HIGHER EDUCATION AND THE WORLD OF WORK

Conceptual Frameworks, Comparative Perspectives, Empirical Findings

ULRICH TEICHLER
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Ulrich Teichler

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CHAPTER 1

HIGHER EDUCATION AND THE WORLD OF WORK:
A PERSONAL VIEW OF CONTINUITY
AND CHANGE OF ISSUES
(2008)

1.1 EARLY IMPRESSIONS

I have had the opportunity to conduct research and to observe the public debates on the relationships between higher education and the world of work for forty years. Therefore, I take the liberty to start this book with a biographically shaped account of the theme under consideration: a report how I perceive the debates on the relationships between higher education and the world of work and how I myself tried to contribute to better understanding of the issue (cf. also the collection of essays in the German language in Teichler 2003 and in the Spanish language in Teichler 2005).

During my last year of secondary education – during the early 1960s in the Federal Republic of Germany – I became strongly aware of the relevance of choosing a field of study for the rest of one’s life. Teachers, parents, and relatives as well as the occupational counsellor of the public employment agency, whom I had consulted, underscored that the choice of the field of study was more or less the choice of the subsequent occupation. I heard most frequently that interest in certain professional practice or success in a certain subject learned in school would be the best criteria of choice. This led me for some time to believe that I should enrol in physics. Eventually I made the abstract decision to choose a field of study which was neither a subject in the school curriculum nor was clearly linked to any professional area. Actually, I faced enormous difficulties in finding such a field of study. As those whom one usually could ask for advice only shook their heads I addressed elder brothers of my classmates whether they could identify such types of fields of study at their university. Fortunately, I got various responses, and my elder brother even presented me a book describing sociology as a discipline. I opted for sociology – only to find out later that I was part of the gradual change process in the relationships between higher education and the world of work: that those fields of study grew which are not closely linked to certain occupational areas and that many graduates even from fields seemingly linked to certain occupational areas more frequently end up in other areas.

I was lucky to finance my fourth to six semester in the framework of a research project. I was invited by a professor who later became the supervisor of my doctoral dissertation to conduct interviews on the professional concepts and activities of protestant ministers and to be involved in the analysis of the findings of this study (the results were eventually published in Spiegel and Teichler 1974). I remember that I contributed one observation to the analysis: the ministers obviously
suffered from the fact that most persons they met had very vague ideas about their professional tasks of ministers and were highly sceptical as far as the relevance of these tasks are concerned. In response, the ministers tended to underscore their relevance in the usual way persons in a secular achievement society do: they tended to stress at any conceivable occasion that they are very busy. Ironically, their professional justification was bound to undermine their opportunities to do professionally meaningful work, because people wanted to consult a minister only when they had got in trouble and needed a person who is willing to spend much time with them, listen to their concerns and eventually consult them.

Subsequently, I got a contract as “free research associate” in the Max Planck Institute for Educational Research already while being a student. My tasks were to advise researchers how to formulate questionnaires, administer empirical research processes and help to analyse quantitative data. Concurrently, I was encouraged to choose a thematic area which could be my own field of research subsequent to graduation. As regards the latter, I got most intrigued by a paradox of that time: on the one hand, the view spread in the late 1960s that educational expansion was desirable and an irreversible trend as well; on the other hand, a conviction was widely shared – certainly in Germany, but certainly not only there - that the growing enrolment rate in higher education was bound to lead to a catastrophe on the labour market. For example, the first systematic forecast on the graduate labour market in the Federal Republic of Germany, published in 1968, predicted that the number of graduates around 1980 would be twice as high as the number of typical job openings for graduates. I came to the conclusion that this paradox could be a good starting point for academic inquiry. And it was part of the academic climate of this research institute that I would have to study both the theoretical debate and contribute to it as well as to find an original way of empirical study.

1.2 “DEMAND FOR INEQUALITY” AND THE OPPORTUNITIES AND DANGERS OF “ABSORPTION”

I was impressed by the decision of my colleagues at the Max Planck Institute to counter the conceptual bias of restrictive manpower requirement arguments by undertaking a survey on the careers of graduates from a newly established field of study – a field which by definition was not satisfying established demand, but providing a new supply, thus forcing the graduates themselves to offer an unexpected supply of competences and contribute to a dynamic process of redefinition of “demand” in a society which has to learn that a growing complexity of knowledge is the demand of the future. Actually, my colleagues found out that about one third of graduates from the new field of political science got professionally active in occupational areas which suited their area of expertise. Another third took over positions suitable for university graduates but possible for graduates from other fields of study as well. Finally, one third ended up in positions which did not seem to require a university degree (Hartung, Nuthmann and Winterhager 1970). The findings suggest that the employment system is more open to unexpected supply than one would have thought traditionally, but that choosing a field not leading to the beaten track implies quite a risk.
I myself decided that I wanted to analyse the conditions for the absorption of graduates in a country or in countries in which the graduation quotas of the corresponding age groups were substantially higher than in Germany. I considered the US and Japan as possible options. The director of the National Centre for Educational Research in Tokyo invited me to his institute; he was convinced that there should be more researchers in other parts of the world who include Japan in comparative studies on educational research, and he was convinced that I could have a secondary motive to be among them, because my wife is Japanese.

In my doctoral dissertation and in various other publications in the early and mid-1970s I underlined that Japan is not an exotic exception as far as the relationships between education and work are concerned, but rather a prototype of a “modern education society”. Employers in Japan at that time – from the mid-1960s to the mid-1970s – were not convinced that the growing supply of graduates was needed, but they accepted the expansion as the consequence of an open meritocratic society where ambitions for educational success spread and should be rewarded. They increased the job openings for graduates by means of “vertical substitution”, i.e. gradually opening up positions to graduates which are almost as demanding as typical graduate positions and previously had been filled by persons with a slightly lower level of educational attainment. The employers in Japan funded this process by a step-wise reduction of the income advantage of the university graduates as compared to those entering the labour market without a degree. This process was facilitated by the fact that most graduates expected a job rank commensurate to their rank of educational attainment without an expectation of a close link between the field of study and the area of job assignment, and that most employers did not expect to recruit specialists. Absorption seemed to be easy, but this certainly cannot be the only criterion for a “good” relationship between higher education and the world of work: from my perspective, the Japanese solution undermined “curricular relevance” and “professional identity”; moreover, tiny distinctions of education status, i.e. possibly marginal differences of reputation among the universities, would become increasingly relevant for one’s career, thereby transforming education to a rat race for tiny educational advantages (see Teichler and Teichler-Urata 1975; Teichler 1975, 1976, 1977).

Concurrently, I studied the political debates and the available research on the relationships between higher education and the world of work in comparative perspective. The request by the International Labour Office to write a trend report on this issue provided a good opportunity to synthesize the state of knowledge and debate (Teichler, Hartung and Nuthmann 1976, 1980). I came forward with a developmental theory according to which the relationships between higher education and employment are not primarily driven anymore by a demand for certain skills, when “mass higher education” (Trow 1970, 1974) was imminent, but increasingly by concerns how growing numbers of highly educated persons could be made compatible with the existing inequities in the world of work. I argued that “demand for social inequality” (Teichler 1974) was the rule of the game (cf. the following text no. 1).
CHAPTER 1

Text 1: Educational Expansion, Qualification and Status Distribution

The significance of the changes in the relationship between qualification processes and status distribution occurring since the 1960s becomes particularly evident when viewed in the context of historical developments.

In traditional society, the individual’s social position was as a rule determined directly by his or her social origin – social status was “handed down”. In a long process by which skills and knowledge were passed on from one generation to the next, qualifications were acquired through familiar socialization and long periods of apprenticeship. Meanwhile, specific institutions sprang up through which the knowledge and skills needed for particular occupations were transmitted. Thus education – save in rare instances – did not determine social positions, but rather was one of its attributes.

These traditional paths to qualification and the underlying social structure were severely jolted by the coming of industrialization. Traditional patterns of socialization and ways of transmitting knowledge were no longer equal to the dynamics of occupational requirements, changing as they were under the impact of economic developments. Moreover, it could no longer be taken for granted that power should continue to rest in the hands of a small group for whom privilege was hereditary. Under these circumstances they developed a systematic and – as industrial development preceded – ever closer inter-dependence between the organized acquisition of qualifications and status distribution. It is characteristic of this latter stage that status distribution was a matter of principle open and oriented toward a certain level of qualification. The promise of social advancement served, under these circumstances, to stimulate the acquisition of required qualifications. At the same time, social inequality was alleged to be the equitable reward for the performance society required, thereby guaranteeing that society would continue to function smoothly.

This development has been accompanied by a growing sense of public awareness of the fine distinctions that exist in the system of rewards, and of the connection between educational achievement and career and social status. This point is illustrated by the fact that more people are becoming conscious of the differences in social opportunity associated with the various types of education available, and consequently seek access to those educational institutions which promise better career opportunities and higher social status.

This process of becoming aware and responding is, of course, subject to fluctuations varying with views, on whether a shortage or oversupply of qualifications is thought to exist.

– In the event that the education system’s output of qualifications actually or supposedly falls short of the requirements of the occupation system, the above-mentioned relationship between qualification and status assignment can be put to effective political use: emphasis is then placed on the open character of the education system. At the same time, measures are taken to render access to hitherto exclusive educational institutions easier.

– On the other hand, the close connection that exists between qualification and status distribution turns out to be politically inconvenient when it is felt necessary to reduce the supply of qualifications as more people are seeking higher education. In such situations the general practice is to try to de-motivate potential students by persuading them that the connection between educational achievements and chances of acquiring status has become tenuous, and that other criteria are now more decisive in opening the way to high-status positions.

to be continued
Under such circumstances, no policy to reduce a surplus of qualification would have a choice other than actually reducing the social reward for additional education. This however, calls in question the legitimization that educational achievement gives the system of social inequality throughout the industrialized world. This, in turn, would mean constantly re-examining the connection between qualification and status distribution in line with prevailing assumptions about what qualifications are required.

– It seems, however, that once a certain measure of interdependence has developed between qualification and status distribution, the tie cannot be loosened without there being consequences. Society cannot switch back and forth from being open and achievement-oriented to the very opposite. Attempts to cut back expansion administratively the moment an oversupply of qualifications is thought to exist appear, in fact, to sharpen public awareness and simply strengthen the demand for higher education.

Various factors have contributed to creating in many countries a far greater individual demand for status-promising education than widespread notions about qualifications requirements would deem advisable. Studies in countries where the trend toward mass higher education is more pronounced show that this development tends to culminate in a state of affairs in which the education system’s output appears out of step with the existing social and occupational structures, in terms both of qualification and status distribution.

This appears to mark a fundamental change in the way qualification relates to status distribution. If the two are no longer interdependent, then one of them might come to dominate: it is conceivable that if qualifications become more closely adjusted to demand, educational distinctions will no longer serve to legitimate social inequality. It is equally conceivable that if status continued to be based on educational success, it would prove impossible to bring the supply of qualifications into line with demand. The fact is that the latter of these two tendencies is prevailing: status distribution is beginning to dominate. Despite a substantial reduction in educational differences, education continues to have a status-distributive function. The importance that was once accorded to larger differences in educational achievement is now accorded to relatively minor distinctions, for example, in prestige between two otherwise equal-ranking institutions.

Throughout all this, qualification and status distribution continue to relate to one another to the extent that educational achievement is rewarded in terms of status, and status distribution serves to stimulate qualifications. However, as the situation changes, it is no longer a simple matter to reconcile the need to keep a balance between the provisions and the requirement for qualifications, nor to legitimize the prevailing system of social inequality. In contrast to our thesis that a “dominance of status distribution” is developing, there appear to be a number of other conceivable possibilities for reconciling the discrepancies we have been describing. First, a reduction in the discrepancies with regard to length of schooling and a lessening of differences in standards between various courses of study could have an equalizing effect on the social structure. Second, a gradual reduction in discrepancies in educational attainment in the presence of a relatively stable structure of social inequality could result in the education system gradually losing its importance for the process of social selection, which then would generally be relocated in the occupational system. Third, differences in social reward could become so slight in response to educational expansion that educational aspirations would generally lower, thereby bringing about a measure of agreement between assumed qualifications requirements and the output of the education system. Fourth, planning and administrative measures could affect the way education is organized, to the extent that it meets the qualification requirements of the employment system.
All four of these assumptions can claim some sort of evidence in their support. In most industrialized countries, things have not developed perfectly in line with any one of these ideal-typical conceptions. Instead, all four possible forms of coordination co-exist, but vary in their impact. Altogether, however, signs supporting such alternatives are clearly weaker than signs that selection through education becomes even more important under conditions of a growing “demand for inequality”.

Source: adapted from Teichler, Hartung and Nuthmann 1980

Fortunately, the research of the Max Planck Institute for Educational Research, where I was employed at that time, was paid enormous attention in the German public debate on educational expansion. We were called the advocates of the “absorption approach” (cf. the overview of the analyses in Hartung, Nuthmann and Teichler 1981). The pessimism with respect to the consequences of educational expansion for employment remained strong in Germany, but we obviously contributed to a phasing out of the term “academic proletariat” – a term suggesting that the superfluous graduates would end up in economic and social misery. However, our comparatively more, but not altogether optimistic notion that “vertical substitution” eventually would enrich the world of work and contribute to economic and societal innovation was not widely shared either. In Germany, instead, the term “displacement” surfaced in the mid-1970s and met highest public acceptance, i.e. agreement to our hypothesis that the “superfluous” graduates were most likely to get employed in positions slightly lower than those traditionally held by graduates, but combined with the claim that those trained for this level of occupation newly captured by the increasing number of graduates would be deprived of their appropriate positions and forced to climb down the occupational ladder.

1.3 THE SEARCH FOR AN UNDERSTANDING OF COMPLEX RELATIONSHIPS

Research on higher education has been a rare species in academia not only in Germany, but also in most other countries of the world (see Teichler 1996a, 2005). In Europe, institutions for higher education research mostly were founded with specific tasks reflecting major concern and policy debates of their period of foundation. For example, the Institute for Economics of Education was founded in 1970 in Dijon (France) when worldwide debates focussed on the contribution of educational expenditures to economic growth. And the Center for Higher Education Policy Studies was established in Enschede (the Netherlands) in the mid-1980s when governmental steering and institutional management of higher education became more strategic. Similarly, the establishment of the Centre for Research on Higher Education and Work (Wissenschaftliches Zentrum für Berufs- und Hochschulforschung) at the Comprehensive University of Kassel (Germany) in 1978 (in the mean time renamed to International Centre for Higher Education Research Kassel) was a response to growing concerns – in Germany, but – as already stated – not only there, about graduate employment and work in the wake of educa-
tional expansion and of graduate employment problems visible since the “oil
shock” of 1973 (cf. Teichler 1990a). But some of the persons advocating the estab-
lishment of the Centre also had hoped that new ideas would be generated about
future links between study and work on a way towards a society which we would
nowadays call “knowledge society”. Being offered to be the key driver for the
establishment and further development of this centre, I clearly viewed this assign-
ment as an opportunity to analyse the relationships between higher education and
the world of work and many related issues of higher education and society from a
broader perspective than individually operating scholars can cope with. Text no. 2,
an excerpt from am text written for an encyclopaedia, might illustrate the broad
range of issues which can be taken into account:

Text 2: Education and the World of Work

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<th>Education is a social mechanism which, as a rule, dissociates the learner physically for a certain period of his or her life from the regular world of work and other life spheres. This is undertaken in order to prepare her or him in a more rational manner for coping successfully with the diversity of work and other life tasks through explanations, rules, general reasoning strategies etc. The more efficient the industrial society became in producing wealth in the nineteenth and twentieth century, the more expanded the education system and the more was education viewed as a means of generating competencies which contribute to the production of goods and services.</th>
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<td>Regarding to the world of work it has</td>
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<td>– a qualifying (in the French and German connotation) function of fostering the cognitive and possibly affective and sensu-motoric capabilities which might be useful to cope with job tasks, as well as challenges in other spheres of life;</td>
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<td>– a status-distributive function: the level of “educational attainment” determines to a certain extent the monetary resources and the social recognition which will be available to the individual person in his or her subsequent life; for education became an increasingly powerful factor in opening up or closing the access to prestigious occupations and providing the means for professional achievement which are directly linked to differential remuneration and socio-economic status.</td>
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<td>These basic functions are undisputed. However, it is generally assumed that education is bound to be imperfect in preparing for the world of work, among others because rational learning through dissociation from practice has its price in less direct preparation for occupational tasks than on-the-job-learning, and because education is expected to serve broader functions than merely preparation for the world of work. Also, in addition to education, many other factors are at work in determining the professional success of individuals, such as socio-biographic background, genetically determined abilities, socio-economic factors surrounding the role of credentials, processes of transfer from education to employment, and finally lifelong learning and personal development. Thus, it cannot come as a surprise to note controversial debates as regards the actual ways education is and ought to be shaped to serve the world of work. Similar, views diverge about the impacts learning has and ought to have on the subsequent employment and work.</td>
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<td>Even if education was expected to be closely geared to the “requirements” of the employment system and even there were no particularistic social factors in play, e.g. parental background, gender, etc., which interfere to a close link of educational and career success, there are obvious imperfections and uncertainties which make close linkages unlikely.</td>
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Available research and past debates pointed out the following issues:

- **Imperfections in identifying job requirements**: Employers tend to be uncertain, and scientific approaches of job task analysis often turn out not to be very useful for educational approaches.

- **Occupational dynamics**: The employment is very dynamic in terms of changes of job tasks within given occupations, and most persons have to expect occupational mobility in terms of changing employers or occupations over the life courses. This challenges the view that youth might be best served by getting well prepared for a very specific bundle of job tasks.

- **Indeterminate work tasks for highly-qualified work force**: The higher the educational level required for a certain occupational area and thus the higher the investments for education are for the learners or for the society, the more difficult is it to identify the competencies required. For the relationships between knowledge and job tasks are too complex to be validly analysed, and the individual is not expected merely to take over anticipated tasks but also to question the existing rules, to contribute to innovation and to cope with indeterminate work tasks.

- **Planning gap**: There is an unavoidable time gap between the identification of new job assignments and the provision of respective competencies on the part of school leavers and graduates, because several years are needed for the revision of curricula, their implementation and the actual “production” of graduates.

- **Generalists’ vs. specialists’ paradigms**: Views vary substantially regards the extent to which education should be general or specialized in order to serve best the preparation for employment and work.

- **Provision of foundation vs. job-preparatory function of education**: Similarly, views tend to vary as regards the extent to which education prepares for future work tasks or only lays the foundation and leaves the direct preparation to the initial training of employees.

- **Emphasis on pre-career education vs. recurrent education**: Finally, views differ similarly on the extent to which the growing role of lifelong learning might reduce the need of pre-career education and training.

Even if there were no major obstacles as regards the feasibility of linking education closely to the demands of the world of work, the views and policies are likely to differ substantially because major value judgements come into play:

- To what extent should education serve the world of work or other spheres of life (personality, citizenship, family, culture, leisure, etc.)?

- Should education be expanded beyond the needs of the economy, if social demands call for it? Should education serve social justice in terms of increasing equality of opportunity and smaller differentials of educational attainments, if this creates tensions to the demands of the economy?

- **Who determines the needs of the world of work** (the current views of employers, a social compromise, the needs according to experts’ views, etc.)?

- How are *employment and work valued in a society* (as a basis for identity, an alienating environment, predominantly extrinsically valuable as means for acquiring income and status), and what role should education play in this context?

- To what extent should education serve the development of personality, values, social skills, etc. *beyond the cognitive domain*?

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In all societies, controversies can be observed as regards the extent to which education is viewed as instrumental in securing the individual’s and the society’s economic success or other aims are given a stronger weight.

The extent to which the patterns of educational qualifications match the demand of the employment system is a frequent topic of research and policy debate. One tries to establish – both for the labour market of recent graduates and the total labour force – the extent to which the qualifications correspond to the occupational structure

– horizontally, i.e. in terms of links between subjects and occupational categories, and
– vertically, i.e. in terms of the appropriateness of the level of education to the status of the occupation.

Altogether, concerns about a horizontal match are more pronounced in countries emphasizing specialization in education and employment than in countries considering education predominantly as a general preparation for various possible assignments. They tend to be more pronounced as well regarding higher levels of education than lower ones: a substitution of a car-mechanic by a baker seems to be more acceptable than that of an engineer by a chemist. But the more research on the horizontal relationships between education and employment progressed, the more visible became lea-way for substitution. For example, the fact that about half of the German having undergone an apprenticeship training phase are employed five years later in occupations not closely linked to the type of training does not tend to be considered as a major wastage, but rather as an indicator that in-depth specialized vocational training fosters substantial potentials for flexibility and transfer of skills.

More attention was paid to problems linked to possible vertical mismatches. In the 1960s, concern was frequently voiced that countries with a low proportion of the population with advanced education might fall behind the others with respect to economic growth. From the 1970s through the 1990s, controversies were on the agenda whether a trend towards “over-education” or “over-qualification” could be observed. During the 1990s, eventually a mix of concerns about over-education in some areas and lack of competencies in other areas, e.g. qualifications required for new technologies, was prevalent in many countries.

The issue of “over-education” seems to be a perennial issue, because the tensions do not fade away between often steep occupational hierarchies on the one hand and on the other a relatively open access to the highest levels of education. Concern, however, tended to be voiced less dramatically in the 1990s. This might be explained by widespread expectations that a “knowledge society” is likely to emerge. Also, research has shown that most persons seemingly overqualified did not face major hardships on the labour market but acquired mostly a position only slightly lower than they had strived for.

Altogether, even in a “knowledge society”, one does not expect that a more or less pure educational meritocracy will emerge, because other factors might increasingly get momentum. But education seems to remain the single most important determinant of career and of chances in other spheres of life.

Source: adapted from Teichler 2001a

Most research institutes at universities, however, face difficulties in pursuing consistent research and communication policies. They must respect the diversity of conceptual, thematic and methodological priorities of the participating scholars. Moreover, these research centres are subject to the merits and plight of staff mobility, they have to weigh the chances of getting research grants and the grants received greatly influence future research strategies. In addition, these centres typically must reflect public debates. These issues notwithstanding, the centre in Kas-
sel succeeded in setting seven research priorities for three decades (see Schomburg and Teichler 2005).

First, there was a strong need to collect information on concepts, available research, and other information, i.e. to conduct secondary analyses on the changing relationships between higher education and the world of work. Also of interest were the implications of these data for quantitative, structural, and curricular developments in higher education. Data gathering was done with the help of national and international conferences, often undertaken in cooperation with other institutions (Teichler 1979; Brennan, Kogan and Teichler 1995). In addition, scholars were invited to write trend reports (Kehm and Teichler 1995) or detailed accounts of available research (Holtkamp and Teichler 1983; Burkhardt, Schomburg and Teichler 2000; Paul, Teichler and van der Velden 2000) as well as synthesizing analyses (Teichler and Sanyal 1982; Teichler 1988b, 1998b, 1999a, 1999d, 2003). This national and international effort yielded valuable information for researchers and practitioners and informed the Centre’s research plans.

Second, efforts were made to overcome the frequent inclinations of large-scale graduate surveys to be confined to a small range of themes. Often graduate surveys provide only information on themes such as field of study, the whereabouts of graduates after some period, their employment success, and the job satisfaction and overall assessment of their study experiences. The centre in Kassel preferred surveys asking graduates to provide detailed information about many areas in order to:

- examine features of the transition from higher education to employment and how students’ competencies, labour market conditions, employers’ expectations, and the dynamics of the transition mechanisms interact in determining the relationships between graduation and initial employment;
- measure the employment and work “success” of graduates in multiple ways, thereby showing the extent to which remuneration and status, on-the-job use of knowledge acquired during the course of study, and job satisfaction are interrelated or divergent;
- get an in-depth picture of the links between the competencies acquired during the course of study and the actual work tasks as perceived by the graduate;
- analyse the extent to which the study conditions experienced by students matter for their subsequent employment and work;
- check the impact of the students’ motivations and orientations on their career paths.

These themes, first, were addressed in a longitudinal study of German graduates who completed their final year of study in the early 1980s. These graduates were surveyed two years, five years, and eventually ten years after graduation (Teichler, Schomburg and Winkler 1992; Schomburg 1992; Schomburg and Teichler 1993, 1998). In the international comparative study discussed in this chapter, these themes played a major role as well.

Third, various studies were undertaken to examine the relationships between curricula and employment in selected fields of study and occupational areas, notably in engineering, fine arts, and teacher training (Hermanns, Tkocz and Winkler 1983; Ekärdt, Löffler and Hengstenberg 1992; Winkler 2003; Rattemeyer 1982). In
most cases, questionnaires, interviews of graduates, participant observation, and expert interviews were combined in order to get a more detailed picture about the links between study and work.

Fourth, various studies were conducted to solicit employers’ views. In the early 1980s, for example, heads of personnel offices of large companies in Germany were interviewed about the recruitment process and the role that credentials play in recruitment (Teichler, Buttgereit and Holtkamp 1984; Buttgereit 1984). In the mid-1990s, a pilot study addressed the demand for graduates and competencies expected by companies through surveying heads of personnel and supervisors of university graduates in German companies (Baldauf et al. 1995a, 1995b). Finally, a study was undertaken during the 1990s about recruitment, career, and training policies of Japanese companies. Questionnaire surveys, interviews, and document analysis were employed in this study (Ernst 1998; Metzler 1999; Teicher and Teichler 2000). On one hand, these studies showed that information provided by employers is an indispensable source for understanding work tasks and job requirements. On the other hand, the studies made clear that the employers’ views and expectations cannot be considered the single most valid indication of demands and job requirements. For example, employers may have divergent perceptions of actors at the workplace and difficulties in identifying actual job requirements and competencies. Finally, traditions, political biases, and other factors may cloud employers’ views.

Fifth, steps were taken to strengthen the element of international comparison in the analysis of the relationship between higher education and the world of work. Most of the studies addressed economically advanced societies. For example, the study on education and employment in Japan aimed to understand differences and common elements between the company-based approach in Japan and the profession-based approach in Germany. Moreover, the Kassel centre had the exceptional opportunity of coordinating a graduate survey in a large number of countries (Schomburg and Teichler 2006; Teichler 2007b).

Sixth, surveys were conducted on employment and work of individuals who had been internationally mobile during their course of study or during early stages of their research career (Schomburg, Winkler and Teichler 1991; Maiworm and Teichler 1996, 1997; Teichler and Jahr 2001; Bracht et al. 2006). International comparative analyses turned out to be very helpful for generating ideas about how to interpret findings. It also provided food for thought regarding alternative options from those customary in one’s own country.

Seventh, the Kassel centre was active in supporting other scholars wanting to embark on graduate surveys and related analyses. Increasingly, universities around the world are evaluating the educational experiences of their graduates. Leaders of developing countries are especially interested in training experts of higher education research, including experts on the relationship between higher education and the world of work. Consequently, the centre advised administrators and researchers in Germany and other countries embarking for the first time in graduate surveys. A handbook was written and updated (Schomburg 1995, 2003) in the English and the Spanish language to serve as a standard instrument for graduate and employers surveys. Individuals aiming to undertake such studies were provided with explana-
tions, sample questionnaires, and computer programmes for data analysis in order to facilitate all steps of a survey.

Training workshops were conducted in more than ten countries in Africa, Asia, and Latin America in order to assist researchers and administrators in conducting graduate surveys (Winkler, Hartmann and Schomburg 1992; Baldauf and Lwambuka 1993). Eventually, ten graduate surveys were conducted in Africa, and researchers of the Kassel Centre collaborated with African scholars to undertake a joint comparative analysis (Mugabushaka, Teichler and Schomburg 2004; Mugabushaka, Schomburg and Teichler 2007) and recommended a common framework for graduate surveys in Latin America.

Finally, the Kassel Centre started offering individual universities in Germany the opportunity to survey their graduates in conjunction with a major representative survey of German graduates. The findings of this representative survey provided the individual university with a benchmark for analyzing their own graduates’ employment and transition to work (Grühn and Schomburg 2002). Subsequently, the Centre created a network of German universities active in surveying their graduates; the Centre supported these activities through conceptual advice, a formulation of a core questionnaire, operational advice and possibly technical assistance (see Alberding and Janson 2007).

The various projects of the Centre in Kassel helped higher education administrators to get access to information about the relationship between higher education and the world of work. The projects informed decision makers in higher education systems, institutions, and study programs. Last but not least they were hoped to be considered by students and graduates but they pointed out that students and graduates determine their educational and career “fate” more substantially than more simplistic research suggests (see also text no. 3). Findings were not disguised in international academic modes of presentation and analysis; instead, the implications of the studies were made explicit for practitioners.

The findings of the projects cautioned against simple studies and called for more comprehensive analyses. For example, findings suggested:

– More than a quarter of graduates who are un-adequately employed (their remuneration and positions are below those expected) report that they have interesting and satisfying jobs and good opportunities to use the competencies they acquired during the course of their study.

– Remuneration of German graduates varies more strongly by the economic wealth or poverty of the region of employment than by the academic reputation of the university.

– Graduates from vocationally oriented colleges in Europe are more satisfied with their preparation for practice than graduates from academically oriented universities, but vocational graduates report a higher discrepancy between their competences and their work tasks.

– Graduates from Japan and Europe differ substantially in the characteristics of study programmes, competence acquired, and job tasks but are very similar in their job orientations.

These studies call for more in-depth analysis about the relationships between higher education and the world of work to better guide decision making.
Students’ and graduates’ motives and activities cannot really be viewed, as it is often done, as primarily driven by a desire to maximise income and status. Six partly interrelated areas of values must be quoted in this respect.

First, professionals hold in high esteem a *pride in good professional work* and in the use of their competences. *Intrinsic motivation* is often seen as a more important driver for good professional practice than the extrinsic motivation for rewards such as income and status. Second, *autonomous work*, in terms of disposition to decide about the goals, the process, the timing, etc. of one’s assignments, is held in high esteem by a substantial proportion of graduates and is part of the professional pride of highly qualified persons. Third, we note that some *values* that are closely associated with the innovative function of systematic knowledge are held by many highly qualified persons: opportunities to undertake research, curiosity, interest in further learning, improving and revolutionising society. Fourth, research on job satisfaction has revealed a wide range of *work conditions and employment conditions* that is generally highly appreciated. Good contacts with colleagues, time for regular leisure activities and other assets of certain job roles could explain the occupational choice and the daily behaviour of the work force. Fifth, values related to the *socio-communicative environment outside the world of work* have often been pointed at in recent years as highly influential for work-related decisions. The choice of certain regions as place of work or place of residence, as well as career sacrifices for the sake of partnership, family and children are examples of this. Sixth, *gender differences* of occupational conditions, values and behaviour have been one of the major themes of debate and research in this framework in recent decades. Analyses do not only address the views of men and women, but also try to establish whether the different values and activities could be considered as adaptations to unequal opportunities or as genuinely distinct values and options.

Views on changes of these values vary over time. On the one hand, a growing weight of intrinsic motives is observed as a shift toward “post-industrial values”: the more a certain wealth of society due to economic dynamics could be taken for granted, the more persons turn to improvements of life and society beyond the material rewards that were previously strived for. Similarly, the *values of the highly qualified professions seem to spread in the process of educational expansion*. On the other hand, monetary and non-monetary labour market rewards as well as status motives are viewed as gaining momentum *when employment problems grow*. Similarly, we noted a revival of the *homo oeconomicus* when the Zeitgeist was increasingly shaped by neo-liberal economic values.

Prior analyses have shown that some value dimensions that could conflict with those of the *homo oeconomicus* and status seekers could be interpreted as an appreciation of non-monetary economic rewards within a broad spectrum of status dimensions. Moreover, we often observed a high positive correlation between income and status and work conditions held highly in esteem by professionals, such as autonomous work, opportunity to make use of one’s competences, or opportunities for lifelong learning.

The more intellectually demanding job roles are the less clearly they are determined by rules, instruments, work environments, and social control. Rather, highly qualified workers are expected to handle indeterminate work tasks, to reflect on established professional practice and to seek innovative solutions, and they have many opportunities of interpreting their work tasks and choosing possible options. Therefore, graduates’ values and orientations can play a crucial role in constantly redefining job “requirements” and in shaping professional work and its outcomes.

to be continued
The high relevance of the graduates’ values and orientations can be viewed as conventional wisdom. Debates and research on the “professions” and “leadership” tend to address the relevance of intrinsic motivation, professional ethics and socio-political views held by graduates. This notwithstanding, a substantial proportion of well-known research projects neglected students’ and graduates’ values and orientations or took for granted that the norms of the *homo oeconomicus* and the status seeker prevailed. The CHEERS study, in contrast, attempted to map the graduates’ values and orientations and to measure the extent to which they explain their professional activities.

Values other than income, status and employment conditions seem to play a major role. For example, graduates quoted personal development, work and home and family more frequently as central than money, social prestige and varied social life. Job satisfaction was more closely associated with autonomous and challenging work and the opportunity of using competences than with income, position, job security, time for leisure, and other dimensions of employment. Graduates considered themselves to be more strongly driven by intrinsic than by extrinsic motives.

A closer look reveals that the composition of values varied substantially:

- One out of seven graduates was predominantly status-oriented and income-oriented with little concern about the intrinsic dimensions.
- For more than a quarter of the graduates, intrinsic and extrinsic motives seemed to coincide: they either stated high or low ambitions in both respects.
- More than half, however, stressed their interest in the challenges of their work or their appreciation of self-development, while they perceived income, status and other employment conditions as being less important.

Not surprisingly, though, many graduates considered their work situation as not fully meeting their desires. Discrepancies between orientations and actual work situations seemed to occur almost as often with respect to status and income, opportunities of pursuing own ideas and using knowledge as with respect to opportunities of spending time on leisure and family. Some graduates accepted these discrepancies and adapted to them, while others tried to transform their work and employment conditions to meet their values and orientations.

There were differences in the values and orientations by country. For example, a status orientation that was not strongly linked to professional intrinsic motives could be observed more frequently in the Netherlands and in the UK than in the other countries. Altogether, these differences were less striking than those of the employment conditions and work situations.

Finally, the relevance of values and norms affected career choices differently in various respects. In some countries, affiliation with a region was held in such high esteem that some graduates forewent bright career opportunities in order to live in a certain region. There were indications that international mobility was greatly appreciated by some graduates for many other reasons other than income, status and satisfactory employment conditions. Last but not least, child care continued to be a central issue for women; we noted a strong preference by women for employment in the public sector, especially in countries where political efforts were made to counterbalance their professional disadvantages.

... Altogether, the results of the study could be seen as indicating less dramatic changes in the relationships between higher education and the world of work than the discussions about macro-trends of modern societies would suggest.
Upgrading of middle-level occupations towards typical areas of graduate employment had progressed substantially in only a minority of economically advanced countries. Graduates were exposed to serious employment problems to a lesser degree than the public debates suggest, and the graduates themselves anticipated this while they were still enrolled in study programmes. Intrinsic professional motives did not seem to weaken under conditions of a Zeitgeist in favour of the homo oeconomicus and status seeker. And national characteristics of study, graduate employment and work did not seem to give way rapidly to convergent pressures of globalisation. Future research will tell us whether the relationships between higher education and the world of work will change faster in the future than in the recent past.

Source: adapted from Teichler 2007

1.4 ISSUES AND DEBATES IN THE FIRST DECADE OF THE TWENTY FIRST CENTURY

In comparing the public debate on the relationships between higher education and the world of work in 1990s and at the beginning of the twenty first century with those of the prior decades we note again, after this issue has been high on the agenda in the 1960s and 1970s some period of less attention thereafter, a high interest on that theme. Certainly, it is indicative that the transition from higher education to employment was one of the major issues in OECD projects in the 1990s (OECD 1993a) and that higher education and the world of work was one of the dozen major themes of the UNESCO World Conference on Higher Education in 1998 (see Teichler 1999c). The thematic area revived, but certainly there were substantial changes in the major thrusts.

Four popular terms or pairs of terms indicate the foci of current debates.
– “Evaluation” and “accountability”
– “Knowledge society” or “knowledge economy”,
– “Employability”, and
– “Internationalisation” and “globalisation”.

The debates on “evaluation” and “accountability” reflect a growing tendency to steer and fund higher education according to the actual “output” and “outcome”. Graduate employment and work, obviously, is a key measure of “outcome” of the educational function of higher education. Therefore, graduate surveys became more popular in recent years than before. International comparative surveys, nationally representative surveys or even efforts to trace the whereabouts of all recent graduates of the whole country as well as surveys undertaken by individual higher education institutions certainly provide valuable feedback. But the growing popularity leads to a growing spread of simplistic interpretations. Often, the career success of graduates is viewed as a direct measure of the quality of higher education, thus overlooking the problems well-known to experts that
– outcomes might be more strongly caused by selectivity at entry to certain programmes, institutions or sectors of to higher education than to the actual “value added” by higher education,
careers success might depend more strongly on regional labour market conditions, specific expectations of employers conflicting with the goals of higher education, and lack of perfection of the selection mechanisms in transition to employment and early career than on the "quality" of higher education,

the information provided by graduate surveys cannot be translated more or less automatically into concepts for curricular improvement.

"Empoyability" became a popular term in the so-called Bologna Process. When ministers in charge of higher education from 29 European countries agreed in 1999 to opt for a convergent structure of higher education systems in terms of a stage system of study programmes and degrees, enhancing student mobility was stressed as the prime goal. The ministers addressed the relationships between higher education and the world of work as well, but to a very limited extent only. They expressed concern that the newly established Bachelor degree programmes at universities might be designed like stages of the single programme and thus push the students to continue study up to a Master. Therefore they formulated in the Bologna Declaration of 1999: "The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification."

Thereafter and related to the "Bologna Process", many actors and experts called for a stronger emphasis to be placed by higher education on the "employability" whereby often utilitarian views of higher education were in the forefront. Actually, however, the "employability" debate led to an enormous diversity of interpretations and responses such as adaptations to the presumed employers’ demands, emphasis on select dimensions of competences such as "key skills", or ideas of curricular innovations as means of pro-active impact of higher education on the world of work.

"Internationalisation" and "globalisation" are referred to in this context in two quite different directions. On the one hand, there is increased interest in the international mobility of students and graduates. Clearly, international experience and understanding becomes important for the assignments of an increasing number of graduates. Altogether, the available information suggest, however, that mobility during the course of study and after graduation has spread less dramatically than the debates suggest, that a substantial proportion of internationally knowledgeable graduates end up in jobs less international than they have hoped for, and that international mobility in study and career is to a lesser extent a guarantee of a high income and status for persons from economically advanced countries than it is widely expected. On the other hand, there is a debate about the consequences of "globalisation" which is similar in many respects to that on "knowledge economy".

