to the improvement of the importance of continuing education within higher education. The chances are that no substantial changes in this situation will occur in the near future because the structures, the processes, and the contents of continuing education have hardly been developed within the framework of an overall concept.

In the context of curriculum development for certain practice-oriented study programmes, one can note that there are varying views about the actual instructional contents that higher education institutions should convey to their students within the framework of a study or a degree programme. As a rule, study and examination regulations must be approved by the given Land, but there is also leeway for experimentation. Departments must organize their teaching in such ways that all the mandatory courses and classes for all degree
programmes being offered are covered. However, each professor tends to insist that his or her field of specialization is relevant for the successful completion of the programme or degree. Instead of clearing the curricula of too many particles of knowledge, further elements are being constantly added. Owing to the principle of freedom of teaching and research, there is not much state intervention in curricular contents. At the same time, employers often express dissatisfaction with the qualifications of graduates of higher education institutions, while universities in particular tend to shift between disciplinarity and inter-disciplinarity or theoretical versus practical orientation in their standards and concepts.

Most of the relevant actors in the German higher education system agree on the importance of further curricular reform, a more practical orientation of studies at universities, and the need to improve the offers of and the facilities for continuing academic education. However, these issues are currently not in the foreground of the debates on higher education reform; therefore, little action is being taken.

8.8. Higher Education after German Unification

It is probably insufficient to discuss developments and current reform debates regarding German higher education on the basis of German-German comparisons because German society as a whole and increasingly also European and international requirements for higher education and research are establishing new yardsticks. Still, the transfer of the West German higher education system into the new East German Länder has triggered developments affecting the German system as a whole.

The dynamic and rigorous changes that have been taking place in the higher education sector of the East German Länder since 1990 are frequently regarded as exemplary for the reform needs of German higher education as a whole. The comprehensive but not very innovative structural transfer was a precondition for renewed debates on reform in West German higher education which had started previously but had come to a standstill in the process of unification. Furthermore, the evaluation of the old East German higher education system considerably increased and widened the perception of reform possibilities beyond funding issues and has triggered a new dynamic of reform initiatives in West German higher education.

Some experts suggested that the transfer of West German higher education structures into the East German Länder might have set back the opportunity for a comprehensive reform of higher education and studies in the old West German Länder and that the West German system in consequence experienced an undeserved endorsement. However, other experts believe that the opportunity to reform the West German system of higher education did not exist.
at that time because restructuring one and reforming the other system could not be accomplished simultaneously. Thus, the question remains as to whether or not this opportunity exists today, i.e., more than eight years after German reunification. And a further question must be asked, namely, whether or not the fact that higher education institutions in the new East German Länder are beginning to use existing leeway for their own individual development can result in innovative impulses for reforms in West German higher education.

In recent studies, three areas of innovation have been identified in which an independent development of East German higher education is noted.

i) Teaching and studying in East German higher education are characterized by an acknowledged higher quality of teaching and supervision and a shorter duration of studies. Several factors that explain these differences in attitude towards teaching and learning have been identified:

- Study places are not filled to capacity; thus staff to student ratios are much more favourable than in West Germany.
- The East German tradition of giving priority in higher education institutions to teaching rather than to research continues.
- East German students tend to lack mobility.
- A high degree of extrinsic motivation and a desire for security and calculability of job opportunities seem to characterize East German students.
- There is better communication between teaching staff and students than in West Germany.
- Certain economic motives pertain to the limited financial means of students and their families that give rise to a desire to start working life as soon as possible.