The increasing popularity of terms such as "knowledge society" and "knowledge economy" imply, among others, that high numbers of highly educated persons are viewed as crucial for coping with the professional tasks of the future. This does not mean, however, that relatively restrictive and relatively elitist views of the relationships between higher education and the world of work have ceased to be dominant in Germany and many other European countries. A widespread belief seems to persist that

high income and professional and managerial occupations are good indicators of the demand of the employment system for highly qualified graduates;
only a limited number of young persons are able to acquire high level competences needed for highly demanding positions and occupational areas;

- the increasing numbers of graduates beyond such a demand for high calibre should be accommodated in academically less demanding institutions of higher education and should find eventually middle-level occupations with the help of vocational specialisation, “flexibility” and acceptance of moderately demanding occupations.

### 1.5 RESEARCH ON HIGHER EDUCATION AND THE WORLD OF WORK: ACHIEVEMENTS AND FUTURE CHALLENGES

Research on the relationships between higher education and the world of work which is not confined in this conventional wisdom has contributed, first, towards a more complex picture of these relationships. Accordingly, many graduates not ending up in high positions report a close link between their level and kinds of competences and their work tasks. Careers depend to a lesser extent than traditionally assumed on the specific field of study. The academic reputation of a university is not the single most important factor for career success. Employers are not a more or less perfect source of information for the “demands” of the employment system. We need hundreds of possible factors to take into account in order to describe appropriately what determines a successful graduate career and what determines successful handling of intellectually demanding and complex work tasks of graduates.

Second, research in this area has underscored that higher education cannot merely respond to the presumed demands of the employment system or the economy and society at large. Higher education has to prepare as well for indeterminate work tasks, to challenge the conventional job roles and practices of division of labour, and to contribute to unexpected innovative ideas. Therefore, curricula, teaching, and learning has to be both a response to perceived demand and training for proper functioning within established work assignments as well as a proactive policy for occupational change thereby transcending the dominant views of “demand”.

In recent years, interest is substantially grown in higher education to get more and more complex information on the links between higher education and the world of work. However, those actors of the higher education system interested are often disappointed that research on the relationships between higher education and the world of work provides little guidance for decision-making in higher education.

We have to admit that even more complex research on the relationships between higher education and the world of work has not yet reached a degree of quality which could be highly beneficial for a dialogue with practitioners about the future of higher education. There remain clearly, what I would like to call, three “construction sites” where improvement is needed.

First, a need to develop more suitable notions of “match” between higher education and the world of work and, correspondingly, more appropriate notions of professional “success”. Most studies on graduate employment compare different fields of study according to common yardsticks of employment and work “succ-
cess”. But fields such as dentistry on the one hand and sociology on the other hand need to be analysed on the basis of different yardsticks as regards the closeness of links between subject and occupational area as well as knowledge and work tasks, the responsive or innovative training for job tasks, the expected occupational rewards, the career risks, the diversity of relevant curricula, etc.

Second, *improved measures of job requirements and of competences are needed*. The available measures of job requirements and competences acquired in the course of study are often too strongly shaped by the categories employed in daily conversations of laymen and are often guided by over-expectations regarding the “isomorphy” between kinds of work tasks and areas of knowledge and learning. Moreover, they depend too strongly on the ratings of graduates or of employers. Ways have to be found towards the development of more sophisticated and more valid measures.

Third, *more convincing strategies have to be found to measure the extents and the ways higher education “matter” for employment and work*. We are still at the beginning of developing good methods to measure well the relative weight of various elements of study provisions and study conditions for the acquisition of competences and for the utilization of these competences on the job, i.e. the extent to which certain factors from the side of higher education “matter”.

Research on the relationships between higher education and the world of work, thus, has further room for improvement. And it certainly has ample opportunities to contribute to more convincing visions about the educational tasks of higher education. But the dialogue between the researchers and the practitioners in this domain is likely to remain strenuous. For the researchers are likely to deliver a more complex picture than the practitioners considers desirable for making priority decisions. And new ways of intensive communication between the researchers on the relationships between higher education and the world of work and the experts of individual disciplines and individual occupations have to be found in order to develop meaningful concepts of the professional relevance of study and competence development in the various areas of knowledge and professional practice.
PART I

OVERVIEWS
2.1 THE SOCIAL FUNCTION OF EDUCATION FOR THE WORLD OF WORK

Education is a social mechanism which, as a rule, *dissociates the learner physically* for a certain period of his or her life *from the regular world of work* and other life spheres. This is undertaken in order to prepare her or him in a more rational manner for coping successfully with the diversity of work and other life tasks through explanations, rules, general reasoning strategies, etc. The more efficient the industrial society became in producing wealth in the nineteenth and twentieth century, the more expanded the education system and the more education was viewed as a means of generating competencies which contribute to the production of goods and services.

Education is linked to the world of work in two principal respects:

– Education has a *qualifying* (in the French and German connotation) *function of* fostering the cognitive and possibly affective and sensu-motoric capabilities (Bloom et al. 1956) which might be useful to cope with job tasks, as well as challenges in other spheres of life.

– Education has a *status-distributive function* (Boudon 1973; Sewell, Hauser and Featherman 1976; Teichler, Hartung and Nuthmann 1980; Husén 1987): the level of “educational attainment” determines to a certain extent the monetary resources and the social recognition which will be available to the individual person in his or her subsequent life; for education is a powerful factor – and has increasingly become so over the nineteenth and twentieth century – in opening up or closing the access to prestigious occupations and providing the means for professional achievement which are directly linked to differential remuneration and socio-economic status.

These basic functions are undisputed. However, it is generally assumed that education is bound to be imperfect in preparing for the world of work, among others because rational learning through dissociation from practice has its price in less direct preparation for occupational tasks than on-the-job-learning, and because education is expected to serve broader functions than merely preparation for work. Also, in addition to education, many other factors are at work in determining the professional success of individuals, e.g. socio-biographic background, genetically determined abilities, socio-economic factors surrounding the role of credentials, processes of transfer from education to employment, and finally lifelong learning and personal development. Thus, it cannot come as a surprise to note controversial debates as regards the actual ways education is and ought to be shaped to serve the world of work. Similarly, views diverge about the actual impacts learning has and ought to have on the subsequent employment and work.
2.2 IMPERFECTIONS AND LIMITS OF THE LINKAGES OF EDUCATION AND EMPLOYMENT

Even if education was expected to be closely geared to the “requirements” of the employment system and even if there were no particularistic social factors in play, e.g. parental background, gender, etc. (cf. Jencks et al. 1972; Bourdieu and Passeron 1977), which interfere to a close link of educational and career success, there are obvious imperfections and uncertainties which make close linkages unlikely. Available research and past debates pointed out the following issues:

- **Imperfections in identifying job requirements**: Employers tend to be uncertain as far as job requirements are concerned, and scientific approaches of job task analysis often turn out not to be very useful for educational approaches.

- **Occupational dynamics**: The employment is very dynamic in terms of changes of job tasks within given occupations, and most persons have to expect occupational mobility in terms of changing employers or occupations over their life courses. This challenges the view that youth might be best served by getting well prepared for a very specific bundle of job tasks.

- **Indeterminate work tasks for highly-qualified work force**: The higher the educational level required for a certain occupational area and thus the higher the investments for education for the learners or for the society, the more difficult it is to identify the competencies needed, for the relationships between knowledge and job tasks are too complex to be validly analysed. Moreover, the individual is not expected merely to take over anticipated tasks but also to question the existing rules, to contribute to innovation, and to cope with indeterminate work tasks (Teichler 1992).

- **Planning gap**: There is an unavoidable time-gap between the identification of new job assignments and the provision of respective competencies on the part of school leavers and graduates, because several years are needed for the revision of curricula, their implementation, and the actual “production” of graduates according to the changed curriculum.

- **Generalists’ versus specialists’ paradigms**: Views vary substantially among experts regarding the extent to which education should be general or specialised according to areas of knowledge or occupations in order to serve best the preparation for employment and work.

- **Provision of foundation versus job-preparatory function of education**: Similarly, views tend to vary as regards the extent to which education prepares for future work tasks or only lays the foundation and leaves the direct preparation to the initial training of employees.

- **Emphasis on pre-career education versus recurrent education**: Finally, views differ in the extent to which the growing role of lifelong learning might reduce the need of pre-career education and training. This is linked to divergent views, among others, on the change of learning abilities over the life-course, on job requirements in different stages of the career, and on the economic and social conditions for lifelong learning (cf. Tuijnman and Schuller 1999).

Even if there were no major obstacles as regards the feasibility of linking education closely to the demands of the world of work, the views and policies are likely to differ substantially because major value judgements come into play.
EDUCATION AND EMPLOYMENT

– To what extent should education serve the world of work or other spheres of life (personality, citizenship, family, culture, leisure, etc.)?
– Should education be expanded beyond the needs of the economy, if social demands call for it? Should education serve social justice in terms of increasing equality of opportunity and smaller differentials of educational attainments, if this creates tensions to the demands of the economy?
– Who determines the needs of the world of work (the current views of employers, a social compromise, the needs according to experts’ views, etc.)?
– How are employment and work valued in a society (as a basis for identity, an alienating environment, predominantly extrinsically valuable as means for acquiring income and status, etc.), and what does this imply for the role education should play?
– To what extent should education serve the development of personality, values, social skills, etc. beyond the cognitive domain?

In all societies, controversies can be observed as regards the extent to which education is viewed as instrumental in securing the individual’s and the society’s economic success. The available literature, however, suggests that there are also strong national differences with respect to four areas of values (cf. Teicher and Teichler 2000).

(a) An educational meritocracy, i.e. a strong impact of pre-career educational attainment on subsequent career, seems to be most consequently realized and most highly appreciated – among industrial societies – in Japan (Dore 1976), whereas lifelong opportunities for counteracting those links are highly appreciated in the US; again other factors, i.e. collective social mobility and limits of educational and social divergences, are more strongly emphasized in many European countries.

(b) Views vary dramatically whether a general or specific and professional approach of education and training is desirable (cf. Psacharopoulos 1987b; Jallade 1989; Lutz 1994). Where a generalist’s view prevails, for example in Anglo-Saxon countries and in Japan, specialized education and training tend to be viewed as “narrow” both in terms of restraining professional flexibility and personality development. Where a specialist’s view dominates, notably in France and to a certain extent in Germany, the acquisition of specific knowledge is considered as exemplary in-depth learning which ensures substantial transfer to other areas of expertise, and professional expertise is viewed as compatible to a broadly cultured personality.

(c) Concepts of employment and work-related identity also differ substantially. In France and Germany, employment and work are generally expected to be a major force for individual identity. This tradition has reinforced a high pride of skilled workers in Germany. In contrast, sense of affiliation to one’s own employing organization tends to be viewed as a major source of identity and pride in Japan. In the Anglo-Saxon tradition, identity linked to work seems to be a phenomenon confined to high level occupations, as the terminological distinction in the English language underscores between (high-level) “professions” and other “vocational” or “occupational” areas.

(d) Finally, views differ strikingly as regards the role policies actually play and should play in shaping the relationships between education and employment (cf. Hüfner 1983). In the Soviet Union and affiliated countries, strong efforts
were made from the 1950s through the 1980s to plan education quantitatively and substantially according to the perceived demands of an economy which was also planned. In the United States, faith in the self-regulatory forces is most widespread as far as educational preparation for employment and work in a market-driven economy is concerned. In European countries, different degrees of macro-planning and steering of education are considered as essential in order to strike the balance between economic and other social and cultural rationales of education in a predominantly market-driven economy.

The different values are so pertinent for the actual links between education and employment in the respective societies that interpretations of research findings and discussions of their policies are more likely to reinforce national characteristics of the education-employment relationships than to create a universalistic challenge.

2.3 RESEARCH ON THE RELATIONSHIPS BETWEEN EDUCATION AND EMPLOYMENT

Various disciplines contribute to the concepts and to the stock of factual knowledge about the relationships between education and employment. The *economics of education* (Psacharopoulos 1987a; Carnoy 1994; Grao and Mora 2000) were among the most visible disciplines in this respect because of their paradigmatic coherence. Notably, the *human capital approach* attracted many economists to follow a certain conceptual and empirical pattern since about the 1960s (cf. Psacharopoulos 1994; Hartog 2000). One tries to establish the private rates of returns by comparing the relative life-time income advantages of highly educated persons with the investments they or their parents have made in terms of educational expenses and foregone income vis-à-vis persons with lower educational levels. Similarly, social rates of returns are measured by taking public expenses for education into account additionally. Many advocates of this approach are convinced that a return to educational investment higher than to capital investment indicates a shortage of the respective graduates, whereas a lower return indicates an oversupply.

Other approaches of economists gained popularity as well. For example, the *manpower requirement approach* aims to establish changes in the demand for graduates from different levels and areas of specialization by means of observation of past trends in economic growth and in the composition of the labour force according to categories of occupational structures and educational qualifications. Notably, in the 1960s and 1970s, this approach frequently served as a basis for forecasts (Parnes 1962).

Many other disciplines or thematic areas of research are interested in the relationships between education and employment. Among others, *vocational education* addresses the generation and utilization of work-related competencies (Arnold and Lipsmeier 1995; Tessaring 1998). *Psychology* and some areas of *sociology* analyze the work tasks and implied job requirements as well as the development of competencies. *Industrial sociology* notably is interested in the mix of technological, organizational, economic, and political factors determining the occupational structure and the job requirements (Baethge and Baethge-Kinsky 1995). *Educational sociology* and sociology of mobility continue to address issues of social origin, educa-
tional attainment, and career (Shavit and Blossfeld 1993). History or sociology of the professions (see Perkin 1996) analyse, among others, issues of professional identity and policies of professional bodies aiming to reinforce a close link between credentials and access to employment and a high status of the profession. Labour market research focuses on changes in the macro-structure of occupations and their composition of competencies as well as on trends of transition from education to employment, unemployment, and career mobility.

The different research approaches cultivate their specific domains, but partly address similar issues. They do not only vary according to concepts and methods, but also according to socio-political values.

2.4 TRENDS OF EDUCATIONAL ATTAINMENT

Expansion of education seems to be a perennial trend since World War II. On average, about one third of the adult population in industrial societies had at least some upper secondary education in 1960 (OECD 1994a); this proportion has reached about two-thirds in the late 1990s (OECD 2000).

From the late 1950s through the early 1970s, research projects and policy documents tended to be shaped by optimism that the economy requires a substantial increase of labour with advanced levels of education and that educational expansion could be instrumental to economic growth. Most international comparisons focussed on the general system of education and full-time schooling, thus neglecting pre-career vocational training. Accordingly, full-time enrolment rates of 17 years olds were 86 per cent in the US in 1970, about three quarters in Canada and Japan, but only about 40 per cent in Western Europe, ranging from about 60 per cent in Sweden to about 20 per cent in Germany (OECD 1977). Average years of schooling, measured in 1975, ranged from about 11 years in the US and the United Kingdom to less than six years in France, Spain, and Portugal (Graff 1996).

The 1973 “oil crisis” was a turning point of the political mood. Concern about unemployment in general began to dominate the scene and about problems regarding the employability of youth as well as potential mismatches between education and employment due to an oversupply of labour with higher or other advanced levels of education and training (OECD, 1977; Teichler, Hartung and Nuthmann 1980). At that time, the OECD began to include part-time enrolment and apprenticeship training into their figures of upper secondary enrolment, thereby observing an average increase of the secondary education graduation quota from about 60 per cent in industrial societies around 1970 to more than 80 per cent in the late 1990s. Differences persisted, ranging from more than 90 per cent in 1998 in New Zealand, Japan, and Germany to less than 60 per cent in Portugal (OECD 2000).

Similarly, the proportion of the respective age group being awarded a university-level degree increased from less than ten per cent on average in industrial societies around 1970 to almost 20 per cent at the end of the century. The change over time can be demonstrated best through a comparison of the educational attainment of various age groups of the population. Table 1 shows that the differences between the age groups are small in the United States, where the major ex-
expansion of enrolment took place before the 1970s, and high in Spain, where educational expansion is most pronounced in recent decades.

Table 1. Percentage of Population from Select Countries Having Attained at Least Upper Secondary Education and University-Level Education, by Age Group 1998

<table>
<thead>
<tr>
<th>Country</th>
<th>Upper secondary</th>
<th>University-level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-34</td>
<td>35-44</td>
</tr>
<tr>
<td>United States</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Norway</td>
<td>93</td>
<td>91</td>
</tr>
<tr>
<td>Japan</td>
<td>88</td>
<td>87</td>
</tr>
<tr>
<td>Germany</td>
<td>92</td>
<td>88</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>63</td>
<td>62</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>75</td>
<td>63</td>
</tr>
<tr>
<td>France</td>
<td>56</td>
<td>53</td>
</tr>
<tr>
<td>Philippines</td>
<td>48</td>
<td>41</td>
</tr>
<tr>
<td>Jordan</td>
<td>53</td>
<td>38</td>
</tr>
<tr>
<td>Spain</td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td>Argentina</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Turkey</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>China</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>11</td>
<td>9</td>
</tr>
</tbody>
</table>


2.5 INCOME DIFFERENCES BY EDUCATION

In all societies, the level of educational attainment and the amount of income correlates. In European OECD member states, for example, persons with upper secondary education earned on average in the 1990s about 1.3, those with non-university tertiary education 1.5, and those with university-level education about twice as much as persons without upper secondary education (see OECD 2000). Income differences according to educational attainment tend to be higher for women than for men, though women earn less than men (Pole 1995). Differentials declined moderately in industrial societies over the last three to four decades, though not consistently over time and across countries. Variations across countries in this respect cannot fully be explained by patterns of supply and demand; obviously, other social factors contribute to varying income inequality.

Calculations based on the human capital approach show that individual returns for higher education vary between countries from less than five per cent to even
more than 20 per cent. In some countries they surpass the interest rates of business capital whereas in others they remain below that level (OECD 1998b).

2.6 THE “MATCH” BETWEEN EDUCATION AND EMPLOYMENT

The extent to which patterns of educational qualifications match the demand of the employment system is a frequent topic of research and policy debate. One tries to establish – both for recent graduates and the total labour force – the extent to which the qualifications correspond to the occupational structure

– horizontally, i.e. in terms of links between subjects and occupational categories, and
– vertically, i.e. in terms of the appropriateness of the level of education to the status of the occupation.

Altogether, concerns about a horizontal match are more pronounced in countries emphasizing specialization in education and employment than in countries considering education predominantly as a general preparation for various possible assignments. They tend to be more pronounced as well regarding higher levels of education than lower ones: a substitution of a car-mechanic by a baker seems to be more acceptable than that of an engineer by a chemist. But the more research on the horizontal relationships between education and employment progressed, the more visible became lea-way for substitution. For example, the fact that about half of the Germans having undergone an apprenticeship training are employed five years later in occupations not closely linked to the type of training (Westhoff 1995) is not considered as wastage, but rather as an indicator that in-depth specialized vocational training fosters substantial potentials for flexibility and transfer of skills.

More attention was paid to problems linked to possible vertical mismatches. In the 1960s, concern was frequently voiced that countries with a low proportion of the population with advanced education might fall behind the others with respect to economic growth. From the 1970s through the 1990s, controversies were on the agenda whether a trend towards “over-education” or “over-qualification” could be observed (cf. the divergent views in Freeman 1976; Suda 1980; Teichler, Hartung and Nuthmann 1980). During the 1990s, eventually a mix of concerns about over-education in some areas and lack of competencies in others, e.g. qualifications required for new technologies, was prevalent in many countries.

“Over-education” and in some cases “under-education” were aimed to be analysed with the help of various measures (cf. Teichler 1988b; Dolton and Vignoles 1999; Hartog 2000; Paul, Teichler and van der Velden 2000):

– Studies based on educational and occupational statistics often came to the conclusion that the expansion of advanced levels of education clearly surpassed the demand of the employment system.

– Studies based on employers’ expectations similarly tended to support the idea of substantial increase of “over-education” in the 1970s and 1980s, though they also point out a lack of competencies in some domains, e.g. in specific areas of expertise or regarding socio-communicative skills.

– Surveys of former students show as well a higher frequency of education seemingly surpassing the level of job requirements than that of “under-education”,
but they indicate that many graduates make use on the job of the higher level of competencies. One should bear in mind, though, that research findings often depend largely on the definition of “over-education” and that the borderlines between “appropriate” and “inappropriate” employment often turn out to be fuzzy. The progress of research notwithstanding, the issue of “over-education” seems to be a perennial issue, because the tensions do not fade away between often steep occupational hierarchies on the one hand and on the other a relatively open access to the highest levels of education. Concern, however, tended to be voiced less dramatically in the 1990s than in the 1970s (Teichler 1999b). This might be explained by widespread expectations that a “knowledge society” is likely to emerge. Also, research has shown that most persons seemingly overqualified did not face major hardships on the labour market but acquired mostly a position only slightly lower than they had strived for.

2.7 EDUCATION, UNEMPLOYMENT, AND “EMPLOYABILITY”

Youth unemployment and various modes of precarious employment became a major policy concern in most industrialized societies since the mid-1970s and in most developing countries for long periods. Altogether, available information suggests that the unemployment quota among youth is substantially higher than that of the total labour force in most countries (OECD 1999). Also, the unemployment quotas in most industrial societies are the higher the lower the level of educational attainment is. For example, OECD calculations made in the late 1990s suggest that Europeans trained below upper secondary education have to expect four years of unemployment over their life course, those trained on upper secondary education somewhat more than two years, and those trained on tertiary education level somewhat more than one year (see Teichler 1999a, p. 232).

This led to a growing attention to the education of persons not achieving advanced levels of education, called for example “the forgotten majority” or the “forgotten half” in the public debate. A discussion was triggered whether an expansionist education policy could strengthen the youth’s employability potentials. Also, the question was raised whether certain types of education and training were more successful than others in preparing youth for the world of work.

Various models were suggested to classify modes of pre-career education and training on secondary education level (cf. OECD 1994b, 1998b; Tessaring 1998). During the late 1970s and early 1983, the apprenticeship training model (Lutz 1994) became popular in international debates, notably because youth unemployment rate in Germany and neighbour countries was not substantially higher than overall unemployment rates. During the 1980s, the pendulum of debate swung in favour of a general approach of pre-career education combined with initial and further on-the-job training within the employment system, as it was pursued in Japan (Dore and Sako 1989).

Four patterns of upper secondary education could be observed around 1980 (see OECD 1994b; Teichler 1999a):
EDUCATION AND EMPLOYMENT

– almost universal upper secondary schooling prior to high enrolment ratios in higher education, whereby general programmes of upper secondary education outnumbered vocational ones (e.g. in the United States and Japan);

– almost universal upper secondary education and training in diverse types of institutions prior to higher education, whereby apprenticeship training outnumbered other types of education and training (in Austria, Germany and Switzerland);

– a substantial sector of vocational schooling, either in vocational branches of secondary schools or in specific school-type training centres, alongside substantial general upper secondary programmes (in France and most Nordic countries);

– a dominance of general education programmes in upper secondary education alongside a high proportion of youth not attending any post-compulsory education and training (in the United Kingdom, Ireland, and various Southern European countries).

During the 1980s and 1990s, efforts were made to increase educational and training opportunities in countries previously characterized by a low enrolment rate on upper secondary education level. Also, new mixes of education and work experience emerged without eventually considering a single model as clearly superior (Ryan 1998; OECD 1999).

2.8 TRANSITION FROM EDUCATION TO EMPLOYMENT

In the 1990s, increased attention was paid to the processes of transition from education to employment. An OECD study defined transition not, as in the past, as a short period after initial education, but as a long period of up to ten years during which young people might be on the search for a satisfying and well-paid job, orientation and efforts to supplement competencies might interact and employment opportunities might differ from those for the older work force (Werquin, Breen and Plannas 1997; Bowers, Sonnet and Bardone 1999; Stern and Wagner 1999).

Part of the respective research focus on the relationships between education and employment in general just take the job start as the point of observation on the part of the employment system. Other studies analyse the speed of transition and the frequency of unemployment and precarious employment over various years, thereby pointing to a substantial diversity of paths between countries (Bédouvé and Giret 1998). A further type of analysis tries to examine whether the process of transition is facilitated by certain types of prior education and training. Some studies claim that the transition process is facilitated by a close “coupling” of education and training to respective occupations, notably through the apprenticeship systems (cf. Müller and Shavit 1998), whereas other consider “market” regulation, as observed notably in the US, as most promising because it facilitates adjustments at any time of career (cf. Psacharopoulos 2000).

Various studies address factors other than educational achievement which might explain transition to employment and further career. One might mention the influence of “credentials” in this context as well as both certifying and symbolically over-emphasizing educational achievements (Davies 1992). Also, socio-biographic background comes into play not merely in terms of particularistic advantages in the transition processes, but also in terms of social skills not taught
through formal educational processes (e.g. “cultural capital” by Bourdieu and Passeron 1977), which eventually turn out to be beneficial for career. Further, the debate on the important role of “key qualifications” (Nijhof and Streumer 1998) for employment and work also points out the importance of competencies at most in part fostered by education and training. Moreover, transition from education to employment also can be viewed as a moment under reduced meritocratic rule when young people can seek for chances through diligent search, smart tactics, and the demonstration of talents so far not rewarded in education (Teicher and Teichler 2000). Finally, some analyses aim to establish the extent to which targeted measures of improving transition to employment are successful (OECD 1999), notably short training programmes for “at-risk youth”, occupational guidance and counseling as well as placement arrangements by public employment agencies, private recruitment and placement firms, and by placement support on the part of educational institutions. Most of the research findings come to cautious conclusions regarding the extent to which those measures can counteract substantially the negative effects of low-level education and training.

2.9 CONCLUDING OBSERVATIONS

Education became increasingly an important determinant of employment and career in the nineteenth and twentieth century. By and large, long periods of pre-career learning are rewarded by a higher status and more interesting and independent work. However, this is not a regular trend but rather is affected by labour market constellations of demand and supply. Also, education becomes, in the process of expansion, more and more a prerequisite for career success, whereby other factors might gain weight with respect to the details of selection and allocation. Also, the growing dynamics within the occupation system make the influence of pre-career education less visible when lifelong education grows.

International comparison pointed out a striking variety of modes of education and training and of links between education and employment. The debates continue on the virtue of general versus specific education, on hopes set in educational expansion versus a closer match between education and the demands of the economy, on the advantages of a close coupling between training and work versus open market regulations, etc. But international comparison cautioned the beliefs widespread in the 1960s that one could identify the most successful, modern way of shaping the education system in a most promising way for serving economy, culture, and personality development. This did not necessarily lead to a dominance of relativistic approaches, but rather often stimulated the search for new mixes, e.g. in combining general education with work experience, opening up avenues for tertiary education while intensifying measures for educationally disadvantaged youth, improving education and concurrently measures which address the transition processes directly as well as the “employability” in other respects.

Even in a “knowledge society”, one does expect that a more or less pure educational meritocracy will emerge, because other factors might increasingly get momentum. But education seems to remain the single most important determinator of career and of chances in other spheres of life.
CHAPTER 3

OCCUPATIONAL STRUCTURES AND HIGHER EDUCATION
(1992)

3.1 LINKS BETWEEN HIGHER EDUCATION AND THE WORLD OF WORK

In explaining the relationships between higher education and employment in the late twentieth century, most experts seem to agree that five characteristic phenomena can be observed in more or less all industrial societies as well as in most developing countries:

(a) Higher education institutions predominantly serve the third stage of education which in most cases is the final stage of pre-career education. The first stage of education aims to provide basic education as a rule for all children. The second stage is somewhat differentiated according to intellectual talent, and subsequent training and career. The third stage is more differentiated, more specialized, and more geared to training for occupations. There are, however, substantial differences between national systems of education both as regards the proportion of young people participating in a third stage of education prior to career or transferring from education to employment without any training, as regards the extent to which higher education directly trains for subsequent careers, and as regards the extent to which higher education institutions additionally serve a forth stage of education termed “adult”, further “in-career”, “recurrent”, “permanent”, or “life-long” education.

(b) The educational functions of higher education, if viewed in their relationships to employment, are in principle conceived as general, professional or academic. Higher education aims to serve a general enhancement of knowledge of the students and possibly a cultivation of values, attitudes, and the personality in general. It is expected to provide a foundation of knowledge relevant for occupations typically taken over by graduates or possibly a direct professional training for these occupations. Institutions of higher education are also the training ground for scholars who will be teachers of future generations of students. National higher education systems, types of higher education, and disciplines or departments might vary in their emphasis on the general, professional, and academic functions, but it is typical for the key institutions of higher education, mostly universities, that identical institutional units, teachers, and courses serve these three functions concurrently.

(c) Higher education is less directly and less clearly geared to occupational tasks than other types of pre-career training. This is not only due to the fact that the more cognitively demanding occupational tasks are, the less directly they can be trained. University or higher education also differs from other kinds of late stages of pre-career education (or possibly other kinds of in-career or adult education) in
its character, because higher education has a \textit{critical} and an \textit{innovative function}. Graduates should not merely be prepared to take over given tasks. They should also be prepared to reconsider and reshape the job tasks. Students in higher education might acquire tools and learn rules. They also have to be capable and motivated to question established professional practices and to cope with undetermined work tasks. The introduction of terms such as “tertiary” or “third-level” education indicates, however, that the distinction between training for questioning established professional practices and merely functioning within given complex assignments was blurred both in many areas of higher education and employment in the process of educational expansion.

(d) Most experts agree that a secular trend of higher education is increasingly becoming an \textit{indispensable prerequisite} for access to the most powerful, most prestigious, and most highly remunerated occupations. It is indicative of the processes of industrialisation and modernisation of societies in the nineteenth and twentieth century that top positions more and more require high levels of cognitive competencies and systematic thinking (Perkin 1989, 1996). In this process, all modern societies became \textit{educational meritocracies} to some extent, in which access to the most prestigious sectors of education was relatively open, and educational attainment was relatively important for access to the most prestigious and best remunerated occupations. This state of affairs both serves to stimulate achievement and to legitimize inequalities as appropriate. There are differences according to fields of study and professions in the extent to which graduation from higher education institutions has become almost a requirement for access to certain occupations and a degree a formal prerequisite for professional practice. Closer links between educational attainments and careers can be observed more in some countries than in others. Furthermore, there are cyclical developments which cause educational success to be more highly rewarded during a shortage of a particular qualification, and less highly rewarded, when a surplus emerges. These facts, however, do not challenge the long-term trend of higher education becoming the gate for elite positions in society.

(e) The trend towards \textit{expansion of higher education} over the last few decades has changed substantially the relationships between higher education and employment. Higher education increasingly assumed the function of serving – in addition to the training of a social elite and to the preparation of the cognitively highly demanding professions – a broad range of students, many of whom enter occupations traditionally viewed as not being high level, nor intellectually demanding, and certainly not involved in challenging established rules. Sometimes the pejorative term “mass higher education” is used to describe these growing education and training functions for those eventually employed in middle-level positions. In most industrial societies this extension to the function of higher education was by no means a smooth process.

This article first provides an overview of the process of higher education expansion, of the changing debates on higher education and employment, and of the range of responses higher education has made to meet these changing relationships. Second, examples are provided of research findings on graduate employment and work assignment. Third, debates and research findings on the relationship between
higher education and graduate employment are reconsidered in the light of their implications for the relationship between education and social stratification.

This article only briefly touches upon – but does not treat in detail – three themes which are in principle relevant in this context. First, the links between social background, higher education, and subsequent social status; second, research and the paradigmatic debate in economics of education about the implications of income differentials by educational attainment on employers’, individual students’, and graduates’ rationales; and third, the training of young scholars and the academic labour market. The first theme has been well documented in the past (OECD 1975; Husén 1987). Internal development of occupations, though linked to education, qualifications, and credentials, and issues such as professions and professionalization, are not treated here.

3.2 CHANGING DEBATES AND REFORMS IN THE PROCESS OF HIGHER EDUCATION EXPANSION

3.2.1 Quantitative overview

Policy debates and research perspectives on the relationship between higher education and employment during the last few decades focused on both the causes and the consequences of expanding higher education. Was expansion of higher education caused by economic demand or more or less independent from demands of the employment system? Or was it a major factor in changing the links between education and employment? Was expansion of higher education in tune with job requirements? Or was there a mismatch between higher education and employment? How have the notions about the required and desirable links between education and employment changed in the process of educational expansion?

According to UNESCO statistics 1.3 per cent of persons in the respective age group of all countries were enrolled at institutions of higher education in 1950. The overall ratio reached 9.8 per cent in 1970 and 14.6 per cent in 1992. In the developed countries the gross enrolment ratio was 46.7 per cent in 1992, while in developing countries it was 7.8 per cent (UNESCO 1995a, p. 107).

Substantial differences existed between industrial societies in the extent of higher education expansion as well as the proportion of college-trained persons among the total labour force. For example, about six per cent of adults in the United States in 1950 completed four or more years of college. This proportion reached more than ten per cent in 1970 and about 20 per cent in the late 1980s. In Japan, the ratio of adults having completed university education was about two per cent in 1950, about six per cent in 1970, and about 12 per cent in the late 1980s. In the Federal Republic of Germany, university graduates comprised about two per cent of the adult population in 1950, four per cent in 1970, and about seven per cent in the late 1980s. If graduates from Fachhochschulen and their predecessor institutions are included, the ratio of higher education trained adults in Germany developed similarly to those completing at least two years of higher education in Japan (see Teichler 1991).

In East European countries, higher education expanded rapidly in the late 1950s and early 1960s, but grew only moderately when the majority of industrial societies
experienced high growth rates during the late 1960s and early 1970s. The proportion of employees having graduated from higher or technical education among the total population ranged from five per cent in Hungary to 12 per cent in the Soviet Union and Czechoslovakia (UNESCO/CEPES 1986, p. 43).

In developing countries, even more striking differences can be observed. In 1985, there were about 1,500 students per 100,000 inhabitants in Latin American countries, about 1,100 in Arab states, about 700 in Asia, and about 300 in Africa – as compared to about 2,500 in developed countries. For example, only 31 out of 100,000 were enrolled at institutions of higher education in Mozambique in 1992 as compared to more than 3,000 in Argentina (UNESCO 1995a, pp. 146-148).

3.2.2 Changing debates

These differences in actual expansion of higher education and graduate employment notwithstanding, similar stages of major debates on the relationships between higher education and employment could be observed in all market-oriented industrial societies. In planned economies of Eastern Europe and in developing countries debates addressed specific characteristics, but joined the prevailing concern in market-oriented societies during the 1970s and early 1980s over the mismatch between higher education and employment due to educational expansion beyond the levels of demand anticipated.

In the 1960s, many experts in industrial societies came to the conclusion that a substantial expansion of higher education was needed in order to stimulate economic growth, and that efforts to reduce inequalities in educational opportunity would be instrumental both in providing the supply needed by the economy and in establishing a modern, democratic society. In explaining the emergence of this notion, most writers refer to the “sputnik shock”, to the findings of the economics of education and their impact on the political debate, as well as to a change in the value system in favour of a reduction of inequalities of opportunity and, though less widely spread, in favour of reduction of inequities.

During that decade and the early 1970s, this optimistic view of the expansion of higher education was modified. Restructuring the higher education system was strongly emphasized to meet the growing diversity of students, their talents, motives, and career prospects. Relatively short and vocationally oriented course programmes and new institutions of higher education were established or expanded. Sociological and economic research on social background, education, and subsequent earnings or status became more widespread and sophisticated (see the summary in OECD 1975), gradually reducing the high hopes that expansion would stimulate economic growth, reduce inequities of education by a social origin, and ensure substantial career rewards for the educationally mobile.

During the 1970s, the optimism of the 1960s was finally replaced by a dramatic criticism of higher education expansion which seemed to have led to over-education, over-qualification, or other mismatches between higher education and the employment system, such as graduate unemployment or underemployment (for the debates in the United States, see Freeman 1976; Rumberger 1981; in other industrial societies Fulton et al. 1982; in developing countries Sanyal 1987).
Furthermore, efforts to reduce inequality of educational opportunity appear to fuel educational inflation without being very successful in making educational and career success substantially easier for the disadvantaged. The reward of educational achievement by the employment system was no longer regarded by some experts as appropriate for a modern achievement society in which education is instrumental for occupational performance. Rather, it was looked upon as an artificial and restricted reward mechanism, exaggerating the importance of qualifications for job performance and reducing meritocratic reward at later career stages, as expressed in terms such as “credentialism” (Collins 1979) and “diploma disease” (Dore 1976). During this period, more research was undertaken on the relationship between higher education and employment than previously and in subsequent years.

From the late 1970s and more obviously during the 1980s, the general atmosphere of crisis about the employment implications of higher education expansion was moderated and gave way to other observations (OECD 1983; Teichler 1988b; see also most recent developments in Brennan et al. 1995). This change of emphasis reflects:

(a) the experience of most industrialised societies that the discrepancies between the number of graduates and perceived demand did not lead to any single major problem. Rather, graduate unemployment increased moderately, transition periods from graduation to first employment became somewhat longer, income and status advantages for graduates as compared to secondary-school leavers decreased slightly, and inappropriate employment increased to some extent;

(b) rationales in favour of restricting expansion of higher education through planning or recommending youth to avoid higher education lost ground. Detailed planning faded both in market and planned economies to increase the awareness of the imprecise nature of prediction and in implementing envisaged goals (see Avakov et al. 1984; UNESCO/CEPES 1986). Yet higher education remained a reasonable choice for – even though privilege shrank – graduation from institutions of higher education reduced the risk of unemployment in many countries and became more and more a prerequisite for access even to higher middle-level jobs (OECD, 1989);

(c) differences of employment prospects increasing in many countries according to field of study, type of higher education institution, or prestige of individual institutions. This corresponded to an emphasis on competition between institutions of higher education and on its evaluation. Thus, debate focused on relative differences of graduate employment as outcome measures of sub-sets of higher education rather than on any absolute threshold of over-education (Johnes and Taylor 1990);

(d) the demand for higher education being subject to a reappraisal. New requirements followed in the wake of technological changes. More emphasis was placed on curricula and socialisation processes, on developing problem solving, attitudes, and norms in the employment system (Boys et al. 1988). Finally, in some countries a highly educated society was viewed as more desirable economically, socially, and culturally.
3.2.3 Structural responses

The development of institutional patterns in higher education systems is affected by many pressures and expectations. Finance, rationales for linking or segregating teaching and research, and interests of academics might play a role, but links between higher education and employment are generally conceived to be among the key factors shaping the structural development of higher education.

Over the last few decades, two structural developments emerged in higher education. First, many institutions of higher education which were specialized in specific fields and prepared students for specific occupations were integrated into multidisciplinary institutions. This development started relatively early and was more or less completed in the 1970s. It was less pronounced in countries influenced by the French and the Soviet model of higher education. A few fields, notably fine arts, remained relatively resistant to this trend. Advocates of multidisciplinary institutions emphasized administrative advantages of larger institutions and the virtue of cross-fertilization between disciplines. This development cannot be grasped without going into its implication for the relationship between higher education and employment. If higher education becomes the more or less indispensible prerequisite for access to high-level occupation, the common “roof” of the university underscores common elements and certain degrees of common status of occupations typically requiring a university degree (Perkin 1989).

Second, one notes a contrasting process involving the extension of one or several additional types of institutions and/or course programmes which are academically less demanding, provide in most cases a shorter length of study, and are more vocational. This process started at a time when expansion of higher education was still generally well accepted. But the view soon spread that students had become highly diversified in motivation, talent, and job prospects, and furthermore that society could no longer afford the costs of traditional university education for an increasing number of students. In many countries efforts to develop such a second sector of higher education were based on the assumption that the second rank of occupation – in some instances called “semi-professionals” – required a training more intellectually demanding than in the past, but less reflective and more directly geared towards employment than training for the first rank of professions.

However, a dominant international model of institutional structures did not emerge (Teichler 1988a). In some countries differentiation according to stages of study and degrees prevailed, whereas in others different institutions with distinct curricula emerged. In some countries, short course programmes tend to be more general than long ones. In others short programmes address future occupational tasks more directly than long programmes. In some, clear distinctions are drawn between various institutions and/or course programmes, whereas in others the respective differences are minimized.

The lack of any convergent trend until the early 1990s as regards the major types of institutions and programmes in response to the expansion of higher education can be partly attributed to national idiosyncracies of educational systems or to the frequently claimed inertia of higher education institutions, and also to substantial structural reforms heading in divergent directions. National employment sys-
tems substantially differ in expecting specialized or generally educated graduates, and hence development of institutional types is strongly influenced by the homogeneity or heterogeneity of institutions within each institutional type. New types of institutions and programmes differed in their stability. Some countries tended strongly towards the more prestigious institutions and/or programmes. In others they became relatively stable.

Some experts have suggested an additional structural trend, namely the emergence of a post-secondary, tertiary or third-level system – more specifically, the accumulation of institutions and programmes, serving similar age groups and emphasizing direct occupational preparation, but eschewing an academic or critical quality to their teaching and learning. In general, the main characteristic of this structural trend is to serve a certain life stage rather than assuming a specific educational character.

Post-secondary education became popular in the United States, although accreditation mechanisms continue to clearly delineate higher education on the one hand and corporate education or “degree mills” on the other. Only in Japan (senshû gakkô) and Australia (technical and further education) there are sizeable institutional types which are considered tertiary but not higher. If taken across a wider spectrum of countries, the existence of a trend towards tertiary education is doubtful.

3.2.4 Reforms of curricula and services

In reassessing the debates on the growing quantitative demand for graduates and its subsequent oversupply, many authorities came to the conclusion, notably in the late 1970s, that traditional approaches paid “insufficient attention to the precise content and knowledge and skills which are implied by the possession of high-level qualifications” (Fulton et al. 1982, p. 102). Concern about graduate employment stimulated and reinforced activities to change the composition of field of study, the curricula and various services that would better prepare students for subsequent work.

In the United States (Teichler 1987) and in some European countries (Williams 1985), enrolment increased substantially in fields of study held to offer better employment prospects. Change to the student composition by fields was in part the consequence of governmental policies, of reallocation decisions by the institutions of higher education or as decisions taken by the students themselves. Enrolment trends, however, did not consistently follow presumed demands, and research on students’ motivation consistently revealed that self-development and preparation for interesting and demanding work are more highly valued than income and career (Bowen 1977; Sanyal 1987; Boys et al. 1988; Teichler and Winkler 1990).

Curricula reforms became the major policy following the changing labour market for graduates (see Lynton and Elman 1987; Boys et al. 1988; Teichler 1985). Curricula reforms were initiated for many reasons. Boys et al. (1988, pp. 66-68) classified them as “system-led”, “institution-led”, “resource-led”, “discipline-led”, “academically-led”, “educationally-led”, “profession-led”, and “consumer-led”. In many cases other than “profession-led” employment considerations played a role.

Three major directions can be identified among efforts to increase the occupational relevance in higher education (Teichler 1985, pp. 2205-2206). First, changes
in fields of study and in the content of courses were undoubtedly the main thrust. In some cases curricula were geared to newly emerging jobs; in others a further specialization within programmes took place. Alternatively, curricula in disciplines facing employment problems were supplemented by single courses or larger components such as the combining of humanities and business studies. Those strategies, however successful, run the risk of increasing the quantitative mismatch between graduates and job openings. In East European countries, where more specialized fields had grown up, one could note a substantial reduction in their number around 1980. In market-oriented industrial societies too, a broadening of curricula was viewed as appropriate response to rising unemployment. New subfields and new combinations of disciplines arose. Students were offered courses not directly part of their major subject but held useful for employment, such as language courses.

Second, work experience was more often integrated into learning at institutions of higher education than in the past. Work experience gained in holidays or immediately after graduation as a pre-admission requirement or licensing requirement has been long established in many countries. Work experience during study as degree requirements integrated into the classroom became popular during the 1970s and 1980s, giving rise to the terms “cooperative education”, “sandwich course”, “internship”, “practical semester”, and so forth.

Third, efforts were made to modify learning styles, such as new problem-solving strategies. Among others, project work was expected to make students aware of the complexity of problem solving. Teachers sought to bring together academic and professional problem solving in lectures and seminars.

Other measures combined these different approaches. The incorporation of a study period abroad into a course programme is frequently reckoned to improve the students’ career prospects, and committees including representatives of the employment system or the recruitment of academic staff with experience in non-academic fields forge closer links between study and employment.

Curriculum changes to improve the students’ preparation for work were criticized for various reasons: the deleterious effects on the quality of basic and academic knowledge meeting employers’ demands would undermine the critical function of higher education; and students would lose the detachment necessary for innovative thought. Any generalization of this kind is certainly inappropriate given the diversity of experimentation. In a research project undertaken in the United Kingdom during the 1980s, Boys et al. (1988) challenged the widespread view that higher education was too slow and reluctant to change curricula and in teaching to prepare students for future work. Though concerned by the presence of some indicators that divide between academic and applied emphasis, the authors note the potential of combining general academic approaches and relevance to employment of preparing for work and pursuing knowledge for its own sake.

Career counselling – traditionally emphasized in the United States – and placement services – traditionally with far-reaching influence at private universities in Japan (Azumi 1969) – became subject to much attention. At many institutions of higher education, informal advice and support spread in various ways.
3.3 GRADUATES’ EMPLOYMENT AND JOB ASSIGNMENTS

3.3.1 Changing patterns of transition to employment

Before concern grew about graduate employment in the 1970s, regular surveys on graduates shortly after graduation were conducted only in Japan. The major activity as well as the occupational group and industrial sector of those employed were recorded two months after graduation by the school or institution of higher education where the individual had enrolled. Since the 1970s, annual or biennial surveys taken about half to one year after graduation were established in the United Kingdom, the United States, Sweden, Norway, Ireland, Switzerland, and a few other countries. Almost all surveys address the national labour market, but the Ireland surveys include employment abroad as well (Advisory Group on Labour Market Trends 1990). These usually short questionnaires pose one or two questions in addition to those addressing the major activity, occupational group, and so forth, on the graduates’ views regarding the links between their studies and work or status, such as the extent to which they utilize knowledge acquired during their course of study.

For example, the proportion of British university graduates unemployed half a year after graduation increased from about five per cent in the late 1970s to 12 per cent in 1982, and declined thereafter again to five per cent in 1988 (Johnes and Taylor 1990, p. 123). A long-term trend towards early transition to permanent employment can be observed, whereas short-term employment as well as further education and training declined over the years.

Some large-scale surveys as well as others aimed at selected groups of graduates investigated the period of transition from graduation to employment. In 1984, three quarters of Swedish graduates heading for employment were employed less than one month after graduation. Only four per cent of those employed one year after graduation took more than four months to find employment. The transition period lasted four to six months for 15 per cent of Swiss graduates in 1984 and more than six months for eight per cent (if not otherwise stated, these data are reported in Teichler 1988b).

In the annual Norwegian survey conducted half a year after graduation, the proportion of university graduates facing employment difficulties declined from 35 per cent in 1982 to 16 per cent in 1987. For graduates from regional colleges the percentage diminished from 43 per cent to 29 per cent in the same period (NAVFs utredningsinstitutt 1989, p. 59). In 1982, 20 per cent of graduates from British polytechnics and institutes of higher education declared to have difficulties in getting any job. A further 24 per cent reported that they had difficulties in finding work appropriate to their qualification (Brennan and McGeevor 1988, pp. 21-22).

3.3.2 Employment measures

Regular employment statistics in various countries take account of the level of educational attainment (OECD 1995a, b). As a rule, they provide the graduates’ economic sector of employment and their occupational groups.
In many overviews on graduate employment, occupational categories are grouped into (a) professional, managerial, and technical occupations; (b) clerical and sales occupations; and (c) manual and other occupations. In this context, university graduates active in occupations (a) are frequently interpreted as adequately employed, but those active in other occupations are deemed inadequately employed. For example, according to publications of the United States Department of Labor, Bureau of Labor Statistics, the number of college-trained persons (with four years of study or more) not employed in group (a), and hence inappropriately employed rose from 15 per cent in 1970 to 28 per cent in 1982.

Data on recent graduates in Japan are grouped similarly. Only 32 per cent of 1994 university graduates and 26 per cent of junior college graduates took up professional employment (Ministry of Education, Science, and Culture 1995, pp. 102-109). The proportions remained more or less constant among university graduates over the preceding two decades while continuing to decline among junior college graduates. A closer look reveals that a growing proportion of graduates transferred to clerical and sales positions instead of becoming teachers. Both United States and Japanese data are misleading, since all technical occupations above manual labourers are counted as professional, whereas non-technical occupations are divided into professional and middle level.

In an Australian longitudinal study conducted between 1986 and 1988 on students two to four years after graduation, occupations were classified into five ranks. Managerial or professional jobs were held by 82 per cent, six per cent held semi-professional and technical jobs, ten per cent subordinate white-collar jobs, two per cent primary blue-collar jobs, and none secondary blue-collar jobs (Currie 1991, p. 252).

An analysis of the relationships between fields of study and occupational category might serve as a more detailed objective measure for appropriate employment. For example, more than 80 per cent of Norwegian graduates surveyed in 1989 ten years after graduation were active in occupation clearly or largely linked to their fields (Enoksen and Stoeren 1990, pp. 55-62).

In the Federal Republic of Germany, more research on the quantitative and qualitative links between higher education and work was undertaken than in other countries. One important issue focused on analyses and forecasts between different fields of study and occupational categories. These differences, the critique pointed out, might well lead to a systematic underestimation of what constituted appropriate employment. Some researchers focused on new fields of study to see if new demands occurred subsequent to new supply. Others tried to establish how far graduation from various fields was associated with a high active potential for substitution (i.e., taking over jobs usually held by graduates from other fields) or whether this led to passive substitution (i.e., being taken up by graduates normally aiming at other occupations) (Teichler and Sanyal, 1982, pp. 90-99). In contrast, researchers who compared the number of university graduates in German firms – often lower than in similar French firms – argued that a growing number of graduates was superfluous. It would also infringe the co-responsibility rights of middle-level staff and thus reinforce top-down decision making (Lutz 1981).
The various research approaches to analysing study areas and occupational categories have not established clearly the proportion of graduates employed in jobs related to their education. Because of this, most graduate surveys ask students to indicate themselves the links between education and employment.

Graduate income has been analysed in many studies, largely because the economic debate on education and employment strongly focused on the human capital approach and other economic hypotheses which challenged the human capital theory, such as the screening theory and the labour market segmentation theory. All these approaches focus on the justification of paying differential salaries according to educational attainment. The human capital theory assumes that employers vary wage differentials by educational attainment in keeping with ratios of demand and supply. The screening hypothesis, however, points out that employers reward different educational attainments, even if the supply of highly qualified labour surpasses demand. The segmentation theory explains wage differences by educational attainment largely by reference to different sub-labour markets, each of which contains separate rationales of employment and remuneration.

The vast amount of data available leaves room for very different interpretations, though a long term trend of reduction of income advantages that graduates from higher education institutions enjoy can be observed. Here the most striking example is starting salaries in Japan. According to regular surveys from the Japanese Ministry of Labour, in 1955 the starting salary of male university graduates was 260 per cent of that of male compulsory school graduates. With the expansion of higher education in 1960 it fell to 221 per cent, to 174 per cent in 1965, to 155 per cent in 1970, and finally to 144 per cent in 1975, the wage differentials for women remaining about the same. Since the mid-1970, university enrolment ratios and the differentials in starting salaries both stagnated (Teichler 1987).

Obviously, many young people continue to strive for higher education, even if income advantages are not very high. High status might remain attractive, even if not associated with substantial income advantages. Furthermore, completion of higher education, even if not highly rewarded, became increasingly a precondition for access to the most prestigious and best paid careers. Last but not least, higher education paves the way for the most interesting and satisfying occupations. Apart from status considerations, students continue to emphasize strongly the intrinsic motives of study and work.

Employment statistics also provide unemployment ratios in relation to educational attainment. For example, the unemployment ratio of college-trained persons was lower in 15 of the 26 OECD countries in 1988 than that of the total labour force. One should add that in the various countries surveyed, those who completed middle-level technical or white-collar training were less likely to be unemployed than their fellows who graduated from higher education (OECD 1989, p. 67).

3.3.3 Graduates' views of appropriate status and assignment

Objective measures on the relationship between higher education, namely those which include levels of formal schooling and fields of study as well as occupational categories and income, are insufficient. They often overlook the relevance of
higher education for lower positions than those traditionally held by graduates. Yet, a mismatch may still exist between qualification and job assignment, even if the field of study seems to correspond to the occupational category. Individual graduates may be ill prepared. The particular job may be highly demanding or utterly undemanding.

A broad range of subjective measures was taken into account in surveys undertaken in the United States by Ochsner and Solmon (1979) in the 1970s. Graduates were asked to rate the relatedness of the job to their major subject. They were also asked to state why the job was not closely related. How useful was education to the job? Graduates were asked to name the major courses they used at work and to say how they acquired job skills. What were the roles that courses, college work experience, and extracurricular activities played? In addition, they were asked to indicate the major subject most appropriate to their job, and finally to say how far they were satisfied with their jobs. The graduate survey undertaken in 1977, seven years after first enrolment, shows that office-workers surprisingly often perceive a link between study and work.

A longitudinal survey undertaken in the Federal Republic of Germany during the 1980s suggested that graduates’ views challenge widespread notions about graduate career opportunities from different fields as well as different types of higher education. It showed that social work graduates reinforce only to a limited extent the general impression that their job prospects are relatively bad. They see their positions somewhat less often as appropriate than graduates in mechanical engineering, economics, and business studies. Yet a larger proportion of social work graduates do utilize the skills acquired during study. Another finding also does not correspond to the conventional wisdom: university graduates utilize on the job their competencies acquired during study far more than graduates in the same fields from Fachhochschulen, even though Fachhochschulen claim to prepare students more directly for future job tasks than universities (Schomburg and Teichler 1993, p. 48).

The links between higher education and employment have been tackled by graduate surveys in many countries. In most cases, however, the results are not comparable, for even moderate differences in the formulation of the questions have a major impact on the findings. Survey questions notably differ substantially according to the underlying concept about the appropriateness of higher education and employment.

Sanyal (1987), who studied students, graduates, and employers in almost 20 developing countries, tried to establish the impact of credentials on the link between study and employment. Graduates were asked whether their credential was necessary in order to be employed and whether studying was useful and adequate for the work involved. In fact, there is a positive correlation in West Bengal in India. However, more than a quarter of jobholders for whom the credential was “very necessary”, felt their education inadequate for the job assignments. Still, more than a third of graduates for whom education was not necessary to obtain a job, considered their education useful and adequate for their assignments.

The way questions influence findings was shown in an overview of research on graduate employment in Europe in the 1980s (Teichler 1988b). One study con-
cluded that 34 per cent of graduates from selected disciplinary areas in France and Italy were “underutilized” one year after graduation (de Francesco and Jarousse 1983). “Underutilized” graduates were defined if they responded affirmatively to the question: “Do you know of people without degrees who do the same job as yourself?” This definition obviously inflates the degree of inappropriate employment because all graduates are classified as inappropriately employed if they do not hold jobs exclusively held by graduates.

The situation is somewhat different among Swiss graduates who reported that their employers did not necessarily require a degree. The author grouped as being inadequately employed only those individuals who in addition stated they had faced difficulties in finding a job and had either “accepted a job hardly related to their training for financial reasons” or “turned instead to a job hardly related to their training and not matching their monetary expectations”. Accordingly, only two per cent of Swiss graduates, surveyed in 1985 one year after graduation, were classified as “inadequately employed” (Morgenthaler 1986).

The questions phrased in graduates surveys are often based on the assumption that graduates are highly qualified, and it is the purpose of the survey to explore how far the highly qualified face employment with less demanding or lower status than what they rightly expect and are readily prepared for. In 1979, a survey on Polish employees trained in economics was conducted. The investigators sought to avoid this methodological bias by combining questions on the links between field and professional specification, on the required educational level, and on the extent knowledge was utilized with a typology of “match between qualifications and job.” However, 12 per cent of respondents seemed to lack the qualifications demanded by the job (see Kluczynski and Sanyal 1985).

3.3.4 Links between learning and job assignment

Since the 1970s, many research projects sought to establish the content links between learning and job assignment. This shift of emphasis reflected the efforts of higher education to reform curricula, to provide improved services for students to know the working world and to ease the transition to employment after graduation.

Early research was based on the assumption that graduates, academic staff, employers, or other key persons clearly understood and could analyse the links between education and employment. Thus, the German Association of Engineers asked their members to estimate the percentages of mathematical/scientific, engineering, and non-technical knowledge required on the job and to compare them to the percentages included in courses taken in these three areas. In addition, engineers were asked to estimate the percentages of knowledge utilized in these areas that had been acquired during study on the one hand and on the job on the other. Investigations of this study recommended an increase in the proportion of non-technical courses, supposedly because these were underrepresented in university curricula compared to their use on the job, and because engineers stated that only 20 per cent of non-technical knowledge used had been acquired during study (Teichler and Sanyal 1982, pp. 103-104).
In Sanyal’s projects (1987) involving almost 20 developing countries, students’, graduates’, and employers’ questionnaires were in part based on identical themes. He presumed that agreement between the different groups would provide valid pointers to the qualifications required and thus set out the reform agenda for higher education. Employers, graduates, and students in certain countries felt it very important that formal educational programmes should be interspersed with related work experience.

Clearly, links between study and work vary according to disciplinary area, by type of higher education institution, and likely as not by individual institution or department. Some areas emphasize immediate professional preparation; others place emphasis on academic knowledge or on personality development. There are different notions, however, about links between the academic discipline and work. In some countries economics or scientific fields may be considered as academic, in other countries as professional fields.

Graduate surveys show that the usefulness of knowledge acquired in higher education does not vary by field to the same extent as the fields of study differ in their academic or professional emphasis. Brennan and McGeevor (1988, p. 103) classified the degree courses according to their occupational links. 71 per cent of graduates from “occupational specialist” programmes said (three years after graduation) that their undergraduate studies were useful to the quality of work. The majority of “occupational generalists” (66 %), “generalists plus”, and “generalists” (54 %) considered their studies useful as well.

Furthermore, a survey of United States middle and senior managers conducted in the late 1980s underscored the usefulness of liberal arts education. Managers trained in liberal arts in comparison to those trained in business and engineering felt weaker in technical knowledge and quantitative skills, but superior in understanding people, leadership skills, and appreciating ethical concerns (see Useem 1989).

Interest in assessing the impacts or specific study programme elements, such as the impact of work placement during study or the impact of study periods abroad, has grown. In the mid-1980s a survey of British, French, German, and Swedish students and graduates who participated in study abroad programmes showed they appreciated the opportunity of getting to know another country and improve their foreign language proficiency, but were somewhat more cautious in assessing the academic and career implications of foreign study. Graduates rated the latter two aspects well below more recent participant students (see Opper, Teichler and Carlson 1990).

Recruitment criteria and employers’ expectations of student qualifications were analysed in a number of research projects in the 1970s and 1980s. A comparison of similar surveys in the United Kingdom (Roizen and Jepson 1985) and in the Federal Republic of Germany (Teichler 1988b, pp. 147-159) showed national differences both in respect of different educational ideals of universities and of different traditions in employment systems.

The authors of both studies emphasize the great variety in terms of selection criteria across the employing organizations. Firms seem to develop their own styles and strategies of recruitment, rather than being predominantly driven by the logic
OCCUPATIONAL STRUCTURES AND HIGHER EDUCATION

of technology or the economy. Higher education and students are much less pressed to meet the single best set of curricula and skills in order to be employable than popular debates tend to suggest. Both studies indicate that employers are much less interested in the details of higher education curricula and specific elements of graduates’ knowledge than those in the higher education system believe.

The United Kingdom’s employers, according to these studies, first, place more emphasis than German employers on the particular institutions graduates come from and they view the higher education system as being stratified by the quality of teaching and learning. Second, personnel managers involved in graduate recruitment question the validity of grading in higher education more than their British counterparts. Third, German employers regard highly the type of knowledge acquired, the specific qualifications, and the cognitive skills in general as a basis of problem solving. British employers are even in technical areas more likely to search for the generally trained mind and to put substantial weight on attitudes and social skills. This corresponds to the finding that the proportion of graduates from fields of study considered unrelated to the private sector such as the humanities, sociology, and political sciences employed in private firms is higher in the United Kingdom than in Germany.

The growing complexity of statistical analyses has led to an increasing number of researchers opting out of analysing the effect of curricula and learning upon career, work tasks, and professional achievements, an approach which previously lay through asking employers and graduates to assess their careers and job performance in relation to certain aspects of learning. Research of this kind spread mostly in the United States. However, most projects measure student outcomes, only a few following through the careers and other dimensions after graduation (Ewell 1988). Findings of such projects are too varied to allow generalized statements dealing with the curricular elements that might have the strongest impact on careers.

3.4 GENERAL PHENOMENA AND SECULAR TRENDS

Higher education institutions, that is, institutions which typically provide the most demanding education and training during the last stage of pre-career education, are part of the formal education system which plays an important role as a social stratifier. The linkages between higher education and social strata, however, may take different forms in different countries, at different stages of social and economic development or at different stages in international debates (Husén 1987).

There is a secular trend of higher education becoming more open to previously disadvantaged groups. This process was not a continuous one. Many point out that it stagnated or was temporarily turned back when conditions of a supposed oversupply of graduates set in (Windolf 1990). Furthermore, the extent of change was slower than expected, above all when major efforts were made to reduce inequalities of opportunity. Views differ as to whether, on balance, higher education became more especially open in industrial societies or for that matter in developing countries. Combined, the relationship between socio-biographic origin and success
in higher education suggests that higher education continues to drive towards meritocracy.

Another secular trend is emerging in the form of a growing influence of higher education over occupational and social status distribution. Once again, this process is neither continuous, nor identical in all countries and sectors of higher education. Both the growing importance of systematic knowledge and knowledge organization for high-level and middle-level occupations plus an erosion of particularistic mechanisms of status distribution have contributed to this long term development.

Substantial differences exist between countries and occupations in the extent to which graduation from certain course programmes is a formal prerequisite for access to certain professions or even the formal qualification for professional practice, as also how far degrees de facto have a strong influence on the transition to employment and on subsequent careers. Hence, the respective degree is formally a necessary requirement for professional practice in medicine and in the civil service in most countries. Substantial variations, however, exist with regards to other professions.

Different formal linkages are also found between certification in higher education and qualification for a related profession. For example, in many European countries a university degree is concurrently a formal qualification for professional practice (effectus civilis). In Germany, those graduating in medical fields, law, and teacher training do not go forward for an academic degree, but take a state examination instead. In other countries, though, a degree is a prerequisite for professional practise. Access to the respective occupation or even to training for the respective occupation may be governed by public entrance examinations (concours) or by professional licensing based on additional exams and/or practise. In the United Kingdom and some other countries, separate procedures for professional licensing exist for university-trained persons on the one hand and for qualified persons on the other who had not been awarded a university degree. Engineering, law, and accountancy are cases in point.

The prejorative terms used to depict a close link between degree and occupation such as “credentialism” and “diploma disease” are often used to criticize undesirable consequences of a close de facto link. Japan is generally held up as the industrial society where educational credentials most strongly determine career opportunities. There is general agreement that credentials have a stronger impact on subsequent careers in developing countries than in industrialized countries (Dore 1976).

Occupational prestige surveys from 27 countries undertaken in the 1960s and 1970s (Treimann 1977, pp. 153-157) ranked 50 occupations according to their prestige. The top 20 occupations which emerged from this enquiry were grouped as follows: (a) physician, university professor; (b) lawyer, head of large firm, engineer; (c) banker, airline pilot, high-school teacher, pharmacist, armed forces officer, and (d) clergyman, artist, primary teacher, journalist, accountant, minor civil servant, nurse, building contractor, actor, bookkeeper.
3.5 CHANGES IN THE PROCESS OF EXPANSION OF HIGHER EDUCATION

Higher education expansion during the last three or four decades brought about various changes in the relationship between higher education and employment, changes which took place concurrently and which, though analytically distinctive, in practice overlap. First, completion of higher education became a prior condition for access to top positions. Second, serious problems of adjustment between higher education and employment could be observed for some periods and for some sectors, but mismatch did neither become a continuous nor a dominant mode. Third, it became a matter of record that a substantial proportion of graduates took over positions previously held by non-graduates. In most cases graduates are in less demanding positions and somewhat lower in status, but these are not jobs traditionally termed *Akademisches Proletariat* in German. Fourth, some occupations previously not requiring degrees underwent upgrading, and now require completion of higher education as a rule. The latter two processes are closely linked: what is at first perceived as a downgrading in the utilization of a degree, becomes over time an upgrading of the respective occupation.

The emergence of various alternative models of relationship between higher education and employment can be set out as a thought exercise (see Teichler, Hartung and Nuthmann 1980):

(a) a new stratification within expanded higher education in tune with the extended labour market for graduates: smaller differences in educational attainment would determine graduates’ careers to the same degree as larger differences in the past. In fact, one observes trends towards the diversification of higher education, though they are not regular and internationally consistent;

(b) an uncoupling of the links between higher education and employment via a decline in the reward for education given by the employment system. Certainly, some graduates were the victims of sudden discrepancies and many did not get the award expected. However, there is no indication of a decreasing correlation between rank of educational attainment and relative socio-economic status;

(c) a continuity of traditional links between higher education and corresponding employment for some graduates with others facing a downgrading. In fact, the questions frequently raised in graduate surveys that dealt with the utilization of knowledge and of appropriateness of position originated from such a way of thinking. Data certainly allow a classification of graduate employment along those lines. In a German research project, graduates were classified into six categories according to information provided two years after graduation on duration of the job search, income, utilization of knowledge, and job satisfaction. The categories “privileged graduate job”, “normal graduate job”, “graduate job with substantial routine tasks”, and “unsatisfactory job” suggest a rank order of appropriateness according to the majority of elements. Exceptions are notably those in “privileged graduate jobs”, “academic jobs” who report interesting work, normal income, but uncertain employment conditions, and the “socially and politically engaged” graduates who report interesting and independent work seen as useful for humankind, and as politically influential, but carrying low status and income (Teichler and Winkler 1990, pp. 213-221). A study undertaken in the United Kingdom (Taylor 1990) tried to establish the links between
CHAPTER 3

objective labour market indicators (unemployment rate, salary, and work abroad), and subjective graduate feedback indicators (getting an interesting job, securing a good income, becoming a widely educated person) for the major fields of university study. The findings confirm that there is a positive correlation between the various indicators. For example, interesting jobs are, as a rule, well paid. But different indicators are not so clearly linked that one could conceive an obvious delineation of occupational ranks.

(d) According to a fourth possible model, expansion of higher education leads to smaller differences in income, prestige, and interesting work. The reduction of wage differentials in Japan points in this direction. However, in most other countries one cannot observe a clear trend of this kind.

3.6 VAGUENESS OF LINKS OR TRANSITION TOWARDS A HIGHLY EDUCATED SOCIETY

The links between higher education and socio-economic status as well as other links between higher education and employment do not seem to follow any consistent model. Alternatively, one could argue that the vagueness of the relationship between higher education and employment is the characteristic of the prevailing model. Some students get appropriate, others inappropriate jobs. For many, it is uncertain whether the job could be classified either way. To some extent strata of higher education change in tune with graduate employment; to some extent they do not match. But to a large degree it remains vague whether they change correspondingly or not. Teaching and learning serve to some extent the preparation for job assignment and to some extent they do not. But in most instances, the links cannot be clearly established.

Arguably, such vagueness in the relationship between higher education and employment will remain. And one could see this state of affairs as praiseworthy because it affords ample room for individual choice. On the other hand, one could equally argue that the links between higher education and employment look vague, because they are conceived from a traditional point of view and take for granted that clear links should exist between fields of study and distinct professions between graduation and elite positions, as well as high differentials both of educational achievement and social reward – based on the assumption that high talents are notoriously rare. In contradistinction to such a view, the expansion of higher education could lead towards a “highly educated society” (Teichler 1991) for which smaller income differences might be typical as well as a regular mix of demanding and less demanding job tasks. The dynamism of development together with the failure of many predictions about the links between higher education and employment suggest, however, that we should refrain from any prediction in this case as well.
HIGHER EDUCATION AND THE WORLD OF WORK:
CHANGING CONDITIONS AND CHALLENGES
(1998)

4.1 INTRODUCTION

4.1.1 Heightened interest in the subject

At the end of the twentieth century, the relationships between higher education and
the world of work are again among the key issues of debate whenever challenges
for innovation in higher education are at stake. Issues of this domain played a sub-
stantial role, for example, in UNESCO’s “Policy Paper for Change and Develop-
ment in Higher Education” (UNESCO 1995b), and were more frequently addressed
than any other topic in the series of preparatory conferences held in 1997 for the
UNESCO World Conference of Higher Education (UNESCO 1997a, b; Dias 1997;
Teichler 1997a). In its 1995 report entitled “Higher Education: Lessons of Experi-
ence”, the World Bank cited the tensions between higher education and em-
ployment as one of the key elements of “higher education in crisis”. In 1997, the
ILO pointed to major challenges for all areas of education and training due to the
globalization of the economy. The OECD addressed the transition from higher
education to employment in one of its largest projects in the early 1990s (OECD
1992b, 1993a), and continued to point at salient issues of higher education and
employment in the OECD Job Study (1994a) and its thematic review of “Redefin-
ing Tertiary Education” (OECD 1998c). Even if overview publications on higher
education in various regions of the world suggest that higher education has been
concerned primarily with issues of policy and management in recent years (Yee
1995; Kent 1996), there is a definite tendency to devote more and more attention to
issues concerning the social relevance of higher education, including the links
between higher education and the world of work.

4.1.2 Changing debates

In the 1960s, the belief spread in many countries that growing investment in higher
education would contribute significantly to economic wealth. In certain countries,
educational markets were expected to serve the wealth of the market-driven econ-
omy. In others, educational and manpower schemes were closely linked in order to
serve a planned economy, while in some countries targeted educational planning
was expected to serve a market economy (Hüfner 1983). In the 1970s, the
pessimistic view spread that the expansion of higher education had gone too far and
that graduates’ skills no longer matched the needs of the employment system.
When, around 1980, expectations finally adjusted to a somewhat blurred state of
affairs which neither supported the high hopes of the 1960s nor reinforced the deep
which neither supported the high hopes of the 1960s nor reinforced the deep sense of crisis of the 1970s, interest in the subject as such lost momentum. But the topic is now back on the agenda. And we might ask: what is heightening the interest in the relationships between higher education and the world of work? What job requirements do we observe these days? What is higher education expected to “deliver”, and how does it respond? Which mix of affirmative and proactive response prevails, and how should higher education define its societal role today?

4.1.3 Current issues

At first glance, experts predominantly observe that job prospects have been bleak for recent graduates in most areas of the world in the 1990s. And the more or less continuous trend of enrolment growth in higher education promises no alleviation of the problem on the supply side.

A closer look reveals, however, that assessments of the relationships between higher education and the world of work are by no means consistently negative and that the prevailing perceptions and views are controversial in various respects. This does not come as a surprise, since:

– there is no indisputable yardstick for assessing graduate employment, some may deplore any loss of social exclusiveness, whereas others regard the reduction of the status privileges of graduates, if interesting and challenging work tasks persist, as a step towards a fundamentally democratic society;
– judgements of the current graduate employment and work situation may differ depending on whether it is compared to the graduate employment and work situation prevailing a few years ago or to the current employment and work situation of persons who do not hold a degree;
– the current employment prospects are often interpreted in the light of contrasting future scenarios – negatively, for example, in the fear of aggravation of the “crisis of the work society”, ambivalently in the discussion of the consequences of “globalization”, and positively in the expectation of the emergence of a “knowledge society”;
– while higher education is challenged today to consider its relevance for the world of work more thoroughly than in the past, the signals from the employment system are more blurred and ambivalent than ever before;
– systematic information is surprisingly scant on graduate employment and work as well as on the impacts of various features of higher education, such as curricula and other study options offered, graduates’ skills, job performance and careers;
– higher education is being challenged in this context to consider its fundamental objectives, for example to strike a balance between pursuit of knowledge for its own sake and a direct service to society, between fostering generic skills and providing specific knowledge, between responding to the demands directly expressed by the employment system and shaping the world of work proactively.

Given these basic controversies, ambivalences, and information gaps, it is remarkable that many experts and key actors seem to agree to the major directions in
which higher education must head in response to the changing challenges from the world of work. Higher education is expected to:

- continue to consider *fair access* according to socio-biographic background to be a key issue;
- further *diversify structurally* and thus as regards conditions of study and the courses provided;
- devote greater attention to *generic competences*, social skills, and personality development;
- reshape its function in the move towards a society of *lifelong learning*;
- prepare students for the growing economic and societal *globalization and internationalization*;
- serve students in their preparation for their future roles through an increasing variety of *means beyond classroom teaching and learning*, for example through out-of-class communication, counselling, the provision of various forms of work and life experience or job-search support;
- establish regular modes of *communication* between higher education and the world of work.

It must also be borne in mind that the conditions in various regions of the world, cultures and societies, economic systems and stages of economic development, certain sectors of higher education systems as well as various fields, disciplinary cultures and professional areas may require specific solutions.

### 4.2 CONTROVERSIAL VIEWS REGARDING GRADUATE EMPLOYMENT AND WORK

#### 4.2.1 The employment scene

*Problems encountered:* Perceptions of short-term graduate employment in the 1990s tend to be dominated by concern and pessimism. There are of course individual countries, certain employment sectors, and certain institutions of higher education which contrast this picture. By and large, however, concern about the problems many graduates from institutions of higher education face when seeking employment or in the course of their career outweigh notions of the bright side of graduate employment and work as well as the long-term prospects of a growing demand for graduates.

Substantial graduate unemployment is reported in many relatively rich countries as well as in developing nations. Despite the fact that the unemployment quota amongst graduates is quite clearly smaller than that of the total labour force in most countries, concern is widespread. Since considerable public and private investments in higher education were made in the past in the hope that they would yield sound returns, graduate unemployment and the insecure employment conditions of graduates from institutions of higher education are bound to be viewed more critically than average employment problems.

Obviously, the growing employment problems for graduates in the 1990s can have many forms, that is, they are not only reflected in higher unemployment.

- The *process of transition* from higher education to employment has become more complex and protracted. Transition from education to work is one of the
major passages in life which is developing its own dynamics more and more in terms of raising and dashing hopes.

- Reinforcing or challenging the weight of educational achievement, of underscoring the specific talents required, and opportunities arising at a particular moment in time are targets to be achieved. This pertains to the eternal question of the link between equality, achievement, shrewdness, and mere luck.

- A mismatch is felt to be on the rise in many countries between certain fields of study and the demand for graduates of certain profiles. This might lead to a situation where one has to start from square one after graduation – particularly in countries and professional sectors in which areas of study tend to be clearly geared to certain professions, whereas in certain other countries the links between fields of study and occupational areas are relatively loose.

- Many graduates end up in jobs considered unsuitable for graduates as far as socio-economic status is concerned and which only offer limited opportunities for utilizing their skills on the job. "Over-education" or "under-employment" are expressions frequently used to denote these phenomena in prejorative terms. It must be pointed out in this context that the criticism of an oversupply of graduates on the one hand is often combined with the claim on the other hand that many graduates often lack the competencies required (Ranuwihardjo 1995, p. 89).

- Last but not least, employment is less stable compared to the situation which was the norm in most industrialized societies and at least in some sectors within developing countries over the last few decades. Insecure employment conditions have become quite common, at least during the first few years after graduation, new graduates being forced to accept part-time jobs, a combination of a few small contracts and jobs, or employment for a limited period of time.

Arguments against negative assessment: A closer look reveals, however, that these more or less undisputed perceptions of graduate employment and work in the course of the 1990s are by no means unanimously assessed as bleak. There are three arguments frequently put forward against a completely negative assessment.

Firstly, graduate employment and work continues to look impressive when compared to the circumstances of persons who have not obtained a degree. In many countries, graduates face unemployment and insecure employment conditions less frequently than those who have not been enrolled in higher education, and returns for investment in higher education have remained relatively stable.

Secondly, graduate employment and work is bound to become more diverse and on average less privileged in the course of higher education expansion. This, of course, is considered deplorable by those expecting privileges and those advocating a fairly uneven distribution of income and wealth as a necessary driving force for competition, but is often viewed by others as a contribution towards a more just society. Besides, a wider spread of knowledge tends to be advocated as valuable for the individual beneficiaries and for society at large beyond its immediate professional and economic utility.

Thirdly, some critics point out that higher education is undergoing a slow reassessment as regards the relationships between higher education and the world of work. In many countries, direct links between higher education and employment in
the public sectors as well as in the professions were viewed as normal, whereas links to the private economy or preparation for informal sectors were alien. The more higher education adjusts itself to a service for a broad spectrum of the economy, the more graduates will appreciate acceptable and challenging tasks in the latter sectors as well.

4.2.2 Enrolment growth

No matter how the developments of graduate employment and work are assessed, most experts and key actors seem to agree that the substantial expansion of higher education over the last few decades has necessitated constant readjustment between higher education and the world of work.