It can safely be assumed that no single one of these factors will provide a plausible explanation for the differences between teaching and studying in East and in West German higher education. However, it is interesting to know that East German students cite different motivations for enrolling in an East German higher education institution than do West German students who enroll in East German institutions. The West German students feel that teaching staff members in East German higher education institutions seem to make greater efforts to assure quality and appropriate counselling and supervision and that the institutions themselves advertise this characteristic in order to attract more students.

ii) Owing to the substantial economic breakdown in East Germany after 1989, science and research have acquired a special role in the regional
transfer of knowledge and know-how and in securing whatever competitive advantages are left. In this context, some questions must again remain open. Is it possible to solve regional economic problems by means of an expansion of higher education capacities or were too many capacities created that cannot be financed in the medium and long-run? What are the requirements for co-operation between higher education and industry in the different regions, and can higher education institutions meet these requirements? What are the effects of opening new institutions in problem regions on the institutions themselves in terms of attracting students and adequate staff?

iii) Owing to the recent comprehensive renewal of East German higher education, existing structures are less solidified. A number of experts have observed that institutions are using the opportunity for innovative and experimental projects, for example, in the fields of research carried out at universities of applied sciences, through the building up of interdisciplinary structures in research, teaching, and studies, or the establishment of innovative colleges. Should these developments be interpreted as first steps towards a further differentiation of the German higher education system as a whole or should they be regarded as an attempt to avoid the weaknesses of the West German higher education system following the transfer of its structures? What are the chances that these new approaches will stabilize, and what are the dangers of destabilization?

It seems that there are still a number of historically determined situational advantages in the new East German Länder that could be turned into conceptual advantages under the condition that the financial base is assured. In any case, at the interface of the confrontation of two historical lines of development in German postwar higher education, a new potential can be assumed and should be seized in order to bring about overall reforms in higher education, in particular in the domain of teaching and studying. In so far as it can be said that the historical opportunity has arrived, one can observe that the opportunity is currently being seized.

8.9. Concluding Remarks

Basically, three problem areas were identified that became the starting points of a major reform and modernization of the German higher education system: (i) the basic concept of the German university as based on the Humboldtian reforms occurring at the beginning of the Nineteenth Century; (ii) structural problems linked to a perceived lack of quality and transparency of higher education; and (iii) administrative problems centering on doubts about the efficiency of institutional management, administration, and budgeting.
The new Framework Act for Higher Education of the German Federal Government has therefore opened the door to basic reform of the institutions of higher education in Germany. The core elements of the reorientation of the principles governing higher education are the following:

- increased freedom for institutions of higher education as a result of the abolition of unnecessarily detailed regulations obstructing innovation;
- increased competition among institutions of higher education owing to the introduction of performance-oriented higher education funding;
- increased internationalization owing to the possibility of awarding Bachelor’s and Master’s Degrees and the introduction of a credit point system.

In the Twenty-First Century, there will no longer be uniform higher education institutions in Germany, but institutions with different profiles. Numerous institutional managers, professors, and students wish to gain a greater say in designing the future of their institutions. The new Framework Act for Higher Education provides the necessary scope. The Länder have started to pick up this diversity in their own laws.

The institutions of higher education need greater flexibility in organizing study contents and programmes according to the changing demands of students, employers, and societies, thus requiring less interference by the government and less bureaucracy. At the same time, they must guarantee quality assurance. Other countries have gained important practical experience with similar models. This experience will assist in the discovery of new solutions tailored to German objectives and structures.

As a consequence, current debates and actual activities in the field of higher education reform in Germany are beginning to develop dynamics that are widely regarded as positive. A multitude of pilot projects and experiments with innovative approaches in higher education organization, administration, teaching, studying, and curricular development are taking place so that as a result the rather homogeneous structure of the past is beginning to dissolve.

Typical of a federal system, as it exists in Germany, are the many decentralized approaches to change at the Land as well as at the institutional level. Several organizations and bodies, for example the German Academic Exchange Service or the Rectors’ Conference, are currently trying to provide better and more comprehensive overviews of opportunities and provisions for higher education studies in Germany in order to help foreign and national students make informed choices. Once this gap has been closed, the breadth of provisions coupled with the fact that there are no tuition fees might turn out to provide a competitive advantage.
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