Enrolment trends: According to the World Bank (1994) report, enrolment ratios, that is, the proportions of new entrant students among the corresponding age group in post-secondary education had, by about 1990, reached an average of “51 per cent in the OECD countries compared with 21 per cent in the middle income countries and six per cent of low-income countries”. The relative growth in preceding decades had thereby been highest “in most parts of the developing world: from one per cent to nine per cent in North Africa, from eight per cent to 16 per cent in the Middle East, from seven per cent to 21 per cent in Latin America, and from eight per cent to 17 per cent in East Asia” (ibid.). UNESCO (1995b), on the other hand, reporting an overall growth of the enrolment ratio in terms of the total number of students among the 18 to 23 age group from 9.6 per cent in 1960 to 18.8 per cent in 1991, argues in contrast that, “Over the same period, the enrolment ratio in the developed countries showed a steadier increase and at much higher level”: from 15.1 per cent in 1960 to 40.2 per cent in 1991 as compared to a growth from 7.3 per cent to 14.1 per cent in the developing countries during the same period.

The growth trend has continued in the 1990s. In relative rich countries of the world, “participation in some form of education at the tertiary education level is moving towards the norm” (OECD 1997b). The OECD report quotes intentions harboured in the US that two years of college would be more or less universal in the twenty first century, a post-secondary enrolment ratio of 63 per cent reached in Japan by 1995, as well as trends toward enrolment ratios of 60 per cent and beyond in several European countries such as Finland and the UK within a few years.

Graduation ratios: The graduation ratios tend to be somewhat lower because the effect of expanded entry affects graduation a few years later and because a substantial proportion of students eventually fail to graduate. The proportion of graduates from institutions of higher education in the corresponding age group actually varies nowadays in developed countries from more than 50 per cent to less than 20 per cent (OECD/CERI 1997), and in developing countries most probably from more than 20 per cent to less than one per cent.

Ample graduate supply: Most experts agree that in most parts of the world the subsequent growth in the number of graduates tends to surpass the immediate demand. The following major causes for this state of affairs, reflecting different concepts and concerns, tend to be cited frequently:
more massive deterioration of the labour market prospects of persons without a degree compared to those with a degree continues to make enrolment in higher education relatively attractive even though the absolute rewards for study may decline;

the majority of young persons adhere to a risk strategy of opting for the highest possible level of education even though a corresponding reward is uncertain and moderate on average;

the costs of study are kept relatively low by substantial public support for higher education;

many learners are inclined to prolong learning periods if the employment prospects are bleak;

higher education is highly valued beyond its career rewards for proving opportunities for the pursuit of knowledge for its own sake, for its cultural enrichment, for its contribution to humane and democratic society, etc.

Problems of graduate employment in the 1990s often stem from general labour market problems and frictions due to substantially rising proportions of graduates. Even if the general labour conditions are satisfactory, the consequences of mass access to higher education are often deplored. Many educated people are disappointed because the most obvious outcome of higher education expansion is the loss of exclusiveness of higher education degrees.

Divergent views regarding the need for graduates: Taken as a whole, however, views vary considerably as to whether the expansion of higher education is desirable or undesirable under current financial conditions and alternative options for utilizing resources, whether the supply of graduates is currently detrimental, absorbed without major consequences or beneficial for the world of work or for graduates themselves, and how the expansion of higher education might be assessed in the light of long-term economic and social developments. Opinions differ markedly as to whether enrolment should or could be successfully curtailed by selective policy measures.

The poorer the region, the more profound are the controversies of this nature. On the one hand, the World Bank study seems to suggest that a reduction of the number of students would be beneficial for many developing countries. On the other hand, “a worrying trend of de-emphasizing tertiary education” is stated in an ILO (1997) report as regards structural adjustment plans opted for in Africa to qualify for World Bank support and similar policies in other parts of the developing world, because such a policy hampers the respective countries’ efforts to “participate effectively in the globalized economy” (ibid.).

4.2.3 Information gaps and research needs

The relationships between higher education and the world of work are among the most frequently discussed issues of higher education, but systematic knowledge on these relationships is relatively poor. We observe vociferous claims of shortages of skills, oversupplies, the qualifications expected, mismatches between the competencies of graduates and the needs of the employment systems, etc., which are not founded on systematic empirical evidence. This does not mean that there is
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scarcely any information available at all. Overviews provide evidence that a substantial number of studies have been undertaken (Psacharopoulos, 1987a; Carnoy, 1994; Sanyal, 1991; Teichler, 1992, 1996a, b; Higher Education and Employment, 1995; Brennan, Kogan and Teichler 1995). However, they note four major shortcomings.

First of all, very few studies are undertaken which make it possible to regularly monitor the changes of graduate employment and work and the impacts of study on subsequent career and work tasks. The employment of recent graduates is regularly surveyed in only a few relatively wealthy countries, but even in these cases information regarding the utilization of knowledge often remains scant.

Secondly, information is most sadly lacking in countries where the employment prospects for graduates seem to be most precarious, though exceptions deserve attention (Sanyal 1987). As regards Africa, Matos (1997) states: “Employment of Higher Education Graduates is an area where little data are available with the exception of a handful of studies which are often not comprehensive, not up-to-date and are conducted over limited periods of time.” Where the developments of the relationships between higher education and the world of work are most controversially debated, systematic information which could rationalize the debate is least available.

Thirdly, the available information on graduate employment, work, and utilization is often lopsided, biased or not sufficiently scrutinized.

– Quantitative information on graduate employment and work is often extensive in the traditional employment sectors, but relatively weak in newly emerging, atypical and informal sectors.

– One of the weaknesses is an imbalance between quantitative-structural and qualitative data (cf. the critique by Brennan and Kogan 1993). We identify a wealth of studies on the whereabouts of graduates and their income, whereas information is often poor regarding types of work tasks and the extent to which knowledge acquired during the course of study is eventually utilized on the job. Due to the high costs and efforts involved, the available studies on job tasks, job requirements, and utilization of competencies often focus on small sectors, thus hardly allowing broad conclusions to be drawn. Data on income and occupational categories of graduates are often over-interpreted as valid indicators of the utilization of knowledge.

– Employers’ statements regarding the qualifications expected are too easily taken as direct and objective information concerning demand in the employment system. It is known, however, that employers overemphasize needs for skills short in supply, general skills as well as competencies which are assessed directly and elaborately in the selection and recruitment process (cf. Teichler, Buttgereit and Holtkamp 1984). Besides, employers’ expectations regarding the education system are often inconsistent with their recruitment and personnel policies.

– Many researchers expect the practitioners surveyed – graduates, their supervisors or heads of personnel or human resources departments, for example – to be most knowledgeable experts of the appropriate links between skills and work tasks. In actual fact, however, few of them can be expected to provide valid information on the “qualifications issue”, that is, the match between job tasks,
“requirements”, “competencies”, and finally the processes and substance of learning.

- Research findings collected in individual countries are often over-interpreted as universal truth.

Fourthly, there is very little information on curricula and their professional rationales and on the impacts of the courses of study offered and the conditions on subsequent employment and work. Participants at a conference on the relationships between higher education research and higher education policy and practice, held in Tokyo in September 1997 in preparation for the UNESCO World Conference, stressed that research on higher education in general does not receive the amount of financial support and the degree of attention which research on a social sector of the similar size, importance and proneness to problems usually can expect (Teichler and Sadlak 2000). Higher education as a field of research suffers from the lack of interest in systematic knowledge on the part of many actors in the field, international organizations thereby forming the most notable exception (Hüfner, Sadlak and Chitoran 1997).

4.2.4 Trends and future scenarios of employment and work


Current trends of employment and work: Views do not actually differ greatly in describing current trends of employment and work:
- a further decline of employment in agriculture and the industrial production sector and a growth in the service sector;
- a shrinkage of employment in the public sector and relative growth in the private sector;
- a decline of job opportunities in large companies in many countries;
- an increase in the “informal” employment sector;
- a mounting pace of change in the job structure and skill requirements in almost any given occupation;
- a loss of job stability and security and growing “informalization” of the employer-employee relations and the work force in general, that is, more part-time, more short-term employment, and more sub-contracting arrangements (ILO 1997);
- an increase in structural and long-term unemployment in many countries, a polarization trend of status, income, and employment conditions within countries and between countries;
- a rationalization trend and a shrinkage of posts requiring only low levels of formal education and training;
- an increasing demand for computer literacy and sophisticated skills in new information and communication technologies;
– an increase in job roles requiring high levels of knowledge in various areas.

The debates, notably in developing countries, are focusing on the immediate problems of graduate employment and avenues to improvement. While a long-term need for an increase in qualified labour tends to be expected generally, the immediate concerns focus on the dangers and opportunities of globalization as well as the need to extend graduate employment beyond the public sector and the traditional professions.

Expected long-term developments: In relatively rich countries, the debates focus on the implications of the anticipated long-term developments, the various future scenarios thereby comprising several common elements. “Knowledge” is viewed as becoming the key resource for economic wealth, societal well-being and innovation in all spheres of life. This means on the one hand that some of the professional elites – defined not in narrow terms of certain self-controlling professions, such as medical professions, but rather in broad terms of those having achieved the cognitive skills and the systematic knowledge required in the various knowledge-based occupations in society (Perkin 1996) – are the most powerful and influential groups in society. And it means on the other hand that systematic knowledge is becoming more and more widespread in society and that the majority of the work force shares to some extent the competences acquired by those at the apex of society. This, amongst other factors, is making employers more aware of the need to secure qualified labour, and is thus stimulating comprehensive personnel policies, known as “human resource development”.

Diverse scenarios: Views differ, however, as regards the long-term changes of the labour force patterns and the distribution of job requirements. Here, different socio-political options and ideologies as well as different emphases on crucial technological, economic, social, and cultural phenomena come into play. The range of possible futures could be characterized by the following questions:

– Will employment opportunities continue to shrink absolutely or in relation to labour supply, or will expanding services in general, new knowledge industries and services, growth in the informal sector and in self-employment more than make up for these losses?

– Will gainful employment continue to be reduced because traditional needs are fulfilled with less work and new needs do not translate into gainful employment, or will new and more sophisticated needs again lead to a balance on the labour market?

– Will instability of employment and work increase further, or will employers ensure a certain amount of stability in order to secure the employees’ loyalty, and will “employment security” (ILO 1997) in part offset “job security” losses?

– Will the trend towards polarization in terms of remuneration, status, employment conditions as well as the nature of work tasks persist, or will balancing effects occur promising more wealth for all?

– Will the hierarchy of job requirements become steeper, remain more or less constant or flatten out on the way towards a knowledge society?

– Will the number of interesting, challenging, and intellectually demanding jobs usually considered appropriate for graduates remain scarce or substantially grow?
– Do the new human resource policies turn out to be lofty forms of exploitation, or are we moving towards a growing harmony between the firms’ interest in profit and the employees’ holistic needs?

– Are desirable developments likely to come to the fore as “trends”, or is there a need for systematic intervention on the part of government or other visible key actors?

As regards the types of skills required, we observe, as will be pointed out below, the widespread expectation that higher education will foster general knowledge, flexibility, social skills, and personality more than in the past. But the future scenarios mentioned above also call for specialized knowledge in new growth areas and for interdisciplinary knowledge raising problem awareness and problem-solving abilities in many areas of graduate work.

4.3 CHANGING TASKS FOR HIGHER EDUCATION

4.3.1 Access to higher education and admission

Most experts agree that the high hopes set on policies aimed at promoting equality of opportunity during the 1960s and 1970s have only been partially fulfilled (Husén 1987). The more existing barriers to equality of opportunity have been removed, the more lofty barriers have arisen. All in all, in-depth research in industrialized countries suggests that efforts of establishing “equality of results” in education, that is, equal participation of various socio-biographic groups in the most demanding and prestigious sectors of education, have been relatively successful in many countries as regards gender but have had little success as regards socio-economic background (Shavit and Blossfeld 1993). The available student statistics also show that in many countries of the world women continue to remain far off the target of equal participation in higher education (Kearney 1997). Altogether, inequality of educational opportunity remained more pronounced in developing countries than in developed countries (Tan 1994).

There is even more widespread disappointment about the fact that success in education has not been translated into career success as visibly as has often been expected. Obviously, not everybody has become a “chief”, and links between educational attainment and career have become less visible (cf. Nowotny 1995). There is no empirical evidence, however, that the correlation between educational attainment and career success has become less marked in recent years.

Given this experience, one would not be surprised to note a widespread disenchantment regarding the role higher education is expected to play for social equality. But the contrary seems to be the case. Many activities are aimed at reducing unequal participation across various regions of the world as well as in terms of socio-economic background and gender.

Views clearly vary regarding the role public funding of higher education has played in the past in the democratization of access, but there seems to be widespread agreement that at times of tightening public support of higher education even more specific public action to redress inequalities of opportunities is required. In the developing countries, a policy of democratizing access to higher education
continues to be appreciated as one of the possibly most efficient policy means of combining meritocratic reward with specific support for those disadvantaged in the past. And in the developed world, equity of access is considered even more important at a time when higher education is becoming the norm for the majority of the population because educational disadvantage could lead to social exclusion.

4.3.2 Diversification

Over the last three decades, it has become a truism among policy-makers and experts that higher education can best serve the growing variety of talents and motives of students in the process of educational expansion as well as the growing variety of job perspectives for graduates through substantial diversification. The hopes placed in the diversification of higher education are enormously high.

It is to be observed that the structures and forms of higher education are being diversified in many directions (Birnbaum 1983; Huisman 1995). For example, the UNESCO (1995b) policy paper (pp. 17-18) mentions diversification according to institutional type, size, academic profile and level of study, student body, funding sources and proprietary status. Although diversification is called for in all areas of the world (Sayegh 1990), the most elaborate studies have been undertaken in the developed countries (see in particular OECD 1975; Teichler 1988a; Meek et al. 1996); they show that national systems of higher education vary substantially according to the structural modes of diversification. For example:

– In the US and Japan, a steep hierarchy of quality and prestige differences between higher education institutions of the same type is acceptable, whereas policies in the majority of European countries aim to keep such quality differences within bounds. Again, we note differences within Europe: whereas considerable differences of ranks seem to be acceptable in France and the United Kingdom, maintaining practically the same quality in all universities has remained the widely shared aim in Germany and the Netherlands.

– Countries vary substantially in the extent to which they accept a horizontal diversity, that is, a diversity of curricular approaches in the various fields of study, or to the extent to which curricula are standardized nationally.

– In some countries, different types of higher education institutions are viewed as the major mechanism of diversification, whereas intra-type diversification is dominant in other countries (Scott 1996). In the UK, for example, the polytechnics were formally upgraded to universities in 1992, whereas Finland, Austria, and Switzerland introduced a second type of applied higher education institution in the course of the 1990s, which is similar to German Fachhochschulen or the Dutch hogescholen.

– In certain countries, such as France, for example, course stages and degrees are the main means of diversification.

Modes of diversification undoubtedly generally reflect the specific traditions of higher education as well as those of links between higher education and the world of work in the respective countries. This does not mean, however, that the scope for innovation is bound to be viewed as limited; there are many examples of major structural innovations. For example, the moves to diversify higher education in
Central and Eastern Europe in the process of transformation since about 1990 provide evidence of the mix of traditions, new challenges, and a variety of international experiences.

4.3.3 Emphasis placed on general skills and flexibility

The general skills expected: Given the complexity of the context, the theoretical methodological problems of identifying job requirements and related skills (Teichler 1985; de Weert 1994), the increasing diversity of graduate work as a consequence of expansion of higher education, the uncertainties of the labour market for graduates, and the variety of traditions in various countries, we should not be surprised to observe a bewildering variety of views as regards changes in the job requirements relevant for higher education and the optimal curricular responses. But we note on the contrary, at least at first glance, an amazing degree of consensus regarding the major curricular thrusts desirable in higher education. Clearly, the most outspoken voices claim that graduates are expected to:
- be flexible;
- be able and willing to contribute to innovation and be creative;
- be able to cope with uncertainties;
- be interested in and prepared for lifelong learning;
- have acquired social sensitivity and communicative skills;
- be able to work in teams;
- be willing to take on responsibilities;
- become entrepreneurial;
- prepare themselves for an internationalization of the labour market through an understanding of varied cultures;
- be versatile in generic skills which cut across different disciplines, and be literate in areas of knowledge which form the basis for various professional skills, for example in new technologies.

Traditional arguments for education beyond specialized expertise: As regards the “generalist versus specialist” dimension, the former seems to be more popular these days than ever before. To be sure, there have been reasons why higher education was also expected in the past to go beyond specialized knowledge. Squires (1987) named four arguments:
- as graduates differ socially from non-graduates in terms of “power, wealth, and opportunity”, it would be desirable for them to be aware of these differences and to use them responsibly;
- as special knowledge creates special, intellectual limitations, it is valuable to learn to see one’s own expertise from outside as well;
- “knowledge about knowledge” helps to become aware of the norms, values, and assumptions that underpin one’s work; one can relativize them and perceive alternatives;
- finally, learning can help graduates to reflect how their expertise is linked to their self-concept and identity (as a geologist, an engineer, etc.).

The causes of the growing emphasis on general skills: There are several obvious reasons, however, for the increasing emphasis on general competencies, social
skills, and personality in recent years. First of all, it is generally assumed that specialized professional knowledge is now becoming obsolete more quickly than in the past. Consequently, lifelong learning and lifelong professional education is generally considered to be gaining importance.

Secondly, a growing number of professions and of positions within enterprises and public agencies is not clearly demarcated but rather based on knowledge deriving from different disciplines. It seems to be more difficult for higher education to prepare specifically for these positions.

Thirdly, mass access to higher education, the employment problems in general as well as the dynamic changes of the economy are likely to elicit mismatches between the skills of the graduates and the demands of the employment system. Obviously, “professional society amidst the employment crisis” (Fürstenberg 1997) calls for a de-emphasis of specific skills. Flexible and generally educated persons are expected to be less disappointed about those frictions and to adapt easily to job tasks not anticipated in advance.

Continuous need for specialized knowledge: There is call for caution, however. The demand for general knowledge should not be overestimated. Obviously, academic knowledge is tending to become more specialized and fragmented (Clark 1996). Also, in-depth study in a given field is still considered a solid basis for professional preparation. In particular, specialized curricula are highly esteemed in many areas of science and engineering. And last but not least, many newly emerging and fast-growing sectors of graduate employment are calling for respective in-depth expertise.

In addition, the need for general knowledge is endemically overestimated. For example, employers’ statements or analyses of employers’ expectations underscoring the role of general competences (European Round Table of Industrialists 1989; Cochinaux and de Woot 1995; Harvey, Moon and Geall 1997; Coldstream 1997) may tend to underestimate the weight specific skills have – inter alia, because general managers and staff of personnel departments are more likely to be asked than the specialists in the various other departments, who have direct experience of the details of graduate work. Furthermore, general job requirements tend to be similar across a variety of job tasks and are therefore more likely to be mentioned frequently than are the specific skills needed for various professional areas.

It is also obvious that some analyses neglect the variety of national preoccupations concerning job assignments, skills, and education. Of course, international cooperation and a certain degree of global standardization are widespread in some fields, most prominently in the medical field. But we already note substantial divergence as regards the occupational fields which are considered “professional” in the various countries. Most experts agree that specialists have traditionally been held in high esteem in France and to a certain extent in Germany as well. On the other hand, British universities and British enterprises have favoured the generally trained mind, and until recently the Japanese have expected graduates to be willing to change tasks regularly, whereas specialists have merely been tolerated as exceptions. Recent research shows that the job profiles may actually have differed to a lesser extent and any differences may be tending to become even smaller. For example, German companies have recently placed strong emphasis on general com-
petences and social skills (cf. Falk and Weiß 1993), even though they continue to hold specialized non-university higher education programmes in high esteem. On the other hand, many Japanese companies, which have traditionally recruited graduates as “raw material”, have recently upgraded and expanded specialist positions and have promised graduates almost as attractive careers as those offered to persons who are ready to accept major changes of job tasks in the course of their career (cf. Nihon Keiei-sha Dantai Renmei 1995).

4.3.4 Other curricular thrusts

It would be misleading, however, to argue that most of the debates on the relationships between the acquisition of knowledge and subsequent work task focus on the question of breadth versus depth of study. Many other curricular thrusts are frequently called for, the various terms employed thereby actually overlapping in the type of competencies emphasized. Although it is not possible to provide a complete overview of the multitude of curricular thrusts discussed internationally, it may be justified to claim that the following are those most often advocated, discussed, and pursued.

Problem-solving abilities: First of all, general skills are frequently called for more specifically. Graduates are expected to have acquired “problem solving abilities” or “key qualifications”. This thrust is based on the concern that general knowledge is not necessarily applicable per se to the world of work. Rather, graduates have to find ways of transferring these competences from the world of learning to the world of work (Harvey, Moon and Geall 1997).

Orientation towards practice: Secondly, fostering the ability to transfer knowledge from the world of learning, science, and scholarship to the world of professional work is widely viewed as an increasingly important task of higher education which cannot be met simply by fostering relatively general strategies of problem-solving. It is often suggested that curricular, teaching, and learning should be more applied in nature or more practice-oriented in various ways. Whereas the first argument calls for knowledge which is immediately useful for work, the second describes a more complex relationship between learning and work in the area of cognitively complex tasks.

The many ways of contrasting “theory” and “practice” in higher education have been summarized by a curriculum specialist as follows: “Theory has to do with statements which are relatively general in scope, and which in some sense predict, explain, or clarify complex phenomena. Practice has to do with activity in a decontrolled environment, with activities which may be only partly expressible in words or symbols, or which may be to some extent automatized or routinized” (Squires 1987). Practice-oriented higher education is advocated particularly in order to understand and tackle the complexity of “real” phenomena intellectually rather than take theory as an excuse for addressing the real phenomena only as far as the theoretical approaches seem to allow. In order to make use both of the fruits of theory and the thought-provoking decontrolled complexity of those phenomena, higher education is expected to ensure systematic confrontation between ways of thinking and problem solving within academic theories on the one hand and the modes of
professional thinking and problem solving on the other (Kluge, Neusel and Teichler 1981). In addition, internships and other practical phases in the course of study as well as the involvement of practitioners in teaching and various other specific activities and measures are expected to serve this aim.

Interdisciplinary learning: Thirdly, higher education is expected to provide more interdisciplinary learning opportunities than in the past. Without going into detail regarding the meanings of the terms “multidisciplinarity”, “pluridisciplinarity”, “interdisciplinarity”, and “transdisciplinarity”, it might be justifiable to state that the call for interdisciplinarity in teaching and learning is based on the claim that disciplines tend to compartmentalize knowledge and to become artificially segmented, that is, in a way which does not correspond to the real phenomena to be analysed and the problems to be understood and possibly solved with the help of systematic knowledge (Squires 1987). This claim is reinforced by a group of well-known higher education and research experts (Gibbons et al. 1994), who argue that a “Mode 2”, a second mode of knowledge production, is steadily regaining importance in modern societies alongside the traditional, disciplinary “Mode 1”. The production of knowledge according to “Mode 2” starts off with problems of an applied nature for which knowledge has to be mobilized; it assembles the relevant knowledge from different areas of knowledge; it is often based on collaborative intellectual work; and it accepts criteria of accountability and relevance alongside those of academic quality.

Confrontation with salient issues of mankind: Fourthly, higher education is expected to address salient issues of mankind. For example, the declarations and action plans of the regional conferences preparing for the 1998 UNESCO World Conference called higher education to address issues of peace, sustainable ecological development, and international cooperation based on mutual respect, democracy, and cultural enhancement (UNESCO 1997b). In search of suitable terms, the 1995 UNESCO policy paper (1995b, p. 13) calls for education and research serving “sustainable human development”; other publications prefer “international education” (Calleja 1995) or “global learning” (Ploman 1994). Based on the concern that the prevailing trends of technology, economy, and society are ambivalent in providing opportunities and implying dangers, higher education is challenged to foster both the civic values and the intellectual competencies considered necessary if successful action is to be taken to promote desirable developments.

International competencies: Fifthly, higher education is increasingly being expected to foster international competencies. There seems to be a clearly growing demand for graduates from institutions of higher education versatile in acting in and shaping an international environment.

Learning to cope with a foreign academic and social environment has been a necessity in the past for all students opting to study in another country in order to receive a quality of education which was not available in the home country or because the study opportunities in the home country were limited. This was notably true for students from developing countries embarking on study in developed countries (Barber 1992). In recent years, however, student mobility between developed countries and other types of courses of study aiming to increase the international nature of higher education have gained popularity. In terms of competencies or
areas of knowledge, “international” teaching and learning in higher education comprise diverse elements (van der Wende 1996), for example:

- “area studies”;
- foreign language proficiency;
- comparative methods;
- international sub-disciplines, such as international law or international trade;
- sensitivity to different cultures, customs, and modes of thinking, coping with the unexpected, etc.

A comparative study in OECD countries developed a typology of internationalized curricula, defined as “curricula with an international orientation in context, aimed at preparing students for performing (professionally/socially) in an international and multicultural context, and designed for domestic students and/or foreign students”. The types presented not only comprise thematically international curricula, e.g. area studies, foreign language programmes, international disciplines, etc., but also programmes especially designed for foreign students, programmes requiring temporary study periods abroad, programmes leading to combined or double degrees, or leading to internationally recognized professional qualifications (ibid. 1996, p. 45).

4.4 THE CHANGING ROLE OF HIGHER EDUCATION

4.4.1 Changing self-perception

The changing conditions to which higher education is being exposed and the efforts to reorganize the relationships between higher education and the world of work are best illustrated by contrasting them to the traditional self-concept of the university. According to Husén (1994, p. 13), the “Western university”, which served as a model throughout the world, “has been characterized by the following:

- it made more or less sharp distinction between theory and practice;
- it has put a premium on autonomy and aloofness to the extent of complete irrelevance;
- it has been both socially and intellectually an elite institution;
- it has tried to be an ‘ivory tower’, as an institution whose main purpose is to ‘seek the truth’.

Certainly, the traditional university adapted the role of preparing students for traditional professions in line with its “ivory tower” understanding. Many institutions specialized in professional preparation, and many vocational institutions were upgraded to institutions of higher education in the process of expansion. Yet, reflections of ways in which higher education could serve the world of work tend to be met with the suspicion that the genuine tasks of the university might be betrayed.

An international comparative survey on the academic profession undertaken in the early 1990s in various American, Asian, and European countries shows, however, that academics consider “preparing students for work” and “helping to resolve basic social problems” almost as important as “promoting scholarship and research” and “protecting free intellectual inquiry” (Altbach 1996). It can no longer
be claimed that the key profession in the institutions of higher education is clearly resisting reflecting on its social relevance in general. But the majority of academics believe that higher education these days is being exposed to excessive instrumental pressures.

4.4.2 Cooperation between higher education and the world of work

Institutions of higher education have often been advised in recent years to seek cooperation with the world of work and actually do so. The more higher education expands, the more knowledge becomes a key factor of productivity, and the more global competition intensifies, the more the institutions of higher education are expected to regard communication and cooperation with the world of work as a means of improving the education provided as well as the employment opportunities of their students. The following means of communication and cooperation are most frequently advocated:

- involvement of practitioners in curriculum development (cf. Skilbeck and Connell 1996);
- participation of industry in decision-making processes, for example through memberships on boards or advisory councils;
- mobility between academic and professional careers as well as part-time teaching by practitioners;
- internships of students prior to or during the course of study;
- involvement of students in research projects sponsored by industry;
- provisions of vocational counselling services for students and placement of graduates.

In observing the various arguments in favour of cooperation between higher education and the world of work (Blackman and Segal 1992; Lindner et al. 1992; Sadlak 1992; Gould Bei 1997; Mitra and Formica 1997), we not only note a plea for professional relevance of study as such. In addition, two other arguments come into play. Firstly, cooperation is advocated, because it is difficult to identify the future tasks of the graduates and the competencies expected. Rather than setting up national or sector blue-prints of qualification requirements, constant communication, often on a regional and institutional basis, should help to obtain manifold signals from the world of work on a continuous basis, even if they are diverse, contradictory or vaguely expressed. Secondly, various means of cooperation are recommended because representatives of higher education admit that they cannot prepare students well for the world of work in the framework of classroom instruction, even if they wished to do so.

4.4.3 Learning and socialization beyond classroom instruction and initial course programmes

Work and other practical experience: Comprehensive “experiential learning” is viewed as a powerful instrument supplementing the prevailing educationally designed cognitive learning processes which are clearly separate from work. Internships in professional work and other facilities providing practical experience dur-
ing the course of study often become an integral part of the programmes or are promoted as additional activities. Temporary study abroad is highly appreciated for the same reason: living and learning in a foreign environment provides insights and fosters intercultural skills beyond what can be achieved within classroom instruction and learning. Graduates who have spent a period of study abroad in the framework of the ERASMUS programme – the largest student mobility programme in existence – believe that studying abroad had stronger social, cultural, and foreign language impacts than the direct academic impact (Maiworm and Teichler 1996).

*Communication and advise:* Communication outside class and services for students have often been advocated as a means for higher education institutions to prepare their students for subsequent careers. Out-of-class communication between academic staff and students as well as academic and personal counselling services, traditionally emphasized in Anglo-Saxon academic environments, have more recently also been given greater emphasis in countries predominantly shaped by other academic traditions.

*Employment-related services:* In preparing students for the world of work, many institutions of higher education establish services on a regular basis. A recent conference held by the OECD Programme on Institutional Management in Higher Education focused on the role of types of support of that nature: professional counselling, support for internships in enterprises, training for job seeking, and direct support in the job-search process were often mentioned in this context (Teichler 1994).

*Extended use of media:* The use of modern technological media for instruction and learning as well as for exchanging academic information in general is quickly spreading, though not necessarily at the pace often predicted by its most ardent advocates. Institutions of higher education are having to reconsider their role in the context of the extended use of the media, because it is leading to a “breakdown of monopolies” (Sargent 1994) in various respects. Students have more options for obtaining information from outside, and the courses offered by various institutions of higher education can be more easily combined by the individual students or through inter-institutional cooperation. The less an individual institution of higher education controls the education provided for individual students, the more it is challenged to reflect and purposefully shape its part in the process.

*Lifelong education:* The growing importance of lifelong learning is one of the most salient challenges to higher education institutions in their efforts to reconsider their function vis-à-vis the world of work. Many institutions have been heavily involved in educational activities beyond initial education and training for young students (Teichler 1990b): notably in advanced academic programmes, advanced professional training programmes, short professional refresher courses, public lectures and other forms of dissemination of general knowledge to adults, part-time, evening, and distance degree programmes suit ing employed persons as well as other courses, remedial and second-chance opportunities, short courses of study for adults (not considered to provide full qualifications), and in-service training for the staff of institutions of higher education. Most of these courses offered, however, have been provided in the past on the periphery of the system, that is, in specific
Most overviews and recommendations in the 1990s (Hunt 1992; OECD 1995c, 1997b; Delors et al. 1996; European Commission 1996) claim not only that lifelong education will dramatically expand and that higher education could play an increasing role in this sector, but also predict substantial change in the function of pre-career education. Higher education must reconsider the tasks of initial programmes if continuous learning is to be extended widely and if students and graduates are to be expected to take a more active role in designing their learning targets as well as the learning processes.

4.4.4 Relationships with the world of work and academic responsibility

It is difficult for higher education to strike a balance between appropriate links to and distance from the world of work. According to the traditional ideals of the university, a clear distance between higher education and society is best for the pursuit of knowledge and will also eventually be most productive for society. Currently, the pressures are certainly tending more strongly to provide evidence that higher education is becoming more useful for the world of work. In the developing countries, many imminent problems call for a more practical approach to higher education. In the process of mass access to higher education in many parts of the world, an increasing number of graduates end up in posts where “applied” knowledge is expected. Higher education cannot continue, on the one hand, to undertake professional preparation willingly for public administration and the traditional professions and, on the other hand, to consider professional preparation for private enterprises, large service sectors, and the informal sector of the economy to be contradictory to its mission. The more knowledge becomes a productive force, the more higher education is expected to contribute visibly to economy and society. Governments often stress “accountability” and mean instrumentalism. All this is reflected in widespread suspicion in many societies today that institutions of higher education have become too far removed from the world of work and that academics do not sufficiently strive for an appropriate balance.

This, in turn, has increased uneasiness within higher education about undue instrumentalist pressures. There is widespread concern that intellectual enhancement for all and equality of opportunity is being forfeited to presumed industrial demands (Taylor 1996) and that teaching and learning in higher education might be geared to such an extent to immediate needs that higher education will lose its function of fostering critical thinking, preparing for indeterminate vocational tasks, and contributing to innovation.

Those participating in the preparatory conferences for the UNESCO World Conference clearly warned higher education against following the presumed manpower demands and immediate expectations of the employment system to closely (UNESCO 1997b). Rather, higher education should strive for a broader view of the needs of society, and, despite the frequent call for the diversification of higher education these suggestions seem to be addressed to the higher education system in
general. There are also claims that wider views of desirable skills are currently spreading in the world of work. The “human resource development” approach in industry seems to be reducing the conflict between coaching the most useful worker and full enhancement of personality (Council for Industry and Higher Education 1996).

Experts agree widely that institutions of higher education must be more clearly aware of their role for the world of work than they have been hitherto. This does not mean, however, that they have to gear their activities to the expectations they are confronted with. Since higher education has the task of preparing students to be able to call in question the prevailing rules and tools in the world of work, to take on indeterminate job tasks, and to be agents of innovation, it has to translate the expectations raised from outside, and must define its own proactive role with regard to the job tasks and the employment patterns of graduates (Teichler 1991; Nowotny 1995).

Controversies on these issues are likely to persist within institutions of higher education. This could be productive, because without those controversies the shaky balance of a creative distance from society might well collapse in favour of the “ivory tower” or of narrow instrumentalism. What is obviously called for more emphatically than in the past is an in-depth knowledge of the needs of society on the part of all those responsible in higher education both for administration and for teaching and learning. It seems to becoming almost a truism nowadays that higher education cannot afford to bury its head in the sand when it faces the world of work: the more those responsible for higher education are conversant with the world of work, the better they will be able to take specific and proactive action.
PART II

TENSIONS AND ADAPTATIONS
CHAPTER 5


5.1 INTRODUCTION

Research on the relationships between higher education and the world of work tends to reflect the public debates in that area. Most of the research approaches chosen and most of the questions raised seem to mirror to a certain extent the hopes and concerns expressed by the policy actors and practitioners involved. One might ask, however, whether research in this area just reiterates the public debates, or whether there are specific dynamics in research which limit the scope on the one hand and on the other transcend it beyond the public debates. How does research approach the currently dominant issues, and does it draw our attention to newly emerging changes in the relationships between higher education and work?

The aim of the following analysis is to indicate the ways the mainstream of the respective research in industrialized societies has addressed to the dominant policy issues regarding the relationships between higher education and the world of work from the 1960s to the 1990s. Also, the question will be raised whether research is prepared to observe and address changes in the relationships between higher education and the world of work which are visible at the horizon and are likely to occur in the future.

The approach of this paper is based on the assumption that social research will gain both in academic quality and social relevance if the researchers involved reflect the extent to which they are likely to be driven by the Zeitgeist of the issues typically addressed. There might be opportunities and dangers inherent in a close link between the prevailing approaches in the public debates and the research paradigms.

The following observations are not based on a more or less complete analysis of available research on the relationships between higher education and the world of work. However, they can draw from various activities of summarizing major research trends in the framework of handbooks (Teichler 1988b, 1992) and conferences (Teichler 1996b, 1996c, 1998a, 1999a) on the state of knowledge, of editing books and journal issues on that thematic area (Brennan, Kogan and Teichler 1995; Higher Education and Employment 1995), of preparing a major comparative survey (Teichler 1997b) as well as of discussing possible futures of the relationships between higher education and the world of work and their implications for the respective research (Teichler 1998b).
5.2 A MAJOR THEME OF POLICY AND PRACTICE

On the one hand, we observe a perennial debate about the extent to which the institutional fabric of higher education, i.e. the institutions as well as their departments and programmes, and the substance and processes of teaching and learning should reflect the future occupational roles and tasks of graduates. In this context, four dimensions tend to be addressed:

- To what extent should higher education focus on the enhancement of students' knowledge and possibly on the cultivation of their personality without or with little explicit regard of their potential future professional roles and tasks, or to what extent should preparation for the world of work be targeted for?
- Should higher education intend to lay the foundation for future occupational tasks, or should it pursue a direct preparatory function?
- Should study prepare students for a wide range of occupations and work tasks or should it be highly specialized?
- To what extent should higher education deliver the competences which seem to be on demand on the part of the employment system, or to what extent should higher education prepare the students to become active agents of innovation and change in the world of work?

It is obvious that these questions are not meant to indicate alternatives, but rather a spectrum of possible options.

On the other hand, we note substantial changes in the debates on the relationships between higher education and the world of work during the period addressed. Attention was paid to the consequences of expansion of higher education, to the dynamics in the occupational structure and the character of work tasks as well as to changes in the labour market constellation. Across more or less all industrial societies, hope spread in the 1960s that expansion of higher education might contribute significantly to economic growth. In the course of the 1960s, the issue of equality of opportunity was widely discussed, and again, hope was not infrequent that educational expansion might serve both economic growth and the reduction of inequality of opportunity.

During the 1970s, concern grew as regards growing mismatches between the moderately increasing demand for qualified labour and the rapidly growing number of graduates from institutions of higher education. Pessimistic scenarios of “over-education” or Akademisches Proletariat fuelled interest in identifying the problems incurred due to the increasing supply of highly qualified labour and in finding means of conflict resolution and improvement, for example measures of increasing the “employability” of graduates.

During the 1980s, the relationships between higher education and employment were not so high on the agenda anymore. Faith in employment forecasts and corresponding educational planning had eroded, and warnings of pending catastrophes due to the expansion of higher education had lost momentum as well. More emphasis was placed on the diversity of the relationships between higher education and career according to institutions of higher education, fields of study and programmes as well as students' individual options and strategies.
RESEARCH ON HIGHER EDUCATION AND THE WORLD OF WORK

The renewed debates in the 1990s cannot be characterized by a single major focus. On the one hand, they seem to repeat the topics of the late 1970s and 1980s: concern about the “employability” of graduates rose in many industrialized countries along an increase in the overall unemployment quotas. Also, continued emphasis is placed on the diversification of higher education as well as on the options and responsibilities of the individual institutions and the individual students. On the other hand, as will be discussed below, there are various indications for paradigmatic changes in the perception of the relationships between higher education and the world of work.

5.3 RESEARCH PRIORITIES AND IDEOLOGIES

5.3.1 An agent of subordination of higher education to the employment system?

Research on the relationships between higher education and the world of work often meets with suspicion, because it is assumed to have strong normative biases. Notably, research often seems to reinforce the immediate societal functions of higher education rather than the pursuit of knowledge for its own sake, to emphasize extrinsic motives of students and graduates, and to focus on the extent to which higher education is closely geared, as far as structures, curricula, knowledge bases etc. are concerned, to employment and work.

This critique is by no means unfounded, because many authors start off with a strong – overt or hidden – normative position. Fortunately, however, mixed realities, as a rule, find their ways of becoming visible in the research findings – may it be due to the deliberately chosen research approaches aimed at provided room for alternative normative options or may it be due to the complexity of the findings not in tune with the initial assumptions. Thus, the research findings, as a rule, are a valuable source of information for all actors considering the educational functions of education irrespective of their views, as long as they reflect the possible biases of the respective research approaches and do not merely yield to them.

5.3.2 A quantitative-structural bias?

In looking at available research on the relationships between higher education and the world of work, we obviously can classify it according to the major themes as well as according to the prime modes of information collection and utilization. The most frequent themes are:

1. demand of the employment system,
2. graduate employment and career,
3. job tasks and performance,
4. the transition from higher education to employment, and
5. the impact of higher education.

The most frequent approaches of data gathering and utilization are:

A. utilization of statistics,
B. student and graduate surveys,
C. employers’ and other actors’ surveys,
CHAPTER 5

(D) in-depth analyses (job analysis, curricular analysis, competence and performance tests, etc.).

Figure 1. Widely Spread Themes and Approaches of Data Gathering and Utilization in Research on the Relationships Between Higher Education and the World of Work

<table>
<thead>
<tr>
<th>Themes</th>
<th>Approaches of data gathering and utilization</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Statistics</td>
</tr>
<tr>
<td>Demand of the employment system</td>
<td>x</td>
</tr>
<tr>
<td>Graduate employment and career</td>
<td>x</td>
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<tr>
<td>Job tasks and performance</td>
<td>–</td>
</tr>
<tr>
<td>The transition from higher education to employment</td>
<td>x</td>
</tr>
<tr>
<td>The impact of higher education</td>
<td>(x)</td>
</tr>
</tbody>
</table>

x = approaches frequently employed
(x) = approaches occasionally employed
– = approaches seldom or not employed

The themes and data bases can be presented as a matrix (see Figure 1). We note analyses, for example of the demands of the employment system which
– aim at establishing changes in the demand through statistical time series and possibly their extrapolation to the future regarding the level and type of education of employed persons in various occupational and economic sector categories (1A),
– asking graduates to state problems in coping with job assignments and their retrospective assessment of study provisions (1B),
– surveying employers’ expectations of the graduates’ competences (1C),
– analysing graduate job tasks and performances and inferring from them needs for curricular change (1D).

We can establish a similar range of research approaches as regards the other themes as well.

Altogether, we note larger numbers of studies based on available education and employment statistics or on written questionnaires than studies based on interviews, tests, observations, etc. Various factors contribute to this state of affairs which can be viewed as a quantitative-structural bias of research. Economists who are strongly represented among researchers addressing the relationships between higher education and employment are often socialized to confine themselves to “objective” measures of employment and work and on the utilization of available
statistics. Also, the strong interest among key actors in getting quantitatively representative information encourages the utilization of those methods of data gathering and utilization which provide information on large numbers of persons with relatively limited costs.

The preference for statistics and large-scale surveys altogether is likely to provide valuable research results for quantitative-structural decisions, e.g. for the allocation of resources to different types of higher education institutions or field of studies, and for students' individual choices of institutions and fields (cf. the summary in OECD 1993). However, they often provide only moderately relevant findings, as far as the character of the job assignments and the utility of study for job performance are concerned.

Again, we note in fact frequent cases of biased interpretations of quantitative-structural information in respect to the links between the substance of study programmes and the competences of graduates on the one hand and on the other the job requirements. An increase of the proportion of graduates in jobs traditionally not held by graduates or in jobs not remunerated in a privileged manner was often interpreted as indicating “over-education” or “underutilization”, thus taking for granted that the requirements in jobs traditionally not held by graduates had not changed substantially. But, again, quantitative-structural approaches were not necessarily bound to such a conservative fallacy. Rather, many graduate surveys indicate that a substantial proportion of graduation employed in occupations and positions which do not signal an appropriate employment at first glance actually perceive a substantial utilization on the job of the competences acquired in the course of study (see Suda 1980; Teichler 1988b).

5.3.3 Reproduction of the actors’ myths?

A substantial proportion of research on the relationships between higher education and the world of work relies on the actors' perception of this relationship. For example, heads of personnel offices or supervisors in companies are requested to state the competences expected to perform successfully on the job (cf. Buttgereit 1984; Roizen and Jepson 1985; Harvey, Moon and Geall 1997). Graduates are asked to point out the extent to which they can utilize their competences on the job. Valuable as the actors' perceptions are in supplementing and correcting the purely “objective” information on educational levels, fields of study, type of institution of higher education, status of employment, economic sector, occupational category, position in the employing organization etc., they obviously do not provide a more or less valid information base on the substantive link between study achievements and work performance. The available literature makes us aware of a multitude of biases.

For example, employers tend to focus on short-term demand. Also, they are often inclined to underestimate the educational level of competences they actually like to recruit, and they often depict primarily shortages of competences felt rather than the complete range of competences required. Further, they tend to point out strongly the need for those competences which keep them busy to measure in the recruitment process. Finally, they often put undue emphasis on those competences
which are needed in many positions, thus being inclined to overestimate the role social skills and personality play and to underestimate the cognitive skills and the knowledge basis for specific fields which the institutions of higher education might provide and also might measure and indicate through credentials.

Graduates are likely to notice the impact of study more clearly if they utilize specific knowledge acquired than if it gradually has sharpened their intellectual reasoning in the course of study. They often blame higher education not having been sufficiently helpful for their concrete professional problem-solving even if higher education was not able in principle to take over these tasks. Finally, they often state a close link between higher education and employment, if they enter high-status careers even if the substantive relationship between the competences acquired in the course of study and the work tasks is by no means close for other observers.

Finally, both employers and graduates might be influenced by the specific national and professional cultures in assessing the relationships between study and the work. Similarly, the Zeitgeist of a certain era might shape certain expectations and observations across countries.

In fact, we note that many surveys of job requirements based on surveys on employers' expectations merely intend to serve a sounding board of the employers' views, thus uncritically reproducing their biases and limited scopes. We also observe frequently a reproduction of the dominant perceptions of appropriate or inappropriate employment in the respective countries in graduate surveys. For example, I noted that surveys undertaken in the various European countries in the 1980s varied in stating quotas of inappropriate employment between less than five per cent and more than 40 per cent, whereby the differences seemed to reflect the researchers' definitions or the dominant national perceptions more strongly than real differences according to a comparable measure (Teichler 1988b).

However, many studies on the relationships between higher education and the world of work employ a multitude of questions, address various actors and draw from a variety of sources in order to counterbalance the weaknesses of specific approaches. They often allow for a more valid view of the reality.

5.3.4 Stuck in the “over-education” concern?

The more higher education gets under pressure to demonstrate its utility to society and its efficiency, the more feedbacks such as those with the help of graduate surveys are considered to be valuable tools. Alumni surveys are already widely spread in the U.S. for a long period. The number of countries increases where major representative accounts of graduates' early whereabouts are available. Detailed handbooks have been published recently for those who wish to undertake graduate surveys, whereby the authors had surveys in developing countries in mind (Schomburg 1995; Lamoure 1996).

It is not easy to establish the quantity of graduate surveys conducted, the dominant approaches chosen and the major results elicited. For the results of a substantial proportion of surveys undertaken by individual institutions of higher education or departments are not documented in a way which draws the attention of those
interested in the state of research on this theme in general. In Germany, for example, a study aiming at providing a synthesis of the results of graduate surveys took not only into account published graduate surveys but also asked all institutions of higher education to provide reports on graduate surveys conducted irrespective of the ways the results were disseminated, thus tracing about 200 graduate surveys undertaken in about ten years (Burkhardt, Schomburg and Teichler 2000).

There are large-scale graduate surveys conducted annually in a few countries which collect information only on a few structural surveys. For example, the Japanese Ministry of Education collects information annually of the whereabouts of recent graduates at the beginning of the subsequent year, whereby information is made available with the help of the individual higher education institutions on the gender of the graduates, their field of study, the degree level, the type of institution of higher education, the individual institution of higher education, the employment status of the graduate (e.g. employed, unemployed, further study, etc.), the economic sector and the occupational category (Monbushô 1998). Similar surveys are regularly undertaken in the UK about six months after graduation and in a few additional countries.

In various other countries, major graduate surveys are conducted regularly or occasionally which are nationally representative for all graduates or for graduates of certain regions or major groups of field of study. They tend to analyse the relationships between higher education and employment in a substantially more differentiated way than the above named annual studies. This is true, for example, for Norway (cf. Aamodt and Arnesen 1995) and France (cf. Martinelli and Vergnies 1995).

Finally, there is a multitude of surveys on graduates of individual disciplines across institutions of higher education, of individual institutions or a small group of institutions, of individual or a small group of departments. They might comprise a few questions only similarly to the above named national annual surveys, they might address similar themes as the second group of surveys named above, or they might raise questions which are of specific interest for the specific field or institution.

In analyzing a broad range of graduate surveys conducted in Europe for the purpose of preparing a comparative graduate survey in 1999 (Teichler 1997b), we came to the conclusion that most surveys share a common set of major criteria of employment “success”:

- a smooth transition to employment, e.g. short periods and limited effort for job search, short intervals between graduation and employment, no or short periods of occasional employment in the search for regular employment,
- a low unemployment ratio,
- a low ratio of non-regular or precarious employment (e.g. occasional employment, part-time employment, short-term employment or spurious self-employment),
- success of graduates in vertical terms, e.g. high return for educational investment, a substantial income advantage compared to non-graduates or a high ratio of graduates adequately employed,
– *success of graduates in horizontal terms*, e.g. a close linkage between field of study and occupation as well as job assignments or a high degree of utilization of knowledge on the job which has been acquired in the course of study. However, research focussing on the above named set of criteria is in the position to absorb a multitude of hypotheses competing with the mainstream interpretations. It serves almost equally well hypotheses underscoring the productive function of higher education as those emphasizing the selection and status-distribution functions, those believing in a threat of over-education and those considering expansion of higher education as useful for economy and society, etc.

5.4 THE DIVERSITY OF RESEARCH APPROACHES AND THE COMMON CORE OF ISSUES

5.4.1 The range of research approaches

The overview on major research themes and priorities might have created the impression that research on higher education and the world of work is an area of relatively homogenous approaches. This is by no means true. We note contributions from various disciplines and interest in a broad range of issues.

Research on higher education and the world of work can benefit from the concepts, field knowledge and preferred methods of a broad range of disciplines. It seems obvious, though, that economists succeeded in putting their footprint most visibly on research in this area by formulating persistent and – both academically and practically – relevant paradigms, among them most visible the manpower requirements approach and the human capital approach (cf. Psacharopoulus 1987a; Carnoy 1994).

Sociology, the discipline second most frequently active in this domain, might pursue more open to complex approaches and might be more open interdisciplinary approaches, but it did not succeed in providing similarly visible explanations. The economist Solmon (1973) claimed in a review of that research literature that sociologists largely ask the same questions as do economists and only substitute the dependent variable “income” by “status”. This is certainly a simplification, because sociology addresses more often the conflicting objectives among the higher education community, the employers, governments and the students and their implications for the world of work.

Both, economics and sociology are prone of missing a balance between the status-distributive and the qualifying function of higher education vis-à-vis the world of work. They focus on the former and infer from it on the latter. Altogether, we note that a scarcity of research on the substance of learning, competences, work tasks and job performance reinforces biased overall interpretations of the relationships between higher education and the world of work. Research on vocational education and its links to the world of work, understandably, is more advanced in this respect (cf. Arnold and Lipsmeier 1995; Tessaring 1998).

Other disciplines did not succeed to counterbalance the limits of the two dominating disciplines addressing the relationships between higher education and the world of work. For example, there is an abundance of psychological research examining the impact of those personality traits on study and subsequent career
which are the least open ones to intervention on the part of higher education. Thus, their relevance for higher education policy and practice might be challenged. And research on curricula, measurement of competences and the utilization of knowledge on the jobs tends to be the thinner the higher the intellectual level of knowledge acquisition and utilization analysed. Yet, research on curricula, teaching and learning, students and staff as well as on higher education policy and management contributes to the knowledge on the relationships between higher education and the world of work to a more significant extent than often observed (cf. Boys et al. 1988; Brennan and Kogan 1993; de Weert 1994; Brennan, Kogan and Teichler 1995).

We also could observe a spread of specific themes of research which cannot be subsumed easily to the list of major themes and priorities named above. For example, three issues got momentum in the 1980s in many industrialized countries. First, as already noted, more attention was paid to the diversity of higher education. Rather than looking on the relationships between “educational attainment” in general and career, efforts were made to establish the impact of minute differences according to fields of study, degree level, individual institution of higher education as well as individual dimensions of study conditions and provisions.

Second, a growing concern about gender inequality had a substantial impact on research. One tried to establish differences in the relationships between higher education and employment according to gender minutely whereas differences according to socio-economic background were not anymore addressed to the extent it was customary in the 1960s and 1970s.

Third, the persistent unemployment in many countries triggered off a debate about a “crisis of a work society”, according to which gainful employment was viewed to be on a decline to such an extent that it was bound to lose its centrality both for the self-understanding and the self-esteem of the individuals as well as for the allocation of resources. In this context, it was assumed that the educational expansion served to substantial extent a “custodial function”, i.e. keeping superfluous supply of labour off the labour market.

5.4.2 The common core of themes and issues

A search for a common core among the varied concepts and research approaches seems to be indicative in a thematic area in which large-scale surveys are on the agenda. For the substantial costs and efforts incurred in large-scale research and its relevance for varied actors call for options which do not serve merely individual theoretical options, methodological “hobby horses” or individual groups of actors interested in the findings.

The need to seek for a common core of themes was considered essential in the project “Higher Education and Graduate Employment in Europe” which is undertaken between 1998 and 2000 in nine European countries with the help of funds of the Targeted Socio-Economic Research Programme (TSER) of the European Commission and in two additional European countries and in Japan with the help of national research support. Apart from the above named cause, two additional pragmatic factors came into play. First, the so-called CHEERS study aimed to be a
pilot future regular graduate survey – an aim which obviously cannot be achieved without accepting compromises among the varied conceptual frameworks. Second, a team of qualified and experienced experts from a large number of countries could not have been established, if one had insisted from the outset on a higher degree of homogeneity of paradigmatic and methodological preferences.

Two further observations reinforced such a realistic and integrative research approach. Third, the theoretical preoccupations vary between countries (cf. the references to different national approaches in Fulton, Gordon and Williams 1982; Teichler 1988b). For example, a stronger emphasis of research on general cognitive and socio-communicative skills is likely in countries in which views prevail in the public that higher education should rather train the mind than educate specialists, whereas links between the acquisition and utilization of specialized knowledge are more likely to be addressed in research in those countries in which higher education is widely expected to train graduates for specific professional sectors. The extent to which the relationships between higher education and the world of work really differ in accordance to the varied nationally prevailing philosophies can be only measured if the comparative study is not dominated by the single approach, but is suitable to examine simultaneously the weight the various philosophies actually have.

Fourth, a close look reveals that, though theories in this area differ substantially in conceptual basis and their normative underpinnings, they agree to a large extent as regards the variables to be taken into consideration for testing these theories.

The major difficulty in agreeing on a common core was not any dissensus as regards the major criteria, but rather in keeping the size of the questionnaire in bound, because the complexity of factors considered relevant for explaining the prevailing relationships between higher education and the world of work seems to have grown in the recent past.

– As already noted, a multitude of dimensions of study provisions and conditions is considered as important in explaining the impact of higher education. Moreover, the graduates' socio-economic background as well as their biography prior to study has to be taken into consideration as control measures in order not to overestimate the institutional impacts.

– The links between study and employment cannot be solely explained as an interaction between a “homo economicus” student and a “rational actor” employer. One has to take into account a potential diversity of their values, the impact of lack of information and valid measurements as well as other motives affecting the search and recruitment process.

– In the 1980s and 1990s, as in part already emphasized above and in part discussed below, major changes occurred in graduate employment and work which do not allow anymore to focus the analysis almost exclusively on the extent to which a traditionally appropriate employment and work is realized. In the framework of the project, a need was felt to examine the relevance of technological change for graduate work assignments, the extent to which regional disparities exist (cf. Moscati and Pugliese 1995), the increase of precarious employment and flexible employment conditions, the growing demand for general and social competences, the character of middle-level jobs increasingly taken
over by the growing number of graduates and, last not least, the internationalisation of the graduate labour market.

Thus, the design of a comparative study on the relationships between higher education and the world of work requires priority decisions on themes to be addressed, which have to be based on substantial prior knowledge on the weight the factors currently play. In addition, agreement has to be reached on a limited set of newly emerging issues which might allow observing changes already underway which might play a more prominent role in the future.

5.4.3 Needs for improvement

In observing the major themes and approaches of research on the relationships between higher education and the world of work in the past, we note that need of improvement was obviously felt and already achieved to some extent. It might be justified to point out six themes which played a significant role in conceptual debates about research approaches:

– the zone between “match” and “mismatch”,
– the dynamics of supply and demand,
– the education, training and socialization function of higher education,
– the measurements of impact of higher education on employment and work,
– the diversity of objectives, values and activities,
– the male versus the female notions of the links between higher education and the world of work.

Between the “match” and the “mismatch”: In most countries we note relatively clear concepts about what a good job is for a graduate from higher education, and also we can establish which fates of graduates are viewed jointly by all the contrasting voices as a clear “mismatch” or otherwise a clear failure on the labour market, e.g. taking over a skilled manual labour or unskilled job or being long-term unemployed.

The controversy remaining refers to employment and work situations and positions in-between. We note divergent terms and ratings, for example, as far as short-term contracts, involuntary part-time employment, spurious self-employment, middle-level occupations, somewhat appropriately employed or some use of knowledge acquired in the course of study are concerned. As already noted, objective “criteria” of occupational statistics and employment conditions do not suffice, because the terminology suits to define the clear “match” and the clear “mismatch”, but not the zone in-between, and the “subjective” ratings by the graduates themselves are vulnerable to biases. Available surveys, however, suggest that the proportion of graduates employed in a way which neither can be called “clearly appropriate” nor “clearly inappropriate” is larger than the proportion of graduates who are “clearly inappropriately employed”.

The dynamics of demand and supply: Most experts agree that the labour market for higher education graduates in most industrial countries has been predominantly supply-driven. No matter what definition we take of the demand, supply tended to surpass the demand, and eventually more graduates were employed on jobs allow-
ing them to believe that they use at least a considerable proportion of their knowledge on the job.

We note divergent explanations of this phenomenon, notably:

- there is more demand than planners and employers suggest;
- the oversupply is absorbed without major consequences as regards the work tasks (“screening”, declining expectations on the part of the graduates, etc.);
- the graduates utilize their surplus-competences and pro-actively change the work assignments and the organization of work.

Beyond, it is largely assumed that various buffers emerged. For example, the prolongation of study and increased choice of advanced study might be phenomena of a “custodial function” of higher education. Increasing length of the transition period from higher education to work and growing part-time employments might serve as well to reduce such gap. Research, however, remained poor in identifying the relative weight of the various modes of adaptation.

The education, training and socialization function: In principle we can differentiate three educational tasks of higher education:

- the educational function: to stimulate the cognitive, intellectual and systematic abilities and to convey knowledge which is conceived as broad, general, or the core of cultural and civilization competences;
- the training function: to foster knowledge and competences targetedly provided in order to prepare students for future professional practice in related areas of specialization;
- the socialisation function: to shape the values, attitudes, social behaviour and the communication skills relevant for action in socio-communicative contexts.

Concepts vary between countries and over time as regards content and processes of teaching and learning most likely fostering the respective functions. There is a similar variety of views as regards the relevance of these functions. One might argue that we note three concurrent trends:

- a quantitative-structural match between areas of knowledge acquisition and areas of work can be less easily achieved nowadays than in the past, professional training is less frequently emphasised in some countries recently.
- concepts such as “key qualifications” became popular underscoring a close interrelationship between general cognitive competences and values as well as socio-communicative competences.
- there seems to be a general trend of appreciating excellence in all three directions. A coherent emphasis on a single major thrust is loosing ground.

In the past, research in this domain often reproduces the beliefs or even misunderstandings and the mis- and dis-information of various groups of actors. There is a need to improve methods in order to get more accurate and valid information.

The measurement of the impact of higher education on employment and work: Research designs, quantitative methods and computer capacity has improved significantly over the last three decades, and in this framework, knowledge on the impact of various elements of higher education on subsequent employment and work has improved dramatically as well. Most of the findings challenge old stereotypes rather than indicate major points of intervention in higher education. For example, highly reputed universities often ensure not more “value added” than
average institutions, and the impact of single components of the study provisions and conditions on subsequent employment and work tends to be marginal. Multivariate analyses of the impact of study were frequently undertaken in the U.S. (cf. the overview in Pascarella and Terenzini 1991). But they are still rare in Europe and other parts of the world.

The diversity of objectives, values and activities: In the past, relatively simple research designs had reinforced simple causal attributions. Single elements of higher education, for example the profile or the reputation of a certain institution, the attitudes of the academic staff, the major modes of teaching and learning, etc. seemed to be very influential, as far as their graduates’ employment and work are concerned. The more complex analyses on the impact of higher education become, the more the traditional mechanistic views are challenged about social causalities.

The male versus female notions of graduate employment and work: Most research on the relationships between higher education and the world of work addressing gender as one of various socio-biographic variables tends to note declining differences in output measures (i.e. number of graduates and their competences) as well as declining differences according to gender in career start in almost all industrial societies. Also, available research suggests that professional disadvantages for higher education-trained women are marked from the moment onwards when they start taking care for children.

In contrast, research focussing on gender issues, while not neglecting the trends of declining differences in some respect, point out differences in appreciation of social environment, different understanding of career goals, working styles etc. which might call for a more relativistic approach for example as regards the measures of professional success. It is still an open question what kind of changes research on the relationships between higher education and the world of work needs in order to analyse the role gender plays in this context in an unbiased way.

5.5 RECENT AND FUTURE CHANGES AS A CHALLENGE FOR RESEARCH

5.5.1 The need to be aware of changing conditions

The conceptual framework of research which is closely linked to the problem awareness policy and practice might actually be preoccupied with issues which had been the focus of the recent past. Since thorough research often takes a while, results are often eventually only available at a time when the issues addressed are no more on the agenda of public debate.

It is difficult to identify the challenges newly emerging and expected future changes pose for research on the relationships between higher education and the world of work. Our fantasy might be too restrained: some experts claim that nothing is more conservative than futurology, because it often does not do more than extrapolating already visible trends. Or we might be too futuristic, i.e. underestimating the inertia of the system. But even if we refrain from speculating about completely new scenarios, we can point out four directions of change relevant for the relationships between higher education and the world of work which often were addressed in recent years both by researchers and practitioners:
CHAPTER 5

- the trends from regular employment towards increased precarious or flexible employment,
- from an elite and scarcity paradigm towards a mass and abundance paradigm,
- from a pre-career education society towards a lifelong learning society,
- from a national training and labour market towards a global or international scene.

Most of these scenarios were not initially put on the agenda by higher education researchers. It might be a weakness of higher education research that it often is not a key actor in identifying and formulating the respective possible future features of society (see Scott 1999).

5.5.2 Towards precarious or flexible employment

There are many indications that a growing number of graduates cannot expect anymore to transfer within a short period of time from higher education towards “regular” full-time indeterminate employment. More and more graduates are expected to become petit entrepreneurs finding multiple niches where they can sell their competences on part-time, short-term, multiple-contract, semi-entrepreneurial etc. basis. Some findings presented in this debate actually only indicate that the period of job research and initial trial-and-error employment has become more protracted, whereas others suggest that the change occurring is more fundamental and is more and more affecting all stages of the occupational life.

The occurring changes meet with controversial value judgements among experts. While some consider it as a loss of job security and a weakening of the employees' bargaining position, others hail the gain of flexibility and opportunities. Obviously, this is not merely a matter of controversy among experts. We might expect that in the near future the spreading phenomenon of a “boundaryless career” (Arthur and Rousseau 1996) will be viewed by some graduates as an involuntary loss and by others as voluntary, since any high risk divides the views (see Kivinen and Ahola 1999).

5.5.3 Towards a mass and abundance paradigm

Most explanations seem to believe that graduates are employed and allotted to work tasks according to the traditional scarcity paradigm: employers try to find the scarce talents, allocate the bulk of complex tasks and responsibilities to few positions, and provide substantial privileges to the chosen talented few. In the process of higher education expansion, this view was not redressed, but only supplemented: one tried to establish the semi-demanding whereabouts of the too many.

But there are indicators that the logic will be turned upside down in the future: when rich supply of high competences is understood as being endemic, the rationales of the utilization of knowledge might change. We currently talk about decentralization of responsibilities not just because we suddenly note that the past models of decisions were far from perfect, but also because the view is spreading that there is a broad pool of potentials to which responsibilities can be successfully distributed.
What are the implications of this change for the character of graduate jobs and the relationships between higher education and employment at a time when enrolment has surpassed 50 per cent of the age on average and seems to be rise further?

– Will the majority of graduate jobs be middle-level jobs traditionally not held by graduates and thus require a rethinking of the job-preparatory function of higher education in general?

– Will return to investment in education loose its role of being a key incentive, as for example the recent OECD study on the first years of tertiary education suggests (OECD 1998c)?

– Or will terms such as “higher education” loose their relevance in a process of increasing diversity giving way to new strata of educational attainment?

The most popular future scenario in academic circles is that of the knowledge society (cf. Gibbons et al. 1994). It sounds as if the universities might regain what they felt threatened to lose in the wake of massification of higher education: to become a key agency in society serving one of its most relevant components. Some experts warn that the opposite might be true. The more the acquisition and utilization of systematic knowledge expands the more vulnerable or even superfluous might be an agency specialized in preserving, producing and disseminating knowledge. Even if the university survives, it might lose its character distinct from other institutions and programmes (e.g. Scott 1999). However, concepts of a knowledge society often remain vague, as far as implications for graduates are concerned. In the context of our considerations, the “knowledge society” might be viewed as just another term for the above named phenomenon of abundance of competences.

5.5.4 Towards a lifelong learning society

Since about three decades, scenarios of lifelong learning are on the agenda. In the 1990s, the belief in a substantial growth of the role continuing education will play was backed more strongly than ever before, as for example the respective publications by UNESCO (Delors et al. 1996), OECD (1997) and the European Commission (1996) suggest. Higher education is posed three major questions:

– regarding the role higher education will play for continuing professional education: Will it slice out the piece of the cake most congenial to its past functions, will it continue to build up a sector of continuing professional education which is more or less segmented, or will the rationales of continuing professional education, in turn, begin to shape the teaching and learning modes of pre-career education?

– regarding changes of pre-career education: Will the idea of “recurrent education” be revived, according to which pre-career education will be shortened, will focus on providing the fundamentals and will loose its status-distributive function?

– regarding the role of teaching and learning: If we do not move towards a lifelong education society, but rather towards a lifelong learning society, will there be a de-institutionalization of knowledge transmission?
5.5.5 Towards an international or global labour market

Universities in industrial societies tended to harbour cosmopolitan values and universalistic approaches, but they took for granted that their graduates ought to be shaped to serve the national employment systems. In recent years, however, the views have changed: awareness grows of the fact that students have to be prepared for an internationalizing and globalizing world (see various contributions in Scott 1998).

Experts claim a growing need for
– comparative understanding,
– lingua franca and possibly other foreign language learning,
– boundless knowledge acquisition.

And we note that international student mobility became the most visible feature of internationalization of higher education. Therefore, the question often is raised, whether study in a foreign country might become essential for graduates in order to be prepared for the internationalizing labour market.

One might argue, however, that the increase of mobility merely is an early step of internationalization for the few. As a next step, internationalization for the majority of students would require curricular reforms relevant for the non-mobile students as well. Thus internationalization at the periphery of the systems would be substituted by internationalization of the core of higher education through strengthening the international dimension of the substance of learning.

5.5.6 The value of future scenarios

We might find out in the future that we have overlooked some directions of change when trying to identify emerging demands. This, however, should not discourage our efforts to identify likely changes. For research on the relationships between higher education and the world of work is both theoretically more enriched and practically more relevant if it tries to analyse the relationships between higher education and the world of work in the light of various future scenarios.
6.1 INTRODUCTION

In discussions about the relationships between higher education and employment, three assumptions are frequently found. First, the topic is viewed as only comprising graduate employment. The whereabouts of students after graduation seem to be the major theme, sometimes enriched by analyses of the occupations of all higher education-trained adults. Second, the topic is frequently viewed as being the exclusive domain of economists. Other disciplines might have only a marginal interest, according to this view, in the relationships between education and employment. Third, reflection and research on the relationships between education and employment are frequently depicted as being ideologically bound to support a belief that higher education should subordinate itself to the needs of the economy. In contrast, the aim of this chapter is to suggest a much broader conceptualisation of the theme.

6.2 THE RELATIONSHIPS BETWEEN HIGHER EDUCATION AND WORK: AN OVERVIEW

Any attempt to analyse the diversity of the relationships between higher education and the world of work faces terminological difficulties in depicting the latter part of this relationship. We might employ the terms labour market, employment, labour, occupations, professions, work, and career. There is no comprehensive term in the English language similar to, for example, “Beruf” in German. We choose “work” here as possibly the most comprehensive single term, because it can refer both to the conditions and the substance. The term “world of work” is sometimes chosen instead (see, for example, Kogan and Brennan 1993), hinting that there is a wealth of dimensions to be taken into consideration. A multi-dimensionality is assumed in our use of the term “work.”

Table 1 provides a “map” of the relationships between higher education and work. Three major themes are underscored.

First, one might focus attention on those aspects of work which are relevant to higher education. As will be explained in detail below, employment, career, work tasks and requirements, profession, and quality of work and employment might serve as appropriate terms for describing the major aspects.

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Second, one might examine aspects of higher education in relation to the world of work. Institutional types, fields of study, and qualification types are the typical structural aspects to be taken into account. As regards the substance of education, curricula forms, approaches to teaching, learning and assessment, as well as work-based learning in some cases, are typically addressed. In addition, we have to bear in mind the broader socialisation effect of higher education and the motivational, attitudinal and behavioural elements involved beyond academic knowledge. Finally, it must always be remembered that higher education is not directly relevant to employment through the kind of education and training it provides, but through the ways students make use of these educational provisions.

Table 1. Relationships Between Higher Education and Work

<table>
<thead>
<tr>
<th>Dimensions of higher education relevant to work</th>
<th>Linkages between higher education and work</th>
<th>Dimensions of work relevant to higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Quantitative and structural developments</td>
<td>- Labour market, intermediary agencies and transition</td>
<td>- Employment</td>
</tr>
<tr>
<td>- Curricula, training and socialisation</td>
<td>- Regulatory system and lifelong education</td>
<td>- Career</td>
</tr>
<tr>
<td>- Educational provisions and students’ option</td>
<td>and work and employment</td>
<td>- Work tasks and requirements</td>
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<td></td>
<td></td>
<td>- Profession</td>
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<td></td>
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<td>- Quality of work</td>
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</tbody>
</table>

Between higher education and work, we note three different kinds of linkage in Table 1. First, the direct linkages between higher education and work might be termed labour market, intermediary agencies, and transition process. Second, one should not overlook the regulatory system shaping the relationships between higher education and work, notably the actors involved and the ways of regulation chosen. Third, the consecutive life stages of study and subsequent work are more and more blurred by work and employment prior to and during study and by periodic return to study from or during employment.

6.3 DIMENSIONS OF WORK RELEVANT TO HIGHER EDUCATION

6.3.1 Employment

The term “employment” is used in three different ways in this context. First, it is the key term in describing the quantitative and structural development of graduate positions in the occupation system. This meaning of the term will be referred to in this section.

A second use of the term “employment” refers to the process of hiring staff or becoming employed, i.e. to selection and allocation processes and to occupational
mobility. These dimensions will be addressed in the context of transition from education to employment and of career.

A third use of the term refers to employment conditions, the elements typically fixed in formal or informal contractual relations between employees and employers. Weekly working hours, work schedules, vacations, social benefits, job security, etc. are the most essential elements of employment conditions. We will refer to them in the section on the quality of education and work.

Employment in the first sense is the most widespread area of research and inquiry regarding relationships between higher education and work. Basic employment statistics identify the level of formal educational attainment of the labour force in various economic sectors and occupational groups. Separate information is available in some countries on recent graduates on the one hand and, on the other, on all degree holders in the labour force. In addition, regular large-scale surveys are undertaken in some countries aiming to identify the whereabouts of recent graduates, for example through information provided by institutions of higher education (in Japan), through annual surveys a few months after graduation (for example in the United Kingdom, Ireland, and Norway) or as part of the regular statistical data collection on the labour force (for example in Sweden). Finally, questionnaire surveys of graduates tend to include, among other things, basic measures of employment.

Information on graduate employment, as a rule, comprises at least:

- employment status (employed versus unemployed; full-time or part-time employment; civil servant, employee, self-employed, etc.), and
- employment sector (public versus private; economic sector; occupational category).

Frequently, the following dimensions are addressed as well:

- job security (provisional versus regular employment; fixed-term versus long-term or indefinite),
- position (salary or other means of income; status within the enterprise, etc.).

It might be added here that research in some European countries emphasises regional differences in graduate employment. In most European countries, we note a higher level of educational attainment and a higher proportion of graduates among the work force in major industrial, commercial, and administrative areas than in peripheral areas. In some countries, we observe other regional divides, for example a north-south divide in Italy. The importance of these differences, however, tends to be over-estimated in graduate surveys, because few of them control for regional differences in living costs or similarly relevant aspects.

Surveys of recent graduates in various European countries reveal that completion of higher education has become the typical entry qualification to almost all high-level occupations. In areas such as medicine, law, and high-level careers in public administration, graduation has been a formal prerequisite for a long time, but in recent decades managerial as well as a whole range of newly professionalised careers generally do require the possession of a degree.

Higher education has become more and more a necessary prerequisite for high-level careers, but also a less and less sufficient prerequisite. Employment surveys and statistics show that the absorption of the growing number of graduates from
institutions of higher education by the employment system has been achieved in a variety of ways. We note concurrently a growth of occupations typically filled by graduates, an increase in the number of graduates entering middle-level occupations, a growth in the (still) small proportion of graduates ending up in blue-collar jobs, as well as an extension of search periods and initial uncertain employment. We neither observe the frequently expressed ideal of the growth of “graduate” occupations in line with the supply of graduates nor the frequently announced catastrophe of a clear “proletarisation” of graduate occupations.

Studies which only address “objective” employment measures tend to rate the changing nature of graduate employment more negatively than studies which address the character of work tasks, the graduates’ rating of the relationships between study and work, and their job satisfaction. A growth in graduate employment in semi-professional areas, in intermediate administrative or technical positions as well as in office and sales positions frequently provides the basis for exaggerated interpretations about losses of status advantages of graduates or about increasingly inappropriate employment. The growing complexity of work tasks becomes more quickly visible in the analysis of the work roles and in the perceptions of the workers than in employment statistics.

Studies of graduate employment also indicate the increasing importance of the private sector in most European countries. Although many employment categories do not clearly distinguish between public, semi-public or semi-private, or eventually private, this trend is indisputable. In most European countries, institutions of higher education had been accustomed to be subject to a substantial influence from government as a major employer of graduates, notably in law, teaching, and medicine. The recent increase of graduate employment in the private sector has triggered off a controversial debate about the legitimacy, and the desirable limits, of influence of private employers on higher education.

In most European countries, graduate surveys have shown an increase in job search periods, in early career unemployment, in initial fixed-term employment as well as signs of increased difficulties in entering regular career tracks. Many surveys suggest that these phenomena indicate a more protracted transition period rather than long-term career problems. Other experts, however, emphasise that graduates not ending up in desirable careers might not respond to graduate surveys and therefore might be undetected by such surveys, thereby causing an underestimate of the size of this group of graduates and the seriousness of the problems they face.

Statistics and surveys of graduate employment (or of the educational attainment of the labour force in general) have provided the data base for studies based on the so-called “manpower requirements approach”. In observing trends in graduate employment and possible factors affecting these trends, for example the speed of economic growth and structural changes in the labour market, attempts were made to estimate the future demand for highly qualified labour and to compare it to the estimated supply of graduates. The general inaccuracy of such forecasts had already reduced their popularity by the end of the 1970s, although they continue to be undertaken occasionally in some European countries.
In recent years, graduate employment data has aroused interest for indicating differences in employment opportunities according to field of study or individual institution of higher education or their departments. Relatively simple data sets have been published in order to provide basic information about job opportunities for different kinds of graduates as well as on possible areas of expansion and contraction in institutional capacity. However, these simple data sets fail to reveal the different subject and institutional patterns in the success with which different types of students are prepared for employment. More sophisticated studies have indicated that students who most easily find jobs are not necessarily the ones who are best prepared for them, at least according to the perceptions of the students themselves.

6.3.2 Career

The term “career” refers to typical or actual sequences of employment and work tasks within occupational life-spans. These might be shaped by career structures set within employing organisations, by societal notions of abilities and tasks of different age groups, by individual aspirations as well as by rewards or sanctions for personal achievement. The term is sometimes used in the context of a possible sequence of positions, sometimes in respect of relatively successful professional paths, and sometimes in respect of extraordinary success.

Career in terms of a foreseeable ladder of occupational status progress appears to be the more likely, the higher the educational level. Graduates from institutions of higher education could expect status improvement up to late career stages, and had a relatively low risk of a dramatic status decline. It is widely assumed that as a result of the expansion of higher education, a growing proportion of graduates not only faces a more risky and shaky start to professional life, but also a less progressive and stable career path.

Systematic information on graduate careers is much scarcer than information on the transition to employment and the early career years. In addition, we have to bear in mind the methodological weakness that research on career mobility has to make use of cohorts of people who have been professionally active for a long period and who completed their studies several decades ago. Thus, the results provided by research on graduate careers are of limited use in considering the effects of recent changes in higher education.

Two major questions are frequently raised in research on careers and mobility. First, to what extent are early jobs clear determinants of subsequent careers? Up to the present, available information in fact suggests that early career stages continue to have significant impact on later stages. The relationship between early and later career experiences seems to have changed to a lesser extent than most observers are inclined to assume.

A second common question is how the link between formal educational attainment and occupational status varies according to age. The older graduates are, the less closely they view the relationship between their work tasks and the content of their study. Continuing education and competences acquired on the job become more important. As far as data are available, though, they suggest that the closest correlation between pre-career education and professional success is to be found in
mid-career. This suggests that higher education has an impact on careers beyond the early selection and immediate use in a first job of knowledge acquired during the course of study.

6.3.3 Work tasks and requirements

“Work tasks” refer to the specific activities regularly undertaken in individual jobs. The term “requirement” (job requirements, qualification requirements, etc.) addresses the implication of job tasks for abilities and relevant training of the people undertaking them.

In general, the interest in identifying the work tasks associated with graduate-level jobs and the “requirements” implied by them reflects a closer linkage between educational fields and occupational categories at relatively high levels of education and work tasks. Further, costs incurred by “mismatches” between education and employment tend to be larger at the higher than at the lower levels of the occupational hierarchy.

Surprisingly, therefore, few systematic analyses of graduate work tasks for the purpose of determining “requirements” and of possibly suggesting corresponding changes to training have been undertaken – substantially fewer than for industrial or office workers. And the few studies actually undertaken have not succeeded in developing convincing concepts and methods which might have changed this state of affairs.

The higher the educational level, the more researchers face difficulties in analysing work tasks and job requirements. There are various reasons for this state of affairs:

– First, the major work tasks of graduates are hardly accessible to direct observation. They tend to take a long time to complete and to be intertwined with other work tasks, and there are few cases where job performance is more or less isomorphic to the contents and processes of learning.

– Second, job analysis of high-level jobs is by definition incomplete regarding “requirements”, because graduates are expected to shape, innovate, and restructure work tasks actively.

– Third, due to the long “production cycles” of high-level competences, errors in prediction and in planning are more frequent than for competences which require shorter periods of training.

The traditional economic approaches did not try to measure job tasks and “requirements” directly. The “manpower requirement approach” inferred more or less appropriate utilization of competences from the match of fields and occupational areas, and the “human-capital approach” inferred the match from the balance of investment in education and the return on this investment.

Sociological approaches most frequently ask persons in charge of personnel, supervisors of graduates or the graduates themselves about job tasks and requirements or about the linkages between higher education and work tasks, for example about the extent to which they utilize on the job the competences they had acquired during the course of their study or about the most appropriate education needed to cope with their job tasks. This approach, implicitly, assumes that knowledge re-
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garding the respective disciplines and work tasks is more important than understanding the character of learning, competence, and work in general for identifying the appropriate relationships between higher education and work. Results of such surveys, however, suggest that respondents’ statements are biased, first in favour of “visible” (isomorphic) similarities between education and work, and, second, in favour of jobs which are satisfying for other reasons.

Irrespective of these biases, most of the available research has pointed in the opposite direction, namely that less obvious “matches” between competences and work tasks are more important to the relationship between higher education and work.

– As a consequence of the difficulties faced in matching specific competences and work tasks, employers more and more tend to emphasise broad knowledge and flexible attitudes of graduates.

– There is a widespread conviction that a growing number of jobs require knowledge from several disciplines, thus calling for new mixes of fields of study, for interdisciplinary learning or for the ability to cooperate with experts from other disciplines.

– There is growing mistrust on the part of employers in many European countries as to whether traditional modes of higher education are suitable for preparing graduates who are able to go on to learn professional problem-solving on the job. Instead, higher education is itself expected to train graduates explicitly for professional problem-solving. Most frequently, modes of experiential learning (for example internships or working in projects aiming to solve practical problems) are advocated in this context.

– Employers tend to place a high value on social skills, attitudes, and motivation in recruiting graduates.

6.3.4 Profession

In employing the term “profession”, we refer to certain configurations of work tasks and careers which

– tend to be relatively stable,
– are based on relatively rare competences which cannot easily be substituted,
– shape the respective persons’ social conditions as well as create a sense of pride and identity,
– tend to be linked to certain kinds of education and training.

Both in the public debate as well as in research, differences between countries exist in the way concepts of professions are either explicitly discussed or implicitly employed. In Anglo-Saxon countries, the use of the term “profession” is often shaped by an ideal-type of “liberal profession”. Accordingly, professions are prototypically defined by self-controlled employment, training, and job performance. In contrast, the continental European notion of profession puts “liberal professions” and government-related or government-supervised professions more or less on equal footing. Professionalism, accordingly, is most strongly determined by a high level of specialised knowledge indispensable for successful job performance.
We also might identify a third, an “academic” notion of profession according to which professional pride tends to be reinforced by long-standing university traditions. Correspondingly, professions such as economics and business studies as well as engineering which were incorporated into universities at historically later stages than, for example, law and medicine, tend to be rated as somewhat inferior. A fourth notion underscores different levels of professionalism. Accordingly, for example, social work is viewed as a “semi-professional” area. Finally, we note different values associated with the respective terminology in different countries. For example, the English term “profession” tends to refer to high-level jobs, allowing for a pejorative use of “vocationalism” at lower occupational levels, whereas the German term “Beruf” tends to underscore professional pride of workers of almost all levels of occupational prestige. The international diversity of notions regarding the character of a profession creates immense problems in international comparative research on higher education and work.

Available research certainly allows us to claim a trend towards professionalism in terms of a growing importance of knowledge as the base for job performance and in terms of a “scientification” of society. It is less clear, though, whether we can observe a general trend towards a status gain of “professions” compared with other highly educated occupations or a trend towards “vocationalism”. We can observe frequent complaints about poor job performance of professions associated with resistance to change and to a failure to allow access to their knowledge base to neighbouring areas of expertise. Additionally, a stress on flexibility, competences across professions, and corporate loyalty challenge the importance of professional values and skills.

6.3.5 Quality of work and employment

Work and employment for the highly educated is usually associated with certain kinds of rewards and job satisfaction. In addition to income, which is taken into consideration in all economic studies, sociological and psychological research in this area addresses

– status,
– autonomy and disposition,
– interesting and demanding work tasks,
– qualities of the working environment,
– job security, and finally
– workload (leisure time, etc.).

Studies aiming to identify the basis of job satisfaction point to relatively stable professional values which are quite similar in most industrial societies. As a rule, highly educated persons tend to put stronger emphasis on autonomy and disposition and on interesting and demanding work tasks. Income and status seem to be less important. People who have not attended higher education seem to regard job security and reduced workload more favourably than graduates.

The trend towards so-called “post-industrial” values might in this context be interpreted differently. It could also be viewed as an extension of values which have always tended to be widespread among the highly educated.
Higher education plays a role vis-à-vis the employment system, first, in terms of
providing job-related knowledge and competences, and second, in pre-selecting
students for future jobs, positions, and ranks. It may do so irrespective of whether it
is pursuing autonomous educational objectives, responding reactively to presumed
needs of the employment system, or attempting to pursue proactive policies of
shaping and innovating in the employment system. However, the extent to which
different higher education systems, and parts of systems, are responsible for selec-
tion and training for employment varies considerably.

6.4.1 Quantitative and structural developments

Higher education impacts on graduate employment, first, by the number of gradu-
ates it provides. According to some current attempts to explain tensions in the
relationships between higher education and employment, the past tends to be de-
picted as a state of equilibrium between the number of graduates and the number of
jobs suitable for graduates. Historians, in contrast, make us aware of cyclical de-
velopments and serious mismatches in the past.

Around 1950, the proportion of graduates was less than five per cent in most
European countries. The respective proportion doubled in many countries within
about ten years. We note, however, that many periods of rapid growth were fol-
lowed by periods of slow growth or stagnation and again by periods of growth.
Today, enrolment at institutions of higher education has on average surpassed 40
per cent of the respective age group in OECD countries.

Available research suggests that governmental policies, policies by higher edu-
cation institutions, and individual demand for higher education have reflected pre-
sumed demand of the employment system to some extent, but – as a rule in most
Western European countries – did not follow this demand closely. Thus, public
debates on the relationships between higher education and employment tended to
deplore mismatches between the quantitative provision of higher education and the
demands of the employment system. We can identify periods in which concern
about a shortage of graduates dominated and other periods in which concern about
an over-supply of graduates was dominant.

In most European countries, expansion of higher education was accompanied by
efforts at restructuring higher education. These were based on the assumption that a
growing diversity of students’ talents, motives, and career prospects was better
served by a diversity of institutions of higher education and by diversity of course
programmes. Around 1970, it became conventional wisdom that a diversified
structure was necessary in order to protect a traditional high-quality sector of
higher education and to provide suitable learning environments for the rising num-
bers of students.

Diversification became generally viewed as desirable or even indispensable.
What remained controversial, though, were the principles and structures of differ-
entiation or diversification. We note at times stronger impacts of “academic drift”
and at times stronger pressure of “professional drift”. We note periods of founda-
tion of new non-university higher education institutions in various countries, followed by periods of minimal structural change and periods of frequent upgrading of non-university higher education institutions, possibly followed by a new cycle of foundation of non-university higher education institutions. We note differences of stability of non-university higher education institutions, whereby stability and reputation seem to be highest in countries in which specialised training is well regarded.

It is generally assumed that differences of quality and reputation between higher education institutions of formally the same type have become increasingly relevant to employment. Yet, those differences obviously continue to be considered more important in countries in which status and prestige differences between institutions have traditionally been steep than in countries in which those differences were traditionally of marginal importance.

Research has aimed to identify differences in employment prospects of students according to

- types of higher education institutions,
- types and levels of course programmes and degrees,
- fields of study,
- intra-type diversity, i.e. hierarchy of prestige and reputation of institutions of formally the same institutional type,
- differences in terms of achievement-related dimensions, such as students’ grades or areas of specialisation.

Available research findings do not necessarily confirm the conventional wisdom about the employment prospects of different kinds of graduates. For example, a British-German comparison presents various surprising findings. Unemployment shortly after graduation was more frequent among British graduates of polytechnics in the late 1980s than among university graduates. In Germany, transition to employment was no easier for graduates of Fachhochschulen than for those of universities, if early unemployment and the duration of the search period is taken into account and if one controls for field of study. The salary differences between British polytechnic and university graduates were greater than those between Fachhochschule and university graduates in Germany. This holds true, even though the British degrees from the two institutional types were formally equal, whereas the German university graduates are required to undertake two more years of schooling than those at Fachhochschulen. Whereas British polytechnic graduates considered their studies more useful for their work tasks than British university graduates, German university graduates, most surprisingly, reported a higher degree of utilization of course knowledge in their jobs than did graduates of Fachhochschulen. Thus, institutional diversity appears to have operated differently in relation to graduate employment in these two countries.

6.4.2 Curricula, additional job-related training, and socialisation

Research on higher education curricula and their impact on graduate work has been undertaken less frequently than research on the structural links between higher education and employment. In addition, research in the former area is more likely
to focus on a few cases. This is certainly appropriate in order to analyse curricular approaches and related work assignments thoroughly, but hardly allows for general conclusions about the substantive relationships between study and subsequent work in the respective country.

Curricula in higher education might vary in terms of their relationships to work in the following ways:

– Curricula might be strongly directed towards preparation for research and the creation of knowledge or towards the reproduction and dissemination of existing knowledge.
– Curricula might be geared closely to occupational preparation or be unrelated to it.
– Where occupational preparation is a goal, curricula might differ in the extent to which such preparation is considered to be completed.
– Curricula might vary according to the degree of specialisation.
– Curricula might focus on a single discipline or combine various disciplines.
– Curricula might differ according to the extent they attempt to shape students’ personality.
– Stages of degree programmes might progress from more general to more specific stages or, conversely, from “vocational” short programmes to “theoretical” long programmes.

According to conventional wisdom, fields of study differ substantially according to their relationships to the world of work. This is confirmed by employment data on the relationships between field of study and occupation: whereas graduates from some fields are most likely to transfer to “corresponding” professions, graduates from other fields will be widely dispersed. On the one hand, a curricular analysis might show that some fields emphasise areas of knowledge and ways of thinking which underscore the functionality of knowledge for professional practice whereas others neither have specific areas of employment in mind nor train for practical purposes.

Some studies have examined curricula revisions which reflect changing employment conditions of graduates. Whereas some studies compare various disciplines, others observe changes in disciplines traditionally not geared to specific professions or new programmes aiming to find new niches in the employment system, for example public health, European studies, gerontology.

Research on employers’ recruitment processes and criteria suggests that employers pay less attention to curricular details than do professional bodies or academics. Whereas academics tend to believe that certain individual courses are indispensable for a sound qualification of a medical doctor or an engineer, employers might assess curricula more broadly. Employers tend to stress three dimensions of higher education.

First, in many countries we note relatively pronounced employers’ views about the reputation of certain institutions and departments. These views seem more likely to reflect and reinforce established prestige differences than to respond to changes made by higher education institutions.

Second, some institutions of higher education try to ensure a competitive edge for their graduates by arranging direct professional experiences during the course
of study (visits or internships), by coaching in professional problem-solving (for example through learning in projects) or by systematically confronting academic and professional problem-solving in lectures and seminars. Similarly, a growing number of higher education institutions are providing courses on graduate employment and strategies of job search, making available professional counselling, and otherwise playing an active role in placing their students.

Third, many institutions of higher education which historically have emphasised the transmission of knowledge are today putting more attention on other dimensions of socialisation, for example personality development, communication skills, or ability to cooperate with others. However, it seems obvious that higher education is less equipped to steer these processes systematically than it is to shape the cognitive domain of academic learning.

Research on modes of teaching, learning, and counselling seems to be less widespread in Europe than research on traditional academic issues of curricula in higher education. Available studies on internships and other means of providing practical profession-related experience during the course of study tend to underline the fact that institutions of higher education face substantial problems in integrating these activities into traditional modes of learning.

6.4.3 Educational provisions and students' options

Various studies have attempted to establish the impact of institutional and curricular provisions on graduate employment. The simplest of these studies observe the characteristics of certain programmes and the graduates’ career and infer on this basis the impact of programme characteristics. These studies, as a rule, lack comparison with other programmes and thus are unable to establish an independent measure of the impact of the respective programme characteristics. They also do not examine whether the students, in fact, learned what they were expected to learn and make use in employment of what they learned. These studies take for granted that the institutions and programmes are crucial in shaping students’ learning and competences.

Whereas quantitative approaches to measuring impacts of study conditions and provisions remain scarce in Europe, they form a major area of research on higher education in the USA. Most research findings in the USA suggest that competences acquired and subsequent professional successes are less shaped by institutional conditions and provisions than by the students’ use of the institutional conditions and provisions. It seems, in fact, reasonable to assume that a student’s competence depends less on the quality of the library than on the ways he or she makes use of it. Yet, most analyses on the impact of curricula or other institutional provisions tend to neglect this obvious fact.

We also note a substantial number of research projects undertaken on students’ values, orientations and study behaviour, and, in particular, their professional aspirations and ways of preparing themselves for their career. Some longitudinal studies show the eventual impact of these views and activities on subsequent employment. Studies would gain substantially in quality if they analysed the interrelationships between the students’ views and activities on the one hand and the institu-
tional provisions and conditions on the other. However, such studies are valuable in pointing up the multi-faceted nature of students’ motivations in entering higher education. On the whole, employment-related benefits are accorded somewhat lower importance by students than the policy frameworks would suggest.

6.5 LINKAGES BETWEEN HIGHER EDUCATION AND WORK

6.5.1 The graduate labour market

In discussing the graduate labour market in the framework of this chapter we wish to underline the point that the employment opportunities for graduates are not exclusively a function of the employment system and its requirements, but of the quantitative, structural, and skill linkages between higher education and the employment system. We use the term “employment approaches” for those studies addressing the whereabouts of graduates, and confine the term “labour market approaches” to those studies which address the linkages between higher education and employment, i.e. the relationships between the demands and supply.

Most available research suggests that in most European countries income is a weaker factor in contributing to a balance between demand and supply than would be assumed on the basis of model assumptions of rational economic behaviour. Rather, income differentials tend to be more stable than constellations between demand and supply according to educational attainment. In addition, students tend to opt for higher education studies even if expected income differentials are relatively small. Finally, students’ choices of field of study have changed less dramatically than respective job prospects. This might be explained in part by various market imperfections and in part by the strong impact of intrinsic motivations in both higher education and professional work.

Some studies have pointed to the existence of a “dual labour market” differentiating men and women, whereby each continues to gravitate and to be pulled towards a certain range of graduate jobs. Gender-related choice of subject is clearly an important factor in this process. However, in general, countries appear to differ in the extent to which various forms of social and cultural capital have a bearing, independent of education, on the operation of the labour market for graduates. Class, region, and ethnicity are all associated with labour market access in different countries.

6.5.2 The transition from higher education to employment

Whereas most conceptual approaches aiming to explain the relationships between higher education and employment and work take for granted that the persons with the appropriate skills will end up in the respective occupation and position, interest in research on the process of transition from higher education to employment spread in Europe during the 1970s, i.e. exactly at a time when the process of transition became more complicated for an increasing number of graduates. At that moment, awareness grew that the processes related to transition, i.e. the search, the
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...and the activities of intermediary institutions aimed at supporting this process of transition, might follow their own logics and dynamics.

A substantial number of surveys of employers’ expectations and hiring practices had been undertaken. Students’ and graduates’ search behaviour was addressed in studies focusing on other issues. Some studies focused on employment agencies or other intermediary bodies.

For a period, surveys of employers’ expectations as expressed in recruitment criteria and processes became one of the priority areas in research on higher education and work. Analyses of that kind were considered useful in providing students and those responsible for teaching and administration with a base of information which could help in setting priorities in higher education. They fulfilled this function to some extent. However, they did not become as popular as some proponents had hoped for and some critics had initially feared. Rather than becoming the regular quick feedback for rapid adjustments between higher education and the employment system, research in this area ended up as only one among various approaches.

One of the major reasons for this short-lived attention to employers’ expectations was the realisation that this approach did not provide the magic tools for identifying the demands of the employment system. As available research shows, uncertainties about requirements and short-term strategies, imperfections in identifying applicants’ competences, recruitment routines, and stereotypes of those involved in decision-making, tactical games played between job searcher and hiring companies and so on – all indicate the imperfections of the recruitment criteria and processes.

It is worth noting that the impact of credentials, though frequently addressed in the public debate, hardly became a focus of research. Knowledge remained shaky about the presumed artificial reward of competences beyond the actual competences required.

Whereas all studies point to subject and institutional differences in the length and difficulty of the transition process, fluctuations in the labour market itself – i.e. demand side factors – appear to have variable impact for students of different kinds. Length and difficulty of transition process are also related to the diffuseness of employment destinations from different kinds of programme and institution. For some students, the transition period incorporates not only a process of job search but also a process of occupational choice.

6.5.3 Relationships between work and lifelong education

Relationships between higher education and work have traditionally been conceived in terms of two stages: study preceding work. This sequential model became more and more blurred by a growth of the number of people enrolling after a period of professional activity and also by a spread of periods of work placement during the course of study. More strikingly, this sequential model is challenged by increasing continuing education provision for graduates.

The character and institutionalisation of continuing education for graduates varies substantially between European countries. Whereas employers and professional
bodies are the key providers in some countries, institutions of higher education are strongly involved in continuing education in other countries.

Most studies focus on individual institutions or individual programmes or at most on sectors, for example provisions for individual professions. Research addressing the whole range of continuing education for graduates in a given country or even comparing continuing education is hardly available. However, a study by OECD has indicated a tendency for continuing education to be undertaken outside of conventional higher education institutions.

6.5.4 Steering the relationships between higher education and work

In providing an overview of research on the relationships between higher education and work, studies on the planning, governance, and steering of these relationships should not be overlooked. There are studies on policies pursued by employers’ agencies or professional bodies. Most available literature, however, focuses on political developments and governmental policies in general. Thereby, most available studies address a broad range of political debates and governmental activities rather than focus on efforts shaping the relationships between higher education and work. However, in a minority of countries there have been explicit governmental initiatives aimed at improving the linkage between the two sectors. These have involved substantial funding directed at achieving changes in the kinds of graduate competences produced by higher education.

However, available research suggests that on the whole governments in Western European countries, though quite active in medium-term quantitative projection and planning of higher education, were not very successful in steering the overall quantities of student enrolment. They played a considerable role in counterbalancing internal views of the higher education system and notably in steering enrolment in fields of study preparing for public-sector employment, but did not set tight regulations for the higher education system in general.

Research in this area primarily focuses on policies in individual countries. A comparison of policies in different countries, as undertaken in OECD studies, suggests, however, that the major political moods were fairly similar in most Western European countries during the 1960s and 1970s. Whereas planning euphoria was widespread in the 1960s, and the economic and social needs rationales of planning were not conceived as conflicting, pessimism regarding planning and efforts at discouraging further rapid expansion of higher education dominated in the 1970s. During the 1980s and early 1990s, studies suggest greater diversity in higher education policies in the various European countries. In those cases marked by the highest rates of recent expansion, it appears that social demand factors have been at least as important as labour market factors in determining policy.
CHAPTER 7

EDUCATIONAL EXPANSION, QUALIFICATION AND STATUS DISTRIBUTION
(1980)*

7.1 EQUALITY OF OPPORTUNITY – ISSUES AND TENDENCIES

In the wake of World War II, efforts intensified in all industrialized countries to reduce those inequalities among different social groups due to educational opportunities. A wealth of measures were taken, ranging from the virtual elimination of student fees in most countries to the introduction of “social quotas” in university admissions, which a number of East European countries implemented for a time in order to secure proportional enrolment of farm and industrial workers’ children.

Within a matter of a very few years a remarkable change took place in many education systems throughout the world. The most striking example is the expansion of higher education, where within less than a single decade in the Fifties and Sixties the student population in almost all industrial countries doubled (OECD 1970-71). Crude indicators have pointed to major changes with regard to equal opportunity, as well. To give one example: according to an OECD analysis based on a 13-country sample the relative chance for upper and middle class youth to gain admission to the university was 7.5 times greater than for lower class youth in 1960; one decade later this advantage had shrunk to only 4.5 times greater (OECD 1975). We will dispense with country by country comparisons since such figures often say more about differences in the way occupational groups are defined than about actual differences in educational opportunities (ibid.; see also Gass 1969).

On the basis of these figures, it cannot help but seem surprising that the reduction of inequities in educational opportunity should meet with scepticism (Fox and Miller 1966). However, a more differentiated picture shows a wealth of obstacles to any reduction of inequality (see Coleman et al. 1966; Bourdieu and Passeron 1971; Husén 1972; Passow 1970) and in particular to the elimination of differences in the amount of life chances people have.

Not even the most modest efforts toward equality of opportunity – removal of institutional barriers in education to guarantee each social group an equal chance – seem destined to succeed. Admittedly, some measures may benefit all students – for example, the extension of compulsory education, uniform standards of education, the eliminating of fees, and the introduction of school and job counselling.

But the qualitative differences that continue to exist between elementary schools represent a disadvantage for children in rural areas compared with industrial workers’ families. Those affected are sometimes hardly aware that a barrier exists –

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barriers such as teacher discrimination in the evaluation of a pupil’s work. Other measures such as the elimination of separate school types and the introduction of a horizontal structure in secondary and higher education show where the limits are drawn on any education policy designed to promote equal opportunity. A differentiated school structure does not seem likely to prevent a hierarchy of schools and courses from developing in line with the career prospects they offer. Nor can they be expected to prevent students from being distributed among these diverse institutions and courses by social background.

Further limits on opportunity are set by the content and the objectives of education which, as a rule, reflect the cultural milieu of the middle and upper classes. Under these circumstances those children whose cultural values are reproduced in the schools are bound to be more successful. Yet any distinction between teaching goals along social lines would run counter to the integration and mobility concepts that are central to any policy designed to promote equality of opportunity.

The more one has sought to achieve equal opportunities for educational success for children from all social classes through the elimination of barriers that exist within the education system, the more conscious one has become of the inequalities that exist in other areas that contribute to success in education. Investigations have shown that entry to university is most unequally distributed across social classes. The proportion of the age group entering higher education is much higher in the upper social class than the lower classes. Even when standardized for “ability” the proportion of lower class students entering higher education was much lower than other classes. What is needed as evidence of reduction in inequality is evidence of equal likelihood of success between groups of equal ability: equality of opportunity and equality of results (see Coleman, 1973).

If one were to translate “equality of results” into political terms, this would require educational institutions to set up compensatory programmes designed to offset inequalities in children’s background as well as in the conditions under which they are educated (Nunner-Winkler 1971).

The world-wide tendency to expand pre-school education is a compromise: institutional aid is given in an effort to diminish the effects of unequal start chances. On the other hand, compensatory programmes specifically tailored to individual groups are not available. In addition, various forms of compensatory education have been implemented in a number of countries – usually as a supplement to normal schooling, not as an integral part of the regular programme (cf. the discussion in Oevermann 1974).

The difficulties involved in using compensatory programmes to achieve “equal results” among children have rekindled an older debate: the debate on the relative influence of hereditary and environmental factors on the individual’s “educability”. Various studies have sought to establish hereditary influence statistically as some sort of “residual factor” that would account for variations in intelligence, school achievement, etc., which cannot be explained by environment differences (see Jensen 1973; Herrnstein 1973). Such studies, which have generally employed the “path analysis” method, assume that hereditary and environmental factors have a cumulative effect on learning. It seems more likely, however, that there is an independence of all these factors such that no one factor can be assigned a specific,
relative influence on learning ability (cf. Husén 1974). So far as the equal opportunity debate is concerned, hereditary determination would mean that the goal of equality of results is, in the last analysis, illusory, even when compensatory efforts are made.

These differences in the way of any educational policy designed to bring about equal opportunity are very grave indeed. They make any idea of according proportional representation in the more prestigious educational institutions to members of all groups in society – what Miller (1975) called “representative equality” – seem an almost unattainable goal.

In the context of our immediate concern – trends in the relationship between the systems of education and employment – other limits on equality of opportunity are more important. We need to ask to what extent does improved access to higher education for hitherto discriminated groups and their increased representation among graduates result in equally improved access to occupations and high status positions (cf. Kelsall, Poole and Kuhn 1972).

One important structural means for promoting equality of opportunity has been the expansion of secondary and higher education. In an effort to limit opposition on the part of the privileged who feared that their own chances would deteriorate, capacities throughout secondary and higher education have been expanded. It was not necessary for the privileged to worry that their prospects for admission to higher education would worsen as a result; on the contrary, there was an actual increase in the proportion of upper class sons and daughters entering universities during these phases of developments. The only real change was that university access has lost its social exclusiveness. This development has not infrequently been interpreted as an artificial reduction of inequality (see for example Anderson 1961; Strasser 1973-1974), for the conflict over status positions cannot be resolved alone by creating more opportunities to succeed in education.

Relevant empirical data support three conclusions: first, that increased access to higher education has some statistical effects on the proportions of social classes attending universities. Even if all upper class applicants were accepted for college, the “index of selectivity” would still indicate a decrease in discrimination, provided that higher education had indeed expanded greatly and the remaining places had been filled by students from other social classes (Anderson 1975).

A second conclusion: the development of a system of mass higher education has led in all countries to a greater numerical increase in lower middle class students than in representatives from the working classes and other discriminated groups. This finding is not infrequently seen as a sign of a “polarization” of educational opportunities, as critics often overlook the fact that the rate of increase in the proportion of working class students is, as a rule, actually greater.

A third conclusion is that educational opportunities have not become more equal with respect to access to prestige universities or those subjects to which access is highly competitive and which are expected to pave the way to high-status positions. A number of studies have shown that access to these highly rated educational spheres is indeed becoming more and more socially exclusive (see ibid.; Teichler 1976).
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7.2 DOES THE SOCIAL HIERARCHY CHANGE AS A RESULT OF EDUCATIONAL EXPANSION?

Experts studying the development of access to the more prestigious spheres in higher education tend either implicitly or explicitly to assume that at the moment of observation the social hierarchy of occupational positions is more or less static. They also tend to view access to the numerically few top jobs as the decisive criterion for measuring equality of opportunity.

In our opinion, these implicit assumptions need to be examined more closely. It needs to be determined whether major changes have not indeed already taken place in the occupational structure and, if they have, whether or not the social hierarchy has been affected. Furthermore, it should be borne in mind that an improvement in access to higher education – even though it may fail to produce changes in the occupational structure – may nevertheless represent a success for a policy of equal opportunity in providing more people with better education, enabling them to carry out their work more competently, be more fully aware of what a job entails, and grasp and, to some extent, shape their occupational roles.

In evaluating the extent to which equal opportunity is (or is not) realized, it is undoubtedly of particular importance to determine whether the fact that access to higher education becomes less exclusive over the course of expansion results in a reduction of class or other social barriers to career and status opportunities. It was a maxim of equal opportunity that educational processes should be organized in such a way as to guarantee all students the same chances of succeeding in education regardless of their social background and other personal factors. Open access to education and determination of social position by educational achievement alone were held to be the mark of a just society. Debate in the seventies about the limits of equal opportunity and the problems that arise in connection with competition over educational success has tended to ignore, or perhaps it would be better to say repress, all considerations of those original maxims.

There are a number of studies whose findings are relevant in this context. They fall into three groups, each of which may be characterized by a question:
- In what way does the relationship between school-leaving certificate or university degree and occupation position change?
- Does education promote equal opportunity in the larger social context?
- Does the fact that educational expansion has helped to close the educational gap signify a general reduction in social inequality?

Comparative studies (see OECD 1969; Ushiogi 1971) show that the more higher education expands, the more likely it is that university education will be made a prerequisite for access to high-level positions. This observation is also supported by trend analyses conducted within individual societies (see for example Halsey 1974; Mannari 1974). In interpreting these findings it must be emphasized that it is becoming less and less possible to acquire necessary qualifications on the job because opportunities for “learning by doing” are declining as a result of specialization and similar developments. At the same time, these experts state that there have recently been upgrading tendencies in some occupations as a result of the increased supply of highly qualified personnel. They contend that this can be attributed neither to any genuine change in the skills required for specific jobs nor to changed
opportunities for on the job learning, nor should one assume that these changes in recruitment practices will result in improved job performance.

Moreover, it is said that a greater variety of training is possible for high-prestige occupations. The results of a study conducted by Jencks et al. (1972) to establish in quantitative terms the relative importance of various factors in determining access to senior posts has been interpreted to mean that formal education has only a relatively slight influence on status distribution and that coincidence plays a very much greater role. However, Jencks’ investigation raises some methodological doubts, for education can hardly be viewed and investigated as an isolated factor. In addition, it is questionable to draw conclusions about the relationship between education and occupational position in an era of mass higher education from data on the educational level of an employed population which for the most part had already entered the labour force before higher education had begun to expand.

In addition, there are indications that qualities other than educational achievement figure prominently in the recruitment of university graduates, and that lower class graduates are disadvantaged by the application of such selection criteria (cf. Kelsall, Poole and Kuhn 1972). Other tendencies – to be discussed later – suggest that educational expansion may well indeed foster the application of such supplementary selection criteria (see Miller 1974). For example selection procedures are growing increasingly more sophisticated both in recruitment and in training programmes. While university training is becoming more and more indispensable, it is also ceasing to be sufficient for entry to higher positions.

Turning to the second question – whether discrimination is lessening overall and if so, whether education is an important factor – the data basis is very weak. Few longitudinal studies have been made up to date on social mobility and social stratification. They allow considerable latitude for interpretation and thus it is very difficult if not impossible to draw conclusions about the effect mass higher education will have on a future labour market. Although some studies claim that social mobility has increased with the expansion of education, the discussion about this aspect is highly controversial (see Fox and Miller 1966).

Turning now to the third question (whether the fact that the education gap has narrowed as a result of educational expansion implies a more general reduction in social inequality) the issue of equal opportunity in education becomes one of social mobility as such. It should be noted that the demand for equal opportunity poses no immediate challenge to social inequality as such, but rather to the determination of status on the basis of a particular criterion. The objectives are to remove institutional obstacles standing between lower class youth and success in education, and ensure that social reward relates to actual achievement, not to other factors. Yet as we have seen, the wide-spread criteria for equal opportunity postulates not only a meritocratic social order but also that members of different groups in society have an equal probability of meeting with success in education and society. Rather than social equality, one would have to speak here of “representative” inequality, for the structure of social inequality remains essentially unaffected. What is required for equality is that in succeeding generations offspring of all classes in society are proportionally distributed throughout all social strata (see Miller 1974).
To analyse the data relevant to the question of whether or not educational expansion has an equalizing effect, it is first necessary to determine if there exists any tendency towards a lessening of educational disparities. Comparative data on the dispersion of schooling (in terms of length) within the individual age groups suggest that educational expansion is not accompanied by any general lessening of educational disparities. In some countries the gap has tended to widen; in others we have seen a reverse trend (see OECD 1975). In all probability, this dispersion spreads when the various levels of education first begin to expand, and then contracts after a period of time.

In the United States, Canada and Japan – countries where higher education began expanding at a particularly early point – the dispersion has been obviously contracting for some time. It therefore seems justified to assume that in the formal sense, at least, the development of mass higher education goes hand in hand with a lessening of educational disparities.

In measuring the extent to which educational expansion has an equalizing effect, one procedure has been to compare the average incomes of graduates with different levels of education. The result, as we have seen, is that the relative income advantage of university graduates is often seen to appear to lessen. Nonetheless, there is doubt that such data suffice to prove that education has an equalizing effect: to begin with, the rate of return to higher education has remained relatively constant over a long period of time in a number of countries regardless of strong educational expansion.

Second, the reduction in income advantage due to additional education is remarkably small considering the rapidly growing number of university graduates in relation to job offers for highly qualified personnel particularly if we assume that there is a growing tendency toward “over-qualification”.

Third, there is reason to suppose that although in the course of education expansion there is some reduction in average income differences between highly educated and others, at the same time the income differences among persons with the same length of schooling tend to widen. However, although the variance within each income group may increase with higher incomes the broad conclusion remains that income differentials do exist between those with higher education and others.

The data on average income differences by length of schooling thus suggest an equalization tendency that does not exist.

However this consideration does not mean that average income differences by length of education are a suitable yard-stick for determining whether educational expansion has an equalizing effect. More relevant is whether incomes become more evenly distributed throughout the labour force over the course of educational expansion. However, studies on income distribution in the labour force as a whole – and we have remarkably little data to draw on – show that the income gap has by no means closed in every country. Although the gap has widened in the United States since World War II, there appears to be a reverse trend in a number of European countries (see Miller 1974). This suggests that factors other than education – country’s social policy, for example – are also important.
These later findings also run counter to the hypothesis according to which income differences are expected to widen as a result of increasing equality of opportunity in education. When hereditary privilege has been reduced and status has finally been distributed according to achievement, then – so goes the hypothesis – talents would have to be more functionally allocated throughout society, with pay based on achievement; this would result in a wider distribution of incomes. This hypothesis assumes that talents occur in a fixed pattern which cannot be affected by educational expansion (see ibid.).

Available data then suggest that nowhere does social inequality lessen at the same rate as inequality in education. In spite of the close tie that exists between schooling and occupational position, the lessening of educational disparities fails to be translated into a corresponding diminution of social inequality. Indeed, it may be that the prevailing structure of social inequality remains relatively stable.

7.3 PROBLEMS OF INTERPRETING TRENDS IN EDUCATIONAL EXPANSION

Studies on trends in educational expansion (cf. Husén 1974) have shown – and this is their most important finding – that in all industrialized countries educational reform has led to a slight lessening of inequality of opportunity in education itself. The outcome of this process is however a far cry from the ideal of equal opportunity – all social groups equally represented at the highest level of education. On the basis of what can be determined, it is doubtful whether the hitherto steady tendency towards a growing interrelationship between schooling and occupational position (see Anderson 1965) will persist once mass higher education has become a reality. As we have already pointed out, although education will continue to grow in importance as a prerequisite to access to the higher occupational positions, it is becoming less and less sufficient in itself.

It is therefore difficult to draw conclusions that might serve as reliable indicators of future developments. Available data are of very little help in answering the question. There are several reasons for this. First, data on the relationship between education and the social macro-structure are very difficult to obtain and available data gives only a very incomplete picture. Second, there appear to be differences among the industrialized countries that should not be ignored. Third, anyone attempting to empirically determine the causes of inequality of opportunity in society is bound to run up against enormous methodological difficulties. Fourth, it is difficult to gauge the effects that a developing system of mass higher education has on the relationship that exists between education and the social structure.

The decisive factor in any evaluation of trends in educational expansion are changes in the occupational and social structure and these will only take time to emerge. In view of the importance of this subject and the difficulties involved in obtaining scientifically clear and precise results, it is not surprising that controversy ranges around the various interpretations of what equal opportunity constitutes and how education affects the social structure. To make matters worse, a number of false conclusions – the product of too narrow specialization – have encumbered this discussion.
By limiting this consideration to the social selection function of education and the net effects of equal opportunity policies, quite a number of specialists have given an inadequate picture of the relationship between education, occupation and social status. It is a common practice to take "perfect" equality of opportunity or social equality and use it as a standard by which to measure the relative fluctuations in the amount of inequality that can be observed. There are for example studies of the way educational attainments and social positions are distributed throughout society. The result is that these measured changes are dismissed as insignificant. Controversies in this area revolve less around differing interpretations of data than around differing answers to the question “how much is much?”

In addition, the feeling that status hierarchy is unalterable lies at the heart of many interpretations (see the critical discussion in Kirchberger 1975). This assumption is not altogether unjustified, for the relative stability of the structure of social inequality is a phenomenon which is of decisive importance for the development of education and the relationship between education and occupation or, more generally, the social structure.

The question remains whether the hypothesis that equal opportunity policies and educational expansion have had no substantial effect on the structure of society has been confirmed? The only criterion used to measure changes in social structure was changes in the social origin of those people who occupy a fixed number of key positions in society. This seems to rule out change in the social hierarchy from the very outset.

Finally, the assumption that the social redistribution effect of educational expansion has been minimal has often been taken as a sign that education is not relevant to the social structure. It has also been offered as proof that policies designed to bring about equal opportunity or social equality through educational reorganization have failed. Two political conclusions are drawn from this: first, that redistribution policies should be directed toward other social spheres (see Jencks et al. 1972; Halsey 1974); and second, that chances should be made less dependent on educational attainments. In other words, the tie between education and opportunities in society should be severed.

The conclusions overlook the fact that social opposition has already blocked any determined policy of equal opportunity with regard to education, so that it has become difficult to draw conclusions about the social effects that equal opportunity in education might have. Second, “meritocratic” confirmation of social inequality on the basis of educational attainments is dismissed as unacceptable. Yet it seems justified to argue that a close relationship between educational and occupational rank is legitimate. To enter an occupation, certain qualifications are needed and the necessary educational background is likely to reinforce loyalty to the prevailing system of social inequality. Assuming that such a close relationship between education and occupation is an important feature of society, developments in the education system cannot fail to have consequences for the social structure.
Throughout the industrialized world there have developed in the 1970s clear signs of opposition to educational expansion, in particular the increase in university enrolment. This opposition takes various forms depending on the stage of educational expansion; the importance accorded manpower requirements in the formulation of education policy, and the part played by government in planning and financing higher education. Such opposition ranges from efforts to de-motivate students from continuing their education, to attempts to set limits on university capacity.

Criticism centres on the argument that the education system’s output is out of tune with the needs of the occupation system. There is also growing concern about problems connected with selection within the education system as well as with the adjustment of education to the social hierarchy. When one considers the way the relationship between the systems of education and employment have developed, it appears that policy measures are influenced more by concern about educational and social selection than by any concern about reconciling qualifications with requirements in the labour market. In discussing this background of shifting accents in the debate we speak of a growing political explosiveness of the issue of status distribution. In calling a particular function of education politically explosive we do not intend to weigh the social functions of education, one against the other.

The criterion for the adequacy of our thesis – that problems of status distribution are growing in importance – is its value in helping to explain the issues which have been raised following the sudden expansion of higher education. The question is whether such reactions seem plausible when viewed as an attempt to come to terms with problems arising from discrepancies between the education and the occupation systems in terms of qualification – or in terms of status.

It is our contention that problems concerned with reconciling the supply with the demand for qualifications have less bearing on the actual formulation of policy than one might think. To begin with, analysis of the concrete relationship that exists between education and occupation suggests that there is considerable scope for adjusting the education system’s output to the needs of the occupation system. Technological and economic developments give us no definite clue as to which overall development in education would be most likely to serve such a process of adjustment. At the same time – as we can see – the occupation system is able, with little friction, to absorb each new, and often allegedly, supply of qualifications and put it to satisfactory use. This, in turn, triggers off a reconsideration of the types of qualifications needed.

There is a second consideration underlying our theses. There are ideological reasons for the widespread emphasis that is placed on the qualifications issue. Efforts to put a brake on educational expansion to reduce the problems of coordinating education and employment have been defended on financial and economic grounds.

Since it is generally agreed that economic development should be promoted, it is an easy matter to place any reference to “over-qualification” in a politically neutral light. In contrast, it is not possible to demand openly that the existing structure of
social inequality be preserved, nor can it be claimed that the same sort of consensus
exists for such a demand. Furthermore, it is often maintained that further educa-
tional expansion will not benefit the economy, which gives the individual student a
misleading picture of the rewards system and thus the impression that continued
education will be of no benefit to him.

Growing concern about the relationship between education and socio-economic
status has focused on two very evident adjustment problems. First, it seems quite
clear that the expansion of secondary and higher education, in particular the in-
crease in higher education, has not led to corresponding equalizing tendencies with
regard to job hierarchies and life chances. The resulting need for some sort of ad-
justment – be it through changes in the education system, through a change in the
occupational and social structure, or be it (at the very least) through a change in the
relationship between the education and the occupation system – has made an im-
 pact on all persons affected by the development.

Second, selection within the education system has grown successively more
problematical as education has expanded. Education can undoubtedly be labelled
dysfunctional, for it is becoming more and more difficult toward learning to the
declared objectives of education. Furthermore, selection procedures increasingly
dominate educational goals, and education reform is to a growing extent affected in
a negative way – for example by efforts to compensate for the fact that certain
educational institutions have become unattractive – and not positively, by pro-
grammes that take account of the pedagogical and social responsibilities of educa-
tion.

The fact that opposition to educational expansion is mounting and status distri-
bution problems resulting from the development of mass higher education are be-
coming politically explosive is in our opinion the result of a decisive change that
has taken place in the relationship that exists between qualification and status dis-
tribution. Since the beginning of industrialization problems have arisen about
selection within the education system and about the labour market’s capacity to
absorb new graduates, but the present situation seems indicative of a more
fundamental change.

Knowledge and information have been increasingly directed towards the re-
quirements of the occupation system; at the same time, the inter-dependence of the
qualification, selection and allocation processes has grown ever stronger (cf.
Anderson 1965). In the course of this development a meritocratic ideology has
emerged according to which social inequality is seen and legitimized as the result
of a system of rewards differentiated according to achievement; and social ad-
vancement is on the one hand the individual’s self-realization in terms of his con-
tribution to society, and on the other hand the means by which society stimulates
and guarantees the continued provision of the qualifications it needs.

As education continues to expand, this trend cannot continue indefinitely. For as
more and more students seek admission to higher education and successfully com-
plete their courses of study, the selection processes within the education system
change. Discrepancies develop between graduates’ qualifications, and the one valid
connection between educational levels on the one hand and placement in the occu-
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It is our contention that as a result of these discrepancies it is now apparent in most of the industrial societies of the world that it is more important to rationalize and legitimize social inequality within the education process than do justice to the concrete qualifications needs of society. When we look at actual learning processes and at the way the structure of education has been changing, we can observe a certain shift in the functions of the education system. Status distribution in educational levels – frequently no more than prestige nuances – have come to have roughly the same meaning in determining a graduate’s life chances as used to be the case with very much larger distinctions in certification.

In the following discussion of the political response to the above-described discrepancies between the education and the occupation systems along with the concomitant shifts in the education system’s function, we have chosen to speak of a “demand” for social inequality (see Teichler 1974). The term “demand” is set in inverted commas in order to draw critical attention to the word’s frequent association with “necessity” and “necessity’s” apparent apolitical character. The term nonetheless has a useful function, underlining as it does the climate of social and political pressure in which the education system must play its part in selection and in stabilizing the system of social inequality.

7.5 HISTORICAL CHANGE IN THE RELATIONSHIP BETWEEN QUALIFICATION AND STATUS DISTRIBUTION

The significance of the changes in the relationship between qualification processes and status distribution occurring since the 1960s becomes particularly evident when viewed in the context of historical developments.

In traditional society, the individual’s social position was as a rule determined directly by his or her social origin – social status was “handed down”. In a long process by which skills and knowledge were passed on from one generation to the next, qualifications were acquired through familiar socialization and long periods of apprenticeship. Meanwhile, specific institutions sprang up through which the knowledge and skills needed for particular occupations were transmitted. Thus education – save in rare instances – did not determine social positions, but rather was one of its attributes.

These traditional paths to qualification and the underlying social structure were severely jolted by the coming of industrialization. Traditional patterns of socialization and ways of transmitting knowledge were no longer equal to the dynamics of occupational requirements, changing as they were under the impact of economic developments. Moreover, it could no longer be taken for granted that power should continue to rest in the hands of a small group for whom privilege was hereditary. Under these circumstances they developed a systematic and – as industrial development proceeded – ever closer inter-dependence between the organized acquisition of qualifications and status distribution. It is characteristic of this latter stage that status distribution was a matter of principle open and oriented toward a certain level of qualification. The promise of social advancement served, under these cir-
cumstances, to stimulate the acquisition of required qualifications. At the same time, social inequality was alleged to be the equitable reward for the performance society required, thereby guaranteeing that society would continue to function smoothly.

This development has been accompanied by a growing sense of public awareness of the fine distinctions that exist in the system of rewards, and of the connection between educational achievement and career and social status. This point is illustrated by the fact that more people are becoming conscious of the differences in social opportunity associated with the various types of education available, and consequently seek access to those educational institutions which promise better career opportunities and higher social status.

This process of becoming aware and responding, is, of course, subject to fluctuations varying with views, on whether a shortage or oversupply of qualifications is thought to exist.

- In the event that the education system’s output of qualifications actually or supposedly falls short of the requirements of the occupation system, the above-mentioned relationship between qualification and status assignment can be put to effective political use: emphasis is then placed on the open character of the education system. At the same time, measures are taken to render access to hitherto exclusive educational institutions easier.

- On the other hand, the close connection that exists between qualification and status distribution turns out to be politically inconvenient when it is felt necessary to reduce the supply of qualifications as more people are seeking higher education. In such situations the general practice is to try to de-motivate potential students by persuading them that the connection between educational achievements and chances of acquiring status has become tenuous, and that other criteria are now more decisive in opening the way to high-status positions. Under such circumstances, no policy to reduce a surplus of qualification would have a choice other than actually reducing the social reward for additional education. This however, calls in question the legitimization that educational achievement gives the system of social inequality throughout the industrialized world. This, in turn, would mean constantly re-examining the connection between qualification and status distribution in line with prevailing assumptions about what qualifications are required.

It seems, however, that once a certain measure of interdependence has developed between qualification and status distribution, the tie cannot be loosened without there being consequences. Society cannot switch back and forth from being open and achievement-oriented to the very opposite. Attempts to cut back expansion administratively the moment an oversupply of qualifications is thought to exist appear, in fact, to sharpen public awareness and simply strengthen the demand for higher education. A number of additional factors tend to contribute to the growing demand for access to the more attractive courses of education.

- Technological developments have produced structural change and an organization of work in industrialized countries that have resulted in a long-term trend towards ever higher qualifications. There has been an increase in “civilization’s minimal requirements” as well as in the number of occupational positions which
require a higher degree of qualification. The result is that more students than ever before are faced with the problem of deciding whether or not to go on into higher education.

– There is a tendency in education toward postponing selection procedures until later in the process. The open education system develops, as it were, its own momentum in accordance with its inner laws. The result is the automatic expansion of exclusive institutions of education.

– The occupation system tends to reward pre-career education more highly. This appears to apply even when the distribution of educational certificates and degrees fails to correspond to the occupational role hierarchy.

All these factors have contributed to creating in many countries a far greater individual demand for status-promising education than widespread notions about qualifications requirements would deem advisable. Studies in countries where the trend toward mass higher education is more pronounced show that this development tends to culminate in a state of affairs in which the education system’s output appears out of step with the existing social and occupational structures, in terms both of qualification and status distribution.

This appears to mark a fundamental change in the way qualification relates to status distribution. If the two are no longer interdependent, then one of them might come to dominate: it is conceivable that if qualifications become more closely adjusted to demand, educational distinctions will no longer serve to legitimize social inequality. It is equally conceivable that if status continued to be based on educational success, it would prove impossible to bring the supply of qualifications into line with demand. The fact is that the latter of these two tendencies is prevailing: status distribution is beginning to dominate. Despite a substantial reduction in educational differences, education continues to have a status-distributive function. The importance that was once accorded to larger differences in educational achievement is now accorded to relatively minor distinctions, for example, in prestige between two otherwise equal-ranking institutions.

Throughout the course of this process, people’s view on the relationship between education and career has gradually changed. Status expectations are attached to fine distinctions in prestige between schools, subjects and certificates more than to the level of formal education, as has long been the case. To a certain extent there are also changes going on in the way the need for qualifications is assessed and in what is considered appropriate employment for university graduates.

Throughout all this, qualification and status distribution continue to relate to one another to the extent that educational achievement is rewarded in terms of status, and status distribution serves to stimulate qualifications. However, as the situation changes, it is no longer a simple matter to reconcile the need to keep a balance between the provisions and the requirement for qualifications, nor to legitimize the prevailing system of social inequality. In view of the contradictions any such effort entails, it will be interesting to see whether, in the long run, people feel that correlating education and occupation is so fraught with problems that they accept either stricter selection procedures within the education process, or selection on a basis other than achievement in education.

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7.6 POSSIBLE ALTERNATIVE COURSES OF DEVELOPMENT AND POSSIBILITIES FOR ADJUSTMENT

In contrast to our thesis that a “dominance of status distribution” is developing, there appear to be a number of other conceivable possibilities for reconciling the discrepancies we have been describing.

(a) A reduction in the discrepancies that exist with regard to length of schooling and a lessening of differences in standards between various courses of study could have an equalizing effect on the social structure.

(b) A gradual reduction in discrepancies in educational attainment in the presence of a relatively stable structure of social inequality could result in the education system gradually losing its importance for the process of social selection, which then would generally be relocated in the occupational system.

(c) Differences in social reward could become so slight in response to educational expansion that educational aspirations would generally lower, thereby bringing about a measure of agreement between assumed qualifications requirements and the output of the education system.

(d) Finally, it is conceivable that planning and administrative measures could affect the way education is organized, to the extent that it meets the qualification requirements of the employment system.

Of these four possibilities, the one that deviates most sharply from our thesis is the assumption that educational expansion has an equalizing effect on society. For many people hope that educational expansion would promote not only equality of opportunity but also a reduction in social hierarchies was one of the main considerations motivating them to work toward educational reform. Available data diverge grounds for scepticism.

So far as the second assumption is concerned – that selection is shifting out of the education system into the occupation system – three schools of thought emerge from the discussion. First, analysis of selection patterns suggests that the tendency for the relationship between the education and the occupation system to stabilize may be reversed. If this is the case, the shift of selection from the education into the occupation system is to be seen as the most likely development. Second, there is discussion in this context about what is meant by “meritocracy”. The question here is: to what extent is social reward based on qualifications that are earned before a person enters the labour force, and to what extent is this reward dependent on actual achievement throughout a person’s working life.

Third, demands for locating selection to a greater extent in the occupation system is often raised in order to discourage people from seeking more education as a means of gearing the quantitative development of education more closely to the assumed qualification requirements of society.

Selection patterns differ from one industrial society to the next. In the United States, for example, meritocracy is thought to refer to the system of rewarding current job performance and it is generally agreed there that this is the way things ought to be. The United States Supreme Court’s decision of 1971 which saw a danger to equal job opportunity in the practice of recruitment on the basis of educa-
tional certificate, together with the Equal Opportunities Employment Act of 1972 both gave implicit support to the concept of lifelong competition (see Huff 1974). In contrast, quite different factors enter into the understanding of what meritocracy means in Japan. There, the principles of permanent employment and seniority are held in great respect, socio-economic status is determined for a lifetime by the level of qualifications and social skills a person has attained in his pre-career education (see Teichler 1976). As a result of these norms, intra-generational mobility is low, inter-generational mobility on the other hand being high.

Proceeding from the normative basis of what we have described as the “American model”, any deviation from this model in the direction of relatively continual reward for a once-acquired qualification level can be termed “credentialism”, the Japanese model “degreeocracy” (Galtung 1971; see also Dore 1970). Such a negative evaluation appears not only politically questionable; it also raises analytical problems because differences between the respective rewards systems and selection procedures tend to be exaggerated in the process. Discussion of the advantages and disadvantages of Japanese selection and employment practices shows that industrial societies have more in common than is generally assumed (cf. Cole 1972; Takane 1975; Teichler and Teichler-Urata 1975). There are, of course, notable differences in the traditions that have a bearing on the organization of work in the various countries. In Japan, for example, the relatively slight emphasis placed on individual competition during a working life corresponds to peculiarities in the way achievement is motivated in that country (de Vos 1973). As we shall see, lifelong competition in other societies does not necessarily promote ever improving job performance, as its advocates presume, and limits on in-career selection can be seen to be altogether “functional”. So far as qualifications are concerned, a trend towards pre-career qualification has been evident for some time. If under present social conditions, selection is closely tied to the process of qualification, this will further increase the emphasis on pre-career selection.

Motivation, a major constituent of job performance, is not encouraged by constant doubts about job security. There are surely other ways of creating it. In Japan, for example, it has been shown that where there are good prospects for a secure future, achievement is stimulated by a differentiated system of rewards (see Dore 1970).

In many other countries, there is recognition of the effect of social insecurity on job performance (Seibel 1974). The more a certain measure of loyalty is required as an element in satisfactory job performance the less an employer can hope to enforce his will with crude threats. This applies in particular to the type of jobs traditionally reserved for university graduates, which are often characterized by a closely undefined set of activities. Moreover, close cooperation can only be secured when there is a limit to the amount of competition that exists within a given group of employees. This gives added grounds for reservations about the principle of lifelong competition.

Finally, employers are in no position to give in-career selection the legitimization it requires. Although it is common practice to stimulate job performance with promises of advancement or make employees compliant with threats of demotion, employers are hesitant about shouldering the full burden of selection and its legiti-
mization. This once again applies above all to those occupations for which more complex qualifications are required, it being particularly difficult to evaluate job performance in such cases.

Thus, so far as problems of occupational qualification are concerned, unrestricted competition is by no means the keystone of modern industrial society. It remains to be seen whether on the basis of such considerations there develops a tendency throughout the world to adopt the Japanese model or whether “convergence” is to be expected. In any event, available evidence makes it appear improbable that a shift of the selection process into the occupation system would be either a satisfactory or a likely solution. In addition, it appears as though bargaining between employers and employees everywhere is tending to revolve more and more around job security, risk diminishment and the maintenance of once-attained positions.

Turning to selection from career entry onward, it is not altogether clear whether educational expansion has the effect of reducing the influence educational success has on occupational position. There has undoubtedly been an increase in the use of differentiated, formalized procedures in the recruitment of university graduates along with more frequent use of traineeships and in-service training and a growing differentiation of career patterns (see Hartung and Nuthmann 1975). The unquestionable proliferation of selection procedures makes it now difficult to determine whether a person’s particular certification has a strong or a negligible influence on his chances of success in a subsequent process of selection. Although we cannot rule out an increase in the importance of in-career selection, we can be sure that what will count more and more in such selection are fine distinctions in education such as the difference in prestige between formally equivalent institutions; the reason being that the lessening in distinctions due to length and type of schooling levels would otherwise make it difficult to prevent the prevailing structure of social inequality from disintegrating.

According to the third of the assumptions we have been discussing, a lessening of differences in social reward can have the effect of reducing educational aspirations and in this way prevent discrepancies from developing between the presumed requirement for qualifications and the education system’s output of such qualifications. Assumptions of this sort are generally based on the education economists’ theses above the close tie that exists between personal income and the returns to society on educational expenditures. It also draws on the thesis, popular among sociologists, according to which personal and social interests converge under the prevailing system of social inequality (cf. Davis, Kingsley and Moore 1969).

Opposing this assumption, it can be demonstrated, first, that the prevailing system of rewards creates conflict (see Neelsen 1975). When access to education is open and when education is recognized as an important factor in determining status, then the result, quite naturally, is that people will strive hard to attain as much education as possible. If the capacity of higher education is not limited by administrative measures, expansion can be expected to set in as a rule, triggering off new conflict over the coordination of education and employment.

Second, rewards cannot be continually altered to fit whichever notions about required qualifications happen to be current. As explained elsewhere, existing possi-
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ibilities for vertical substitution make a system of reward according to educational standard seem the obvious solution. It can hardly be expected that a relative decrease in privilege would have any regulatory effect on the market since people are in no position to change their basis qualifications repeatedly throughout a lifetime. Thus, they tend to prefer obtaining the highest level of education possible. Significantly enough, employers have never attempted to bring about changes in the pattern of rewards so momentous as to cast doubt upon the positive correlation between educational rank and occupational position.

A change of this sort would also seem to pose problems for the prevailing meritocracy, for it would challenge the prevailing notion that privilege is justified by educational success, endangering the current reward systems. This would mean that it would no longer be possible to achieve success by means of a calculated plan, for such consistency is not possible without long-range goals in view. For all practical purposes, pre-career training would cease as part of a meritocratic rationale for social inequality.

A third argument against this assumption is that fluctuations in the size of the student population have not yet amounted to proof of the thesis that one can control the supply of qualifications by changing the pattern of occupational rewards. Although there has been a notable decline in the number of students in Sweden in the early 1970s, as well as in the United States between 1969 and 1973, the American example shows that one should not take such developments too seriously: the short-lived decline in that country is to some extent connected with the fact that for those who wanted to avoid military service, college was no longer the only way out.

Another factor – before affirmative action policies began to have an impact in the US – was disillusionment when it was discovered that after having been granted preferred admission to some universities despite a poor high school record or entrance exams, representatives of minority groups were not as a rule offered the expected positions upon graduation. This led to a feeling of uncertainty about the value of college attendance. This, it should be noted, is the effect of compensatory policies specific to American higher education.

The fourth assumption – according to which university admissions should be geared to assumed qualifications requirements – also became a focus of discussion during the 1970s. Social selection through education was perpetuated or even strengthened, as were traditional notions about qualifications requirements and coordinated supply.

University planning proceeded from this type of model in a number of East European countries. In countries such as the United States and Japan, on the other hand, this type of planning is out of the question, decisions about financing and capacities being largely in the hand of market-oriented, independent agencies. In those countries where the government has a strong influence on university capacity, planning decisions generally strike a compromise between the assumed need for qualifications and demand for admission to higher education. This seems sensible, for any other course could only further exacerbate the problems attendant on selection within the education system. Furthermore, it is general knowledge that ideas about qualifications requirements are vague, to say the least. In view of the
risks involved in a demand-oriented policy it is understandable that some planners would rather make the best of over-qualification than face the danger of under-qualification, and therefore attach importance to factors other than the coordination of qualification supply and demand.

In conclusion, all four of these assumptions about the long-term coordination of educational output and qualifications requirements can claim some sort of evidence in their support. In most industrialized countries, things have not developed perfectly in line with any one of these ideal-typical conceptions. Instead, all four possible forms of coordination co-exist, but vary in their impact. Altogether, however signs supporting such alternatives are clearly weaker than signs that selection through education becomes even more important under conditions of a growing “demand for inequality”.

“APPROPRIATE” EMPLOYMENT AND “UTILIZATION OF KNOWLEDGE” (1988)

One of the most popular and at the same time most controversial topics both in higher education policy and in research on higher education and work in Europe is “adequate” or “appropriate” employment. The unemployment of graduates might seem to be a more obvious indicator of the problems a graduate faces, but it turns out not to be the most frequent problem. Critics of educational expansion, especially, many of whom predicted substantial unemployment of graduates, began to emphasize overeducation, overqualification, the displacement of non-graduates, misallocation, underutilization, and so on, once it became obvious that in all European countries, graduate unemployment remained substantially lower than average unemployment. In addition, in Eastern European countries, underutilization of competences or dissatisfaction with jobs or salaries also became a potential indicator of oversupply (see Sanyal and Jozefowicz 1978; Chuprunov, Avakov and Jiltsov 1984).

The aim of this analysis is to show the diversity of methods used in Europe to measure how many graduates are inappropriately employed and how many graduates make little use of the knowledge they have acquired. For each of the studies introduced, we summarize the major findings. This analysis does not cover the extent to which “appropriate” employment and limited utilization of knowledge may have increased since the mid-1970s, because most of the relevant surveys do not allow an examination of such changes. “Cross-sectional” approaches (i.e., efforts to infer historical changes from differences by age group) are inappropriate: for example, in one survey conducted in the Federal Republic of Germany, elder higher education graduates considered their work more complex and satisfying than young higher education graduates (Stooss 1979), but this effect is more likely to be the result of career patterns than of historical changes in employment opportunities. In addition, the following analysis shows that the degree to which the presumed overeducation occurs in the results of surveys is due to a large extent to the concepts of the researchers and the methods used in their surveys.

8.1 OCCUPATIONAL CATEGORIES

Employment statistics frequently serve as a basis for assessing the percentage of graduates being inappropriately employed. This approach has also been frequently taken by US and Japanese experts to prove that a growing proportion of graduates are employed in administrative middle-level occupations, sales occupations, and manual work. For example, one can show that the proportion of higher education graduates in such categories increased in the United States from 15.4 per cent in 1970 to 27.9 per cent in 1982 (Sargent 1984). Similarly, the percentage of recent
Japanese university graduates (bachelor level) employed in such occupational
groups increased from 49.7 per cent in 1975 to 58.4 per cent in 1985 (Monbushô
1986; see also Ushiogi 1984). Similar approaches have been taken in many Euro-
pean studies as well.

For example, Vincens (1986, p. 55) considers those graduates to be most down-
graded whose jobs are categorized as employés and ouvriers. In 1985, 2.5 per cent
of university-trained men and 7.7 per cent of women (as well as 8.1 % of men and
21.9 % of women having completed short-cycle higher education) in France were
registered in those categories. Similarly, one can show that five per cent of recent
graduates from British universities in 1985 entered secretarial, clerical, and manual
occupations. The corresponding figure for graduates from polytechnical institutions
was six per cent, and for those from other colleges 14 per cent (Harrison and Grett-
ton 1987, p. 57).

Analyses based on this approach certainly provide more-or-less clear evidence
that an increasing number of graduates have taken office or sales positions in the
last two decades, whereas the percentage of graduates employed in blue-collar
occupations has not consistently increased (see, for example, Vincens 1986). The
data are frequently criticized for not being adequate to assess inappropriate em-
ployment. On the one hand, they are misleading in suggesting that “inappropriate
employment” is more likely for graduates in the humanities and social science
fields than for those in the science and engineering fields; this, however, might be a
statistical artefact, because employment statistics in many countries put engineers
and middle-level technicians in one occupational category (such as “technical pro-
fessions”) but differentiate administrative personnel (e.g., management may be
derifferentiated from other office and sales occupations); thus, “vertical substitution”,
i.e., a process whereby jobs are filled by persons with higher education levels than
their predecessors, seems to take place only in the latter areas and is bound to be
overlooked in the former areas. For example, if one disaggregates the census and
microcensus data available in the Federal Republic of Germany, the proportion of
university-trained persons working as “technicians” among all university-trained
persons in higher technical and scientific positions seems to have increased from
five per cent in 1970 to nine per cent in 1982, a finding that tends to be overlooked
in most studies; however, the corresponding figure of university-trained persons in
middle-level office occupations among all university-trained persons in administra-
tive occupations (the figure usually presented in various statistical overviews)
remained constant at 40 per cent during the same period (see Baethge et al. 1986,
pp. 24-25). On the other hand, some occupations categorized as “middle-level
occupations” may be more demanding than the occupational category suggests, as
was found, for example, in surveys in the United States that examined differences
in self-ratings of the utilization of education by occupational groups (see Solmon,
Bisconti and Ochsner 1977).
8.2 GENERAL ASSESSMENT OF THE RELATIONSHIP BETWEEN STUDY AND WORK

Many surveys ask graduates to assess how they view the relationship between their studies and their work. A very general assessment is used in annual surveys of recent graduates in Sweden one year after graduation. Graduates are asked whether the training, which they had completed in the previous year, was completely, somewhat, or not at all suitable to their present work assignment. Altogether, 70 per cent of the 1984 graduates reported in 1985 that their education was (completely) suitable to their jobs; about 60 per cent of science and engineering, social science, and arts graduates; 73 per cent of teacher-training graduates; and 83 per cent of graduates in medical fields. Altogether, 24 per cent perceived a partially suitable relationship, and five replied that their education did not fit their work assignment at all (Statistiska centralbyran 1986, pp. 9 and 28).

Other studies that also used a single question related to that topic have addressed the degree to which the knowledge acquired during study was utilized at work. Among university-trained persons in the Federal Republic of Germany questioned in 1979 in a representative survey, 57 per cent reported that they did use the knowledge acquired during their studies. This share varied considerably according to subjects: it was especially high among graduates in the medical fields and in law (83 % and 81 %), about average among graduates in the humanities, engineering, and science (59 %, 57 %, and 56 %), as well as for those in teacher training (44 %); the latter percentage was as low as the average one obtained from graduates of non-university institutions of higher education (Akademiker in Deutschland 1980, p. 177).

8.3 PREDECESSORS AND SUITABLE SUCCESSORS

In several surveys in Western European countries, graduates were asked about the educational attainment of their predecessors, an approach that was first used in the late 1960s in a German study on the employment of political science graduates (Hartung, Nuthmann and Winterhager 1970). For example, seven per cent of the recent Swiss graduates surveyed in 1985 reported that they had taken positions previously held by non-graduates (Morgenthaler 1986, p. 75). This approach describes the process of vertical substitution in more detail than the above-mentioned approach, but it does not provide any evidence about “over-education”: vertical substitution may take place, in some cases, because a higher level of education is considered desirable for proper job performance and, in other cases, merely as a consequence of an increased supply of graduates, professional pressures for upgrading, and so on. The substitution itself does not provide any explanation.

One survey, however, shows directly that graduates who have taken positions previously held by non-graduates frequently do not consider a degree essential to their job. Of university-trained Austrian engineers surveyed in the early 1980s who had taken positions previously held by non-graduates, 61 per cent said that their work could have been done by non-graduates. The corresponding figure for engineers who had taken positions from graduates was 31 per cent, and for engineers
whose positions had been newly established, 21 per cent (Bodenhöfer and Ofner 1986, p. 43).

Several studies have taken another approach introduced by Hartung et al. (1970) in asking graduates to assess globally the suitable relationships between education and employment; that is, they asked graduates what, according to their view, the most suitable education would be for their successors. According to a survey conducted in Poland in 1979 addressing graduates one year after graduation, 55 per cent of the respondents considered the same educational level appropriate for their potential successors; 11 per cent suggested a higher level (i.e., advanced higher education); and 33 per cent considered a lower level (no degree) to be appropriate. The percentage that considered the same educational level appropriate ranged from 61 per cent of graduates in physics to as low as 27 per cent in the economic fields (Buttler 1984, pp. 178-179). Similarly, some surveys asked respondents to name the most suitable educational level for their current job. As an example, the representative survey on higher education graduates in the Federal Republic of Germany conducted in 1979, which has already been referred to above, showed that three per cent of the respondents did not see any necessity for higher education in the accomplishment of their tasks (Stooss 1979, p. 616).

8.4 CREDENTIALS AS INDISPENSABLE PREREQUISITES

At the next stage of complexity, replies to two or three general questions are used to create an index of appropriate employment. For example, in a comparative study in the winter of 1981-1982, persons graduating in 1980 from some Italian and French universities had been asked to assess the correspondence between higher education and work in two ways. First, rather than being asked, like Swedish graduates, whether their education was suitable to their jobs, these French and Italian graduates were asked whether the job fits their education: “Does your current job correspond to your university training?” The authors categorized those replying “no” as being “misallocated”. In addition, the graduates were asked, “Do you know of people without degrees who do the same job as yourself?” Those replying affirmatively were categorized as “underutilized” by the authors. Replies to both questions were combined into one index of “adequately utilized”; “partially utilized”, if only “misallocation” was observed; and “underutilized”, if the second question was replied to affirmatively (no matter what the reply was to the former question; see Jarousse and de Francesco 1984, p. 50; the English preview of the survey in de Francesco and Jarousse 1983, pp. 69-70, is somewhat misleading).

According to this definition, the authors came to the conclusion that 58 per cent of Italian graduates were adequately utilized (sic!), eight per cent were partially utilized, and 34 per cent were underutilized. The corresponding percentages in France were 44 per cent, 22 per cent, and 34 per cent. Both surveys included graduates in a few subjects only. The percentage of adequately employed Italian graduates was 71 per cent in law, 66 per cent in economics and business, and 43 per cent in the humanities. The corresponding figures were 52 per cent for French business and economics graduates and 34 per cent for French humanities graduates (Jarousse and de Francesco 1984, pp. 108 and 227). The data suggest that in both
countries, the competences of humanities graduates are more likely to be underutilized than those of graduates in the economic fields. In addition, one can conclude that in both fields the Italian graduates surveyed reported more frequent utilization than French graduates.

If we compare the findings of the surveys discussed above to the results in this study, we could conclude, for example, that Swedish arts graduates have a far better chance of utilizing their competences in their job role than their French and Italian colleagues, and that French and Italian graduates in the economic and law fields have a comparatively limited chance of finding appropriate employment. One might argue, though, that the somewhat more complex questions asked in the French-Italian survey are misleading: if non-graduates do jobs similar to those of graduates, this does not necessarily prove underutilization of the graduates’ competences; rather, it may indicate a flexible and permeable employment sector that makes allowances for experience gained on the job instead of being controlled by credentials. The definition of underutilization chosen by Jarousse and de Francesco seems to be inappropriately strict and thus inflates the findings of “inappropriate” employment.

8.5 ACCEPTANCE OF JOBS CLEARLY UNRELATED TO TRAINING

Another approach in creating an index of “inadequate” employment based on very few questions was taken in a Swiss survey conducted in 1985. First, the graduates were asked whether their employers had required a degree for their position. Of the 1984 graduates, 17 per cent replied that their employers had not required a degree – an increase over the 13 per cent of 1982 graduates surveyed in 1983. The percentages differed dramatically according to the field of study: from one per cent in medicine and nine per cent in science, on the one hand, to 44 per cent in the social sciences, 30 per cent in the humanities, and 27 per cent in the economic fields, on the other hand (1985 data). Among those reporting that their employers had not necessarily required a degree, only those were categorized as being inadequately employed who reported additionally that they had faced difficulties in finding a job and had either “accepted a job hardly related to their training for financial reasons” or “turned instead to a job hardly related to their training and not matching their monetary expectations”. Only three per cent of Swiss graduates are “inadequately employed” according to this definition (Morgenthaler 1986, pp. 74-79), among them hardly any medical and engineering graduates, but about ten per cent of the humanities graduates.

As opposed to the authors of the French-Italian study, the Swiss researchers assumed that a position for which a degree was not necessarily required could nevertheless be appropriate: the graduates might make use of their knowledge as they would have in positions where a degree was formally required or where most persons in similar positions were degree-holders. One might argue, however, that the additional criterion used by the Swiss researchers in order to define the “inadequately employed” graduates was relatively strict; compared to other studies, the Swiss study may have belittled the problem of inadequate employment because of the method chosen.
8.6 APPROPRIATE LEVEL, RELATIONSHIP BETWEEN FIELD OF STUDY AND OCCUPATION, AND UTILIZATION OF KNOWLEDGE

One interesting example of a complex model used to assess the utilization of competences with the help of a very small set of questions is provided by a study conducted in Poland in 1979 (Kluczynski and Sanyal 1985) on university-trained economists. The researchers combined the replies to three questions to yield a typology of “match between qualifications and job”; (1) whether the job corresponded to the profession and its specifications (relevant, partly relevant, or irrelevant); (2) whether higher education was necessary for the job the graduate was performing or whether lower levels of education would do; and (3) to what extent knowledge acquired in higher studies was utilized (full, to a high degree, partial, to a low degree, or not utilized). The researchers (ibid., p. 144) called the types:

1. good match (28% of women, 42% of men),
2. surplus of qualifications (15%/22%),
3. lack of qualification (16%/8%),
4. partial match (16%/8%),
5. waste of qualifications (14%/9%),
6. loss of qualification (8%/5%),
7. bad match (3%/5%).

There is one component in the typology (Type 3) that the other surveys completely overlooked or at least did not address directly: the graduate might take over a position typically held by non-graduates because he or she was not as well qualified as a typical degree-holder should be. It might be added here that the (frequently made) simplistic inference about the amount of “overeducation” in society, which is made on the basis of the percentage of graduates considering themselves inadequately employed, may also overlook the possibility of a reverse “mismatch”; that is, positions requiring a degree may be held by non-graduates. Thus, graduates’ surveys will not suffice. An employers’ survey conducted in the Federal Republic of Germany in the late 1970s showed that, according to employers’ assessments, the number of positions held by non-graduates that would have been better held by graduates was as large as the number of positions held by graduates that could have been held by non-graduates (see Stöoss 1979).

In addition, the Polish researchers combined answers to a list of job characteristics (“makes me to decide on my own”, “requires managing other workers and giving instructions”, “is boring”, etc.) into an index of work complexity. Not surprisingly, the need of a higher education and the complexity of a job thus defined were closely related: 83 per cent of the economists surveyed, whose work seemed to be highly complex, considered a higher education degree necessary for their job; if, however, the work seemed to be of low complexity, only 25 per cent considered a degree necessary (Kluczynski and Sanyal 1985, p. 139).
8.7 \textit{VARIED DIMENSIONS OF “APPROPRIATENESS”}

Other studies cast doubt on efforts to establish a single index of appropriate graduate employment at all, because the dimensions of appropriateness turn out to be quite heterogeneous. A job might be considered appropriate as regards one dimension (for example, the degree of knowledge utilized) and might, at the same time, be considered inappropriate as regards another dimension (for example, the position held).

This heterogeneity of dimensions can be demonstrated by means of a comparison between fields of study in a survey on graduates two years after graduation conducted in 1985–1986 in the Federal Republic of Germany. According to this survey, graduates in mechanical engineering (71\%) and economic fields (64\%) much more frequently considered their income appropriate than graduates in social work (37\%). The average income of the graduates in mechanical engineering turned out to be 64 per cent and that of the graduates in economic fields to be 57 per cent higher than that of the graduates in social work. The same order of fields, but much smaller differences, is visible in replies to a question about whether the graduates considered their position appropriate (61\%, 56\%, and 52\%, respectively).

On the other hand, graduates in social work (85\%) more frequently considered their field to be suitable to their assignment than those in the engineering (78\%) and economic fields (73\%). They also utilized, according to their own view, their skills and knowledge more frequently, either predominantly (29\%) or partially (58\%), than graduates in economic fields (26\% and 53\%) and those in engineering (21\% and 57\%).

As regards the necessity of a higher education degree for the job, graduates in the economic fields (as in some of the other surveys previously mentioned) more frequently raised doubts than one would expect on the basis of other indicators of “inappropriate” employment. Of graduates in those fields, 24 per cent considered a higher education degree not to be necessary for their job as compared to 13 per cent of the graduates in each of the other fields of study surveyed (Kasseler Hochschulabsolventenverlaufsstudie 1986, pp. 108-114). Three dimensions are addressed in these examples: (1) status; (2) content of education and work; and (3) a clear versus a blurred borderline between the functions of graduates and non-graduates in the corresponding employment areas.

In criticizing restrictive concepts on “inappropriate employment”, Teichler (1978) suggested taking into consideration at least the following dimensions: income; social benefits; non-monetary income; prestige; power and influence; leisure and communication networks; utilization of skills; interesting and satisfying work; complex job tasks; the disposition of time, personnel, and material resources; and career and training opportunities. This approach is based on the observation that in the process of the expansion of higher education, an increasing number of graduates consider positions of lesser status to be acceptable if the work is complex and interesting, and that graduates have become more and more diverse in their occupational values (see also Baethge et al. 1986).
CHAPTER 8

One way of following such an approach is just to ask graduates about the different dimensions of status, utilization of knowledge, complexity of assignment, autonomy, and so on, without aggregating the findings – that is, just to demonstrate the diversity. In a survey conducted in the south-western state of Baden-Wuerttemberg of the Federal Republic of Germany in 1979, only four per cent of persons having graduated four or five years earlier from institutions of higher education considered their jobs monotonous; six per cent had hardly any say about the rhythm of their work; 16 per cent could not determine their assignment in a cooperative manner with their superiors and colleagues; and four per cent did not have any chance to realize their ideas and views on the job (Kaiser et al. 1981, pp. 100-104).

One has to note, though, that such an approach is not suitable for comparing the degree of “appropriate” employment between graduates and non-graduates. For example, the number of higher education graduates in the Federal Republic of Germany reporting that they were not continuously supervised hardly surpassed the corresponding share of all the labour force not being continuously supervised (50 % and 47 %; see Akademiker in Deutschland 1980, p. 32); this does not mean, however, that graduates and non-graduates are supervised in the same way.

The authors of a survey on education graduates (Diplom-Pädagogen) conducted in the late 1970s in the Federal Republic of Germany (Busch and Hommerich 1981; see also Hommerich 1984) went a step further. They examined the correlation between a general notion of an “appropriate job” and various dimensions typically addressed in surveys on job satisfaction, such as the characteristics of the job, the colleagues, the employing organization, the supervisors, the working conditions in general, and the income and the opportunities for promotion. Thus, they provided evidence that the “appropriateness” of a job seems to be, at least for graduates in that field, closely linked to elements of the organization of the work and the working conditions (i.e., “open” organization, non-bureaucratic organization, limited supervision, and high decision-making power).

8.8 THE DIVERSITY OF CRITERIA FOR “APPROPRIATENESS”

Obviously, a broad range of indicators has to be taken into consideration in any analysis of the relationships between studies and work that tries to establish how many graduates do not have “appropriate work”. A comparison of various research approaches does not allow the conclusion that certain criteria are the most suitable ones. This result does not mean, however, that complex research models have turned out to be unsatisfactory. On the contrary, they have been important in demonstrating the preoccupations underlying many simple research approaches and many arguments in the political debate on the consequences of higher education expansion. Rather, the difficulties in choosing a limited set of clear criteria for analyzing what work is “appropriate” to one’s studies reflect the diversity of the links existing between higher education and work.

First, the differences between occupational sectors are striking as regards the typical distinctions between traditional graduates’ jobs and lower-level positions and whether the borderlines between levels of positions have traditionally been very clear or vague. For example, vertical distinctions between job roles may be
more clearly established in public employing organizations than in private ones, in large organizations than in small ones, in production sectors than in administrative sectors, and in typical professional organizations (e.g., law firms and schools) than in occupational areas comprising a continuous vertical job structure.

Second, there are obviously distinct cultures in various disciplines and in various occupations as regards values and perceptions, what a desirable high-level job is and what a proper link between education and work means. Income, status, complex and demanding work, disposition and autonomy, job security, utilization of knowledge, and so on, are differently evaluated in different sectors.

Third, it is generally assumed that students’ and graduates’ values regarding employment and work and regarding the relationships between education and employment have changed in the 1970s and 1980s. Interesting, demanding, relevant, and relatively autonomous work seems to be highly appreciated by a growing number of students and graduates. This suggests that absorption in jobs not outstanding in status terms may be more frequently considered appropriate than in the past. In any event, changes in appropriate employment according to set criteria can hardly be measured exactly, if most of the research in this area relies on graduates’ views, and if those views change over time.

This does not mean, however, that the issue of “inappropriate” employment has become obsolete. There are indicators, on the one hand, that a growing number of graduates take positions that lack some elements of the jobs traditionally considered typical for graduates in general or considered typical for graduates in a particular field of study. On the other hand, the number of graduates in European countries taking jobs that are strikingly inappropriate by all standards for appropriate graduate employment has increased much less in the 1970s and 1980s than pessimistic statements widespread in the 1970s had predicted. In addition, the values of students and graduates have seemed to change with regard to desirable jobs. Most research in this area in European countries does not suggest that graduates have just adapted their views to the changing job prospects, although, according to many experts’ views, this may have been the case in the United States and in Japan. Rather, many graduates in Europe seem to have upheld certain expectations about work and the relationships between their studies and their work. The reactions to changed relations between higher education and work differ: adaptation, disappointment, an emphasis on the value of certain dimensions of jobs, an active shaping of the job that underscores the utilization of knowledge and that may change the job in accordance with the expectations held, and so on. Many of these responses to changing employment opportunities are obviously based on a vision of appropriateness – a vision, however, that is not in all cases as static and defensive as the “overeducation” approach suggests.
CHAPTER 9

EMPLOYERS’ EXPECTATIONS AND RECRUITMENT CRITERIA
(1988)

9.1 EMPLOYERS’ VIEWS: A NEW MAJOR RESEARCH Emphasis

Most research on the relationships between higher education and work is based on higher education or labour market statistics or on surveys addressing students or graduates. The views and actions of the employing organizations are not, in most cases, analysed at all or are analysed only indirectly: in several surveys, graduates have been asked about the recruitment and personnel policies they experienced during their job search or thereafter; also data on job offerings frequently serve as a starting point for speculations on “demand” and employers’ rationales.

Two major reasons can be given that have led to an increasing curiosity about the employers’ views of the relationships between higher education and work: First, the “over-education” debate speculated to such an extent about the rationales of both the students and graduates and the employers that direct evidence had to be sought for. Most concepts that were put forward by economists on education and employment and that gained popularity in the 1960s, especially human capital concepts and, to some extent, the manpower requirement approach, analysed numbers of graduates, positions, employed persons, educational expenditures, income, and other “objective” data; their interpretations were based on stereotyped model assumptions about the motives and rationales of the actors: if the homo oeconomicus happens to be a student, he or she will opt for higher education if the return for educational investment is more profitable than the corresponding capital investment; the homo oeconomicus on the other side of the market (the employer) is assumed to change salaries constantly according to productivity and market conditions and employs as many graduates as are clearly required by technological and economic needs. When, however, in the 1970s almost everybody concerned believed that the number of graduates surpassed the presumed “demand” substantially, employers continued to employ more graduates, and students continued to opt for higher education in larger numbers than seemed to be appropriate on the basis of such assumptions, these concepts could obviously not claim clear proof. Subsequently, many additional assumptions were introduced about the employers’ rationales in order to save or modify the explanatory models.

For example, employers might reward higher credentials as indicators of a higher level of ability and might thus reinforce the screening processes taking place in the education system, even though the competences acquired at university were superfluous; or private employers might have to pay higher salaries for graduates than were justified in terms of the utility of their knowledge in order to lure some talented graduates away from the public employers, who, according to such claims,
provided substantial income advantages for graduates because of bureaucratic routine. Or students might continue to attend college in spite of deteriorating employment opportunities because they disregarded information, hoped to be exceptions to the rule, took study as a consumption good, appreciated the non-monetary benefits of graduate employment, or even substituted the economic rational by “post-industrial” values. No matter which speculation could claim most plausibility, it became obvious that the “objective” data analysed so far could not provide anymore evidence by itself and needed to be supplemented by research on the rationales of all the major actors, including those of the employers.

Second, in the 1970s, most experts agreed that the higher education policies of the past had over-emphasized the quantitative relationships between higher education and employment and had not sufficiently taken into consideration the institutional patterns of the higher educational system and other structural aspects, as well as the content of learning and of job tasks. This argument was put forward in many connections, for example, in criticisms of educational expansion as diluting the quality of competences or in criticisms of manpower requirement forecasts for ignoring the possible differences in competences between persons formally holding the same degree, and also in criticisms that emphasized the importance of employers’ expectations: as the employment prospects for graduates deteriorated and the employers’ position in the labour market became stronger, the kind of structures of institutions and curricular approaches that were likely to be rewarded in the employment system became one of the most important or even the most important criterion in many debates on higher education reform in the 1970s.

9.2 APPROACHES OF A BRITISH AND A GERMAN RESEARCH PROJECT

From among the various research projects conducted on employers’ expectations of higher education and on employers’ ways of recruiting graduates, personnel policies, and so on, two projects are summarized here because they addressed almost the same topics, chose almost the same methods, and were conducted simultaneously in 1981-1982 in Britain and in the Federal Republic of Germany. Both the British project (Roizen and Jepson 1985; see also Kogan 1984) and the German project (Teichler, Buttgereit and Holtkamp 1984; see also Buttgereit 1983, 1984) analysed the processes and criteria used in recruiting new graduates by conducting interviews with the heads of personnel offices or other persons in charge of recruiting graduates.

As these publications show, both projects analysed in detail the stages of the recruitment process; the criteria and methods applied during those stages; the role that personnel officers played in the recruitment process; the relative weight placed on various types of competences and skills, on certain fields of study, on graduating from certain institutions of higher education, and on other kinds of information associated with credentials; and finally, the critical views of the employing organizations regarding the competences of graduates as well as their expectations and recommendations about innovation and reform in higher education. Also, the presentation of findings in the two projects is quite similar in their use of extensive
Some differences between the two research projects have to be mentioned: the British study intended to provide a fairly representative overview of all employing organizations; the 139 organizations that were finally included comprise small and large firms, some government agencies, and so on but also includes a very large, possibly over-proportionate, share of commerce and other private services. The German study includes 47 of the 100 largest industry and private services firms, more than two thirds of them industrial firms; employers of large numbers of graduates were selected based on the assumption that these employing organizations were more likely to acquire a systematic basis of knowledge of the relationships between higher education and work and were also more likely to act or react strategically on changes in technology or economy and on changes in the supply of graduates. The British study focused on the employers’ views, expectations and policies; in this framework, the researchers put an emphasis on such issues as the expected competences, preferences for certain institutions of higher education, the “shortages” felt, and suggestions put forward by the interviewees for higher education reforms. The German study emphasized more strongly the details of the recruitment process. This "procedural" approach was based on the assumption that otherwise the representatives of the employing organizations might reply in a stereotypical way, rather than providing valid information on the criteria really shaping the decisions implied in the recruitment process. Also, the German study tried to elicit detailed information on the role played by various aspects of the information provided by credentials, such as grades and marks and the courses chosen; further, the German study discussed recruitment in the context of initial training and early career stages. Finally, it might be pointed out that the German study (cautiously) quantified the findings, in addition to presenting many examples, whereas the British study provided information about the frequency of certain views in a more general way ("many", "few", "generally", "typical for" certain branches, etc.).

There is a considerable number of surveys available on recruitment criteria or qualification requirements as viewed by representatives of the employment system, which have chosen written questionnaires for the collection of information. Teichler et al. (1984) criticized such approaches as being methodologically inappropriate. According to their view, the standardized questionnaires on recruitment criteria are, as a rule, misleading in three ways.

First, they put together in the same list of items two incomparable categories: competences (knowledge of mathematics, problem-solving ability, etc.), on the one hand, and sources of information (grades, institution of higher education, etc.), on the other. A certain source of information, such as the institution that a candidate comes from, may be considered by the respondents as an indicator of certain competences, but the relative weight of such an indicator cannot be compared directly to the weight placed on individual competence criteria.

Second, such standardized surveys do not recognize that the weight of certain sources cannot be established because the sources are frequently not independent. For example, those personnel officers who do not consider grades or the institutions of higher education separately but weigh the grades according their assump-
tions about the differences of standards between institutions of higher education (for example consider an “A” at institution X to be equivalent to a “B” at institution Y) cannot disentangle the different weights they place on grades and on the institutions.

Finally, the authors of the German study argue that personnel officers might, at most, be able to provide information on what they are looking for in a certain stage of the recruitment process, but they do not know what the aggregate weight of certain criteria is for the total recruitment process, in which, for example, academic competences may play an important role in the first selection stages, and general attitudes and social skills may play an important role in the final selection. The authors claim that many personnel officers overestimate the weight placed on the different criteria that play an important role in the most time-consuming stages of the recruitment and selection process.

9.3 DIVERSITY OF EMPLOYERS’ VIEWS

The authors of both the British and the German studies emphasize one finding very strongly in all parts of their reports: a great variety in the employing organizations in terms of both recruitment procedures and selection criteria and expectations regarding the graduates’ competences in general. This finding of extraordinarily diverse rationales and recruitment exercises is strongly emphasized by the authors of both studies because it contrasts with the popular notions of the requirements of the employers or the employment system. The various types of procedures used by the employing organizations surveyed, as well as the major emphases on criteria, do not seem to be closely related to certain economic sectors, types of firms, and so on, apart from certain procedural preferences of large firms and apart from the somewhat different priorities in the criteria for technical positions and for administrative or commercial positions. This variety leads first to the conclusion that individual employing organizations develop their own styles and strategies of recruitment, rather than being predominantly driven by a logic of technology or economy that determines qualification requirements. Second, as is strongly pointed out in the German study, the institutions of higher education and the students are under much less pressure to strive for the single best set of curricula and competences in order to secure employability than popular debates tend to suggest.

9.4 THE RECRUITMENT PROCESS

The descriptions of recruitment procedures differ in the two studies: whereas the British study explains in detail the degree of centralization or decentralization of recruitment in large firms, the German study puts an emphasis on the different roles of management, personnel officers, and supervisors of the prospective new employees in the recruitment process. A comparison of the reports suggests that personnel officers in both countries play an important role in the early stages of recruitment, as well as in securing a certain degree of homogeneity of recruitment in a firm. In the later stages of final decision, however, they hardly seem to have any say in Britain, whereas several German respondents reported an important
advisory or participatory role for personnel officers in this final stage or, in some cases, even in the final decision, especially if persons are being hired for administrative or commercial positions.

As regards the search and selection process, one difference between the two countries is worth mentioning. Most British firms employing a considerable number of graduates conduct a “milk round”; the personnel officers make a tour of institutions of higher education in order to conduct pre-selection interviewees. Many employing organizations invite only a small number of promising candidates to the firm for a second interview. The German firms, on the other hand, do not conduct on-campus interviewing; they are more likely to invite a larger number of graduates for interviews and, in some cases, for tests at the firm. On average, one in six applicants will be invited to the employing organizations, and one in seven persons invited will be offered a position. These figures are certainly not representative of the employment opportunities or of the difficulties that German graduates experience in the job search process. Instead, they are indicative of the strong market positions of the large employing organizations that were surveyed in the German study; however, they do indicate that a relatively high number of applicants are invited for interviews to these firms. The typical procedures in both Britain and Germany have specific strengths and weaknesses, which are discussed below. The pattern popular in Germany creates some frustration on the part of the personnel officers: their positions in selecting candidates is strong as regards screening the files, when the information base is limited anyway, but relatively weak when it comes to interviews, that is, when their competence in discovering talents – from their point of view certainly much superior to that of the supervisors of the prospective new employees – could be utilized most effectively. However, German personnel officers have put all their professional pride in increasing their say in the final selection process, and this policy seems to have been successful in a substantial number of firms.

9.5 INSTITUTIONS OF HIGHER EDUCATION GIVEN PREFERENCE

As regards selection criteria, the two studies differ because of the differences on the higher education systems of Britain and the Federal Republic of Germany. In Britain (this generalized description does not take fully into account all the characteristics of Scottish higher education), the universities differ substantially according to prestige, quality, and attractiveness to students, although the quality differences are considered much narrower than, for example, in Japan or in the United States. In addition, the British non-university sector (i.e., the polytechnics and colleges of higher education) is unique in neither differing from the universities in the length of prior schooling required for admission nor in their duration of course programmes or the degrees granted; British higher education policies have aimed at emphasizing a similar level of competences as well as a more practical curricular approach in the former institutions (see Becher, Embling and Kogan 1977).

Roizen and Jepson (1985) confirmed the view that British employers perceive a considerable hierarchy of quality differences among universities and strive for a large share of new graduates from the more prestigious universities. In their pres-
entation of interviewees’ replies and their interpretations, these authors emphasized another finding as being most striking: a strong preference of most employing organizations for university graduates rather than for graduates from “public” institutions (i.e., polytechnics and other colleges). The authors came to the conclusion that most employers differentiate much more clearly between universities and other institutions of higher education in their preferences and their perception of quality than British public policies emphasize. The authors even went so far as to conclude that market forces in Britain affecting both higher education and employment proved to be dominant and demonstrated “the impotence of government policy makers” (Roizen and Jepson 1985, p. 97).

One has to add, though, that many British experts doubt whether employers’ preferences clearly confirm the popular views about institutional prestige and quality hierarchies. As regards differences among universities, J. Taylor (1986) shows that differences in the unemployment rate and in the permanent employment rate by university, as shown by regular surveys of recent graduates, can be attributed primarily to the instability of the market over time and to a mix of subjects that may be found at various universities. As regards differences between universities and other institutions of higher education, some experts have criticized Roizen and Jepson’s findings as being somewhat exaggerated. Certainly, the study itself shows that many employing organizations try to overcome the uncertainties of recruitment by employing a substantial number of persons on the basis of experience gained through “sandwich programmes” and “sponsorships”, which allow the firms to get to know candidates on the job rather than only on the basis of “paper” and interviews; this approach to selection gives some edge to students in polytechnics and thus may counterbalance, to some extent, the general preference of many employers for university graduates.

In the Federal Republic of Germany, the universities were fairly homogeneous in quality, and most students enrol in universities of their region. Fachhochschulen differ from universities not only in taking a more vocational approach, but also in the length and type of schooling required for admission and in the shorter duration of study (see Peisert and Framhein 1978). The German employers’ survey addressed the question of whether representatives of employing organizations perceive substantial differences of quality among universities, as some experts have recently claimed in Germany (cf. the overview on the literature and the diverse interpretations in Framhein 1983; Rau 1984; Teichler 1986a). Teichler et al. (1984, p. 91) rated few firms as strongly emphasizing the individual institution of higher education (7 out of 50), whereas 24 weighed the institution somewhat, and 14 did not even have a recruitment policy based on university quality, contrary to widespread rumours regarding differences in quality between universities. On the basis of their findings, the authors concluded that employers emphasize institutional hierarchies much less than they are believed to do in public debates on higher education and employment in Germany. In most cases in which the interviewees talked about “good” universities during the interviews, they were referring to specific programmes and to training in special production techniques used by the firm, rather than to the quality of a department or a university as a whole; on the other hand, several interviewees criticized two universities, combining their reservations
about these universities’ left-wing political environments with claims that these institutions were too lenient in their standards and thereby did not guarantee a minimum standard for acquiring a degree. The authors admitted, however, that employers might place more emphasis on differences between individual institutions of higher education than was visible in the study’s findings, for some interviewees might have been reluctant to be candid with the interviewers.

On the other hand, the German study addressed the employers’ views about the relationships between the universities and other institutions of higher education. The authors showed that about half of the firms foresee different career paths for graduates of the two kinds of institutions, with some overlap in the long run; although almost half of the employing organizations did not recruit the graduates of these two types of institutions separately, they were more likely to put the majority of university graduates in somewhat higher entry positions. Hardly any of the large firms surveyed provided the same career opportunities for graduates from both types of institutions. The authors concluded that many employers like to claim in debates on higher education and employment that these career opportunities are the same in order to discourage a further increase of enrolment at the universities.

9.6 WEIGHT PLACED ON GRADES

It might be added at this point that many interviewees seemed to regret somewhat the role that grades or the institution that the applicants came from played in the recruitment process. Some interviewees deemphasized the role of these criteria, although it was obvious that they played a considerable role in the early stages of the recruitment process. Some personnel officers blamed their colleagues in the firm for being too stereotyped regarding these criteria. Some respondents expressed their regret that the limited information available on the candidates in the application files or the pressure to economize in recruitment procedures might force them not to be completely fair to all candidates or might lead them to overlook some talents.

Actually, the majority of British and German employers seem to agree that, on the whole, better grades indicate better candidates. In the Federal Republic of Germany, several surveys confirm that employers stress grades (in most cases, only the grades on the final exam at college) as the most important information provided by the education system on the graduates’ competence (von Landsberg 1985; see the overview on various studies in Teichler 1986a). On the other hand, many British interviewees also considered grades at the completion of high school (number of A-levels and marks) as fairly valid indicators. Preferences for graduates from certain universities or for university graduates in general, as compared to graduates of polytechnics, were frequently explained in terms of the differences in the high school credentials of their student body.

This does not mean, however, that employing organizations rely heavily on college grades in their recruitment. The authors of the German study, for example, rated five firms analysed as emphasizing grades very strongly, eleven strongly, twelve moderately, and ten marginally or not at all (Teichler et al. 1984, p. 56). Again, many preferences may be due to the specific style of recruitment of the
individual firm, but some qualifications were mentioned frequently in both studies and seem to indicate general patterns, as follows.

The employers consider grades important in their recruitment of “specialists.” It is interesting to note in this context that views seem to differ from one country to another regarding the graduates of which fields are be considered specialists in this respect: whereas the British employers emphasized grades for graduates in accountancy, law, and science, many German employers considered engineers high-level experts whose diploma thesis, for example, might be an important predictor of achievement on the job. On the other hand, many employers considered differences between grades as weak predictors or even as meaningless, as long as a certain minimum level of qualification was given, for job performance in many areas of administration, sales, and so on. In this context, a survey conducted in Poland provides interesting findings: representatives of employing organizations rated 66 per cent of those graduates as being well prepared for their jobs by their studies who had the highest marks (“very good”) at university. The corresponding figures were 58 per cent in the case of graduates with good marks and 55 per cent in the case of students who had just passed. The author took this finding as striking evidence how far the views of the universities and the employers differ as regards a good graduate (Buttler 1983, pp. 104-105).

Some interviewees in both countries emphasized that they were reluctant to recruit very high achievers because they might not fit into the world of work and might become disappointed if they were not constantly provided with challenging tasks.

If the value of grades as criteria for recruitment is put into question, the arguments vary substantially. In addition to the above-mentioned point of view (that the employing organizations and the universities might differ in their view of what competences are needed and should be rewarded), three other arguments put forward by some interviewees challenge the validity of grades in terms of the goals and criteria of the higher education institutions themselves: first, grades conferred in exams may be accidental in some cases and may not represent the student’s level of competence adequately. Second, standards in grading differ and may be balanced only in part if the differences in grading of different institutions of higher education are known. Finally, some teaching staff – and especially teaching staff at lower-ranking institutions – may be too lenient in their grading. A comparison of the two studies suggests that German employers more frequently question the validity of grading at German institutions of higher education than their British colleagues do.

Again, as discussed in the previous section on the role that the institutions of higher education plays in the recruitment criteria, one has to keep in mind that grades may be more important selection criteria than personnel officers admit because they play a considerable role in the first stage of selection, which tends to be underestimated in comparison to the final stage. Even some German interviewees who reported that those who conduct interviews deliberately remain ignorant of the candidates’ grades in order to avoid any “bias” regard the overall role of grades as being inevitably important given the limited information available in the first stage of hiring.
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9.7 WEIGHT PLACED ON GENERAL VERSUS SPECIFIC COMPETENCES AND ON SOCIAL SKILLS

The two studies discussed here show that both British and German employers vary substantially in their preferences for very specific skills or more general competences as well as in the role that values, attitudes, social skills, and so on play in recruiting graduates; also in both countries, specific skills and cognitive competences are more likely to play a role in positions requiring scientific, technical, legal, and accounting knowledge than in other positions. On the whole, a comparison of the two studies confirms the view that German employers continue to put more emphasis on the knowledge acquired, on specific qualifications, and on cognitive competences in general as a basis of problem solving, whereas British employers are more likely, even in many technical areas, to search for the trained mind in general and are also more likely to put a substantial weight on attitudes and social skills. These different findings fit the statistical data from the 1970s showing that German industry and trade firms hired less than half a per cent of graduates from fields of study not considered related to the private economy (e.g., the humanities, sociology, and political science), whereas more than five per cent of graduates employed in private firms in Britain were arts-degree holders (see for example Butler 1978; Holtkamp and Teichler 1981). Apart from the different traditions regarding the relationships between education and work, a second difference is worth mentioning in this respect: it is not surprising that German employers expect a higher level of specific competences after the nineteen or so years of learning that the German graduates are likely to have completed when they graduate (German universities do not award any degree commensurate with the baccalaureate) than British employers expect of graduates who have mostly been awarded a baccalaureate.

Both studies confirm the conventional wisdom that a very important rationale in recruitment interviews and other assessment techniques is to explore the attitudes and the social skills of the candidates. Complaints are widespread in employing organizations that there is a shortage of graduates considered to be well prepared for the job in those respects. The British and German studies also confirm that such characteristics are more strongly emphasized in recruitment for administrative and commercial positions, and that they also frequently play a role in the recruitment of engineers and scientists as well. In this respect, the findings are by and large in tune with those of other studies that have aimed at providing more detailed lists of the most frequently preferred characteristics. For example, a German survey conducted in 1985 names as the most frequent “non-specific” requirements for highly qualified personnel in the technical sector (1) effort, achievement orientation, and so on; (2) leadership potentials; (3) creativity; (4) ability to cooperate; (5) ability to carry things out and follow them through; and (6) problem-solving abilities (von Landsberg 1986, p. 16). Both of the surveys discussed show, however, that the relative weight placed on these characteristics differs among employing organizations. The authors of the German study argued that such criteria may play a lesser role in most firms than the public debate or many less complex surveys on employers’ expectations suggest.
In the above-mentioned general report of an OECD project on “The Role and Functions of the Universities”, W. Taylor (1986, pp. 77-78) pointed out three types of “attempts to strengthen the linkages between the content of higher education courses and occupational performance”:

– first, courses “closely tailored” to specific job requirements;
– second, “to build curricula round a core of skills and knowledge deemed to be relevant in a wide variety of tasks and occupational contexts”;
– third, relying “on developing the powers of the mind and strengthening dispositions favourable to subsequent success” (i.e., working hard, team work, and responsibility).

W. Taylor suggested not only that the British survey discussed here indicates exactly that the third approach is dominant, but also that this approach is the one rightly preferred by employers in general, given the labour market imperfections, the difficulties in predicting performance and future requirements, and finally, the difficulties in dismissing employees later on. The findings of the two surveys discussed here, however, suggest that Taylor’s summary over-generalizes the views held by some employers (more frequently represented in Britain than in Germany) and held about certain graduates. Certainly, most employers criticize “narrow specialization” and lack of the attitudes and the social skills preferred in the employment system, but many employers view either very specific skills or a somewhat broader range of firm knowledge to be the indispensable preparation for a job, which higher education has to provide; many employers also believe that professional socialization on the job may make up for some of the deficiencies in attitudes and social skills observed among recent graduates.

9.8 EMPLOYERS’ VIEWS ON HIGHER EDUCATION

The two studies indicate some similarities between the employers in Britain and in the Federal Republic of Germany in their way of assessing higher education systems and of recommending changes.

– First, most personnel officers or other persons in charge of graduate recruitment are less concerned about the details of the structure of the higher education system, the content of courses, and so on than representatives of the higher education system tend to believe.

– Second, many employers in both countries expressed their concern about a superfluous expansion of higher education, although when it came to recruitment, they strove to pick the talents believed to be scarce and, in several instances, complained about a lack of quality of higher education and the deplorable lack of competence of some graduates.

– Finally, employers in both countries suggested that the institutions of higher education and the students be more practical-minded and business-oriented than academic cultures tend to be, but their suggestions were varied and sometimes inconsistent when it came to specific curricular strategies.

In one respect, however, the two studies suggest an obvious difference between the countries under consideration: a higher share of those German representatives of the employment system questioned tended to be critical of the higher education
system than their British colleagues. Many of the British interviewees seemed to be fairly impressed by the quality of British higher education and did not suggest any major changes. As was shown in a workshop of British scholars and government representatives, which was arranged by the Society for Research into Higher Education and which addressed the two studies discussed here, this distinction of dominant moods allows for varied interpretations: it might just reflect the different historical academic cultures and a stronger historical antinomy between government and business in Germany. It might be taken as an indicator that British universities are functioning fairly well, whereas German universities are in a state of crisis. Finally, it might suggest – as some participants in that workshop concluded – that British industry misses chances of innovation because the industrial and business elite happily accept the traditions of higher education.

The results of those surveys cannot be expected to provide convincing answers about the causes of such a difference in attitudes toward the present higher education systems in the two countries; also, the surveys cannot be expected to suggest the single best curricular response. They show what employers miss and suggest. Such research provides a data base for a range of possible curricular solutions, but it does not legitimize a single best curricular strategy, because although both the employers and the graduates can state single arguments, neither can present a comprehensive view based on all the expertise needed to assess, for example, what would be lost if the present emphases in courses were replaced by new ones, what competences beyond the obviously useful ones might be overlooked, or how certain types of competences would be promoted (see Holtkamp and Teichler 1983, pp. 13-21).

9.9 EMPLOYERS’ RESPONSES TO THE EXPANSION OF HIGHER EDUCATION

As already mentioned, many surveys on employers’ expectations in the 1980s in Europe have intended to explore whether employers perceive an “over-education” or “over-qualification” as a consequence of the rapid expansion of higher education, which has not been matched by changes in the structure of occupations. The findings relevant to this question deserve special emphasis in our analysis here, because they link recruitment criteria with the previously discusses issues of graduates’ problems in their transition from studies to employment and with the issue of “inappropriate” employment and work.

The two studies actually indicate, at first glance, the ambivalence on the part of many employers regarding the increase in the number of graduates. On the one hand, a substantial share of interviewees in Britain and in the Federal Republic of Germany regarded the rapid expansion of higher education during the 1970s as superfluous or undesirable, notwithstanding some criticism on the part of British employers that the financial cuts in funding for British institutions of higher education in the early 1980s may have been too harsh. A few opinions that some graduates now are not better prepared for their jobs than were qualified non-graduates before the development of mass higher education can be seen in this context as well. On the other hand, the same interviewees might indicate quantitative short-
ages in certain areas (as some of them did regarding various fields of engineering), lack of certain skills, or a general low level of competences among most graduates. This might confirm the view that most employers are inconsistent in their assessment of higher education expansion and that they tend to stress “over-education” when issues of education policies are addressed, and to stress “under-education” when they are considering their own recruitment policies (see Teichler 1983a).

The two surveys discussed here also allow another interpretation. Most of the information collected on the recruitment criteria is not relevant to employers’ positions regarding educational expansion because (and this has been frequently overlooked in the past) the relationship between the overall demand and supply of graduates is addressed to only a limited extent in the recruitment process. The issue of vertical substitution might be decided on before the recruitment process by fixing the numbers of graduates to be hired in advance; therefore, during the recruitment process, one will notice only relative deficiencies of graduates for the jobs that graduates are typically recruited for. Changes in the ratio between the number of job applicants and the number of positions offered might indicate the popularity of the individual employing agency among graduates rather than the labour market situation in general, or these changes might reflect cyclical differences in recruitment more strongly than long-term trends. For example, the British employers seemed to ascribe the decline in the number of positions offered in 1981-1982 to recent economic problems rather than to long-term changes. Altogether, the recruitment process makes the actors aware primarily of their relative role as competing units striving for the best “match”, and not of the macrostructures shaping the likelihood of certain kinds of matches. Thus, the averages of the perceptions of the actors do not represent such macrostructures. It would be interesting in this context to speculate to what extent the differences in the debate on educational expansion and employment between the United States and many European countries are due to the fact that a lesser share of the relevant U.S. research addresses the macro-structures in this relationship: does this explain why the recent debates in the United States focus on problems of lack of quality of teaching and learning in higher education and of the competence of students, whereas projections by the U.S. Bureau of Labor Statistics continue to project much higher numbers of graduates than numbers of corresponding jobs?

In the German study on recruitment processes and criteria, the consequences of educational expansion are more directly addressed in two contexts. First, the representatives of the employing organizations were asked to what extent the positions were open to both graduates of Fachhochschulen (at least 15½ and, on average, about 16½ years of education) and graduates of universities (at least 17 and, on average, 19 years of education) or were offered for certain types of higher education only. Second, the interviewees were asked to assess the changes in their personnel and recruitment policies regarding graduate employment in the past five years. The answers given, which are similar to the findings in additional surveys conducted by institutions closely linked to German employers’ associations (Kemmet, Linke and Wolf 1982; Ferring, von Landsberg and Staufenbiel 1984), seem to be inconsistent at first glance: the number of graduates recruited increased more rapidly than expected; at the same time, however, the jobs offered did not
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seem to have become much more demanding in recent years. Notwithstanding these two perceptions, most employers were convinced that they had not hired more graduates just because the supply had increased.

These findings do not fit any major explanatory model, neither the “over-education” assumption nor the assumptions that employers just recruit according to demand, that demand might have increased corresponding to increased recruitment, nor finally to the assumption that absorption is determined by supply. The authors of the German study discussed here argue instead that less dramatic shifts occur concurrently: a small increase in the level of job requirements, a small decline in the average competences of graduates in the process of educational expansion, a small response to increased supply, a gradual change of perceptions of the appropriate relationships between education and work and similar shifts of notions have contributed jointly to an increase in positions offered to graduates.
CHAPTER 10

GRADUATION AND DEGREES
(1996)

10.1 THE DEGREE PROGRAMME

From the 1950s up to the 1970s, study in many European countries became more highly structured and more standardized than before. Almost all attention was paid to students wishing to study a whole study programme upon the successful completion of which their expertise is certified as a basic qualification for further academic and professional work.

In various European countries universities differed, and still differ to some extent today, as regards the extent to which students have to follow highly structured study programmes or, reversely, the extent to which study is relatively open in terms of the amount of individual courses to be taken, the choice of individual courses, the duration of study, etc. Notably, Western European universities closely following the Humboldtian tradition, and especially the humanities and social sciences in these countries, tended to provide many options. Also, some Southern European universities, for example in Italy and Spain, tended to provide the students’ ample freedom as far as the study period is concerned.

In the wake of higher education expansion during the 1960s and 1970s, we noted a trend for curricula to become more highly standardized. Many factors contributed to this trend. The growing professional relevance of higher education in many areas called for a clearer delineation of competences to be achieved. The “knowledge explosion” required a sorting out process as regards what can be achieved in a few years of study. The proportion of students not adjusted through prior learning and family socialisation to loosely structured teaching and learning processes seemed to be on the rise. The growing funds needed for higher education called for increased efficiency, therefore long and open studies as well as discontinuation of study without a degree (“drop-out”) were more likely to be regarded as a “wastage”, and more frequently than in the past, degrees were expected to certify a common body of knowledge.

This trend towards standardization of complete degree programmes, however, did not remain unchallenged. Efforts to serve learning of “adults”, “lifelong education” and “recurrent education” called for an opening up of those highly structured programmes. Notably, British and Nordic universities addressed these demands more strategically since the late 1960s and the 1970s. In addition, study opportunities were eased for students starting late, possibly without typical secondary education credentials, wishing to study part-time or through distance programmes – evening and distance study programmes were established in all planned economies already in the 1950s – or for students discontinuing study for some periods.
In most countries, however, teaching serving those not heading for a degree is clearly dissociated from degree programmes – for example as open lectures, non-degree adult education, continuing professional education, etc. Notable exceptions are the “single courses” (“enstaka kurser”) at Swedish institutions of higher education as well as the various levels of diplomas in Irish non-university higher education for one, two or three years of successful study.

Increased standardization has many implications for graduation and the award of a degree. Previous study achievements might have to be scrutinized more carefully, and the certification of competences might have to be more elaborate than in the past. Obviously, standardization of study programmes is accompanied by a more detailed assessment and certification during the course of study (cf. the overviews of study programmes in Ebel and Mohr 1985; Braun 1991; Teichler 1988c).

A continuous counting of study loads and credits – somewhat similar to the US credit system – was introduced in various European countries from the late 1960s to the early 1980s. For example, Swedish points (“poäng”) and the Finnish study weeks (“opintovikko”) are understood as being equivalent to one week of study – irrespective of how much time is spent in classes or on self-study. Dutch universities began to calculate all study programmes in terms of an overall study load (“studiebelasting”). A course programme comprises a total of 6,720 study hours (“studie uren”), i.e., four years of study, whereby the academic year lasts 42 weeks and the weekly study load corresponds to 40 hours.

In some countries, efforts were made to establish clear stages of study, as found traditionally in France. Since the 1980s, for example, all universities in the Federal Republic of Germany were expected to undertake a major interim assessment after about two years – similarly to the pre-diploma (“Vor-Diplom”) which already existed in programmes leading to the degree called “Diplom”.

Finally, efforts were made in some countries to create a clear stage structure of degrees where it did not exist before. For example, German and Austrian students wishing to be awarded a doctor’s degree traditionally were not obliged to take any prior final examination and to be awarded any lower-level degree. This practice was more or less phased out in the 1970s and the 1980s respectively. Still, a small minority of German and Austrian universities allowed students to take the doctorate as their first degree.

10.2 GRADUATION

Graduation is understood as a process in which a student’s achievement is assessed and he or she is eventually certified as having successfully completed studies and having acquired such a configuration of expertise which can be considered as basic academic and/or professional qualification. Graduation tends to be symbolically underscored by a certificate testifying the complete qualification as well as frequently by the award of a title (cf. the overviews in British Council 1984; Jablonska-Skinder and Teichler 1992; Wijanaendts von Resandt 1991; Dahlström 1985).

As a rule the institutions of higher education are in charge of certifying the successful completion of studies. There are, however, various exceptions some of which might be mentioned.
(1) In the United Kingdom, universities are granted the right to award degrees through a royal charter. Other colleges traditionally had to cooperate with universities in order to have their students awarded an "external degree" by the chartered university. When polytechnics were established in the late 1960s as a second major type of higher education institution, the Council for National Academic Awards (CNAA) was founded for the purpose of granting degrees and other awards in the non-university sector and of examining the respective curricula. Similarly, a National Council for Educational Awards (NCEA) was established in the Republic of Ireland.

(2) In the Federal Republic of Germany, students completing a field of study usually leading to a government-supervised profession – notably in medical fields, law and teacher training – are not awarded any university degree. Rather, they pass a state examination which is jointly examined by university professors and state examiners or professionals.

(3) In the United Kingdom and in Ireland, some professional bodies or other external institutions, for example churches, are awarded the right to grant degrees. In various other European countries, churches are involved in granting degrees.

10.3 CERTIFICATION AND AWARD OF DEGREES

Universities, other institutions of higher education or possibly other awarding agencies certify the completion of studies. Such a certifying document might comprise general information about the awarding institution, the institution providing the course programme, the title conferred, the level of institution and of degree programme, the legal basis of the course programme and the award, the field of study, and the typical duration of the programme. It also provides information about the person having been awarded the degree (name and possibly other biographical data), details of his or her studies, competences and achievements, for example, areas of specialization chosen, prior examinations passed, title of thesis, and grades. In addition, names of examiners and those guaranteeing the award through their signature might be given.

In some European countries, governments regulate the information provided by the documents and other formal elements of certification. Altogether, however, certification of awards varies substantially as regards the degree of detail and the transparency of the competences acquired. On the one hand, they are expected to inform about the competences of graduates, but on the other hand, traditions emphasizing the symbolic nature of the award as well as efforts of deliberately disguising the value of the award make it difficult for the potential user to understand the competences certified, for instance by exaggerating the value of the award (cf. Teichler 1986b; Berg and Teichler 1988).

The certification documents in some European countries provide detailed information about the grades conferred, possibly the overall grade as well as grades regarding different areas of expertise, different courses, the thesis and other components of the final examination. Or formulations supplementing the award might indicate grades, such as “First Class Honours” or similarly in the United Kingdom. Other institutions might provide documents without any grades, but possibly pro-
vide statements of the student’s achievement which are not perceived as being part of the formal documentation of the award.

In most countries, awards upon the completion of study have typical names, and in many cases a title is awarded which the person might use in connection with his or her name. In some countries, the designation of the award and the title are more or less identical, for example the “Magister” in Austria, or the “kandidat” in Denmark or similarly in most other Nordic countries. In others designation of degrees and titles awarded differ: holders of the “laurea” degree conferred by Italian universities are called “dottore” or “dottoresca”.

Awards upon completion of study programmes might differ according to discipline, type of competences and professional area. For example, the “Magister” in the Federal Republic of Germany, mostly conferred in the humanities, underscores the academic and general nature of the course programme, the “Diplom”, mostly awarded in science, engineering and social sciences, indicates some basic professional competences, and the “Staatsexamen” is the first professional qualification for the civil service or other publicly supervised professions.

In many European countries, specific titles are awarded for those graduating in engineering – for example “ingenieur (ir.)” in the Netherlands and “ingenjör” in Sweden – or in other fields emphasizing professional preparation – for example “meester in de rechten (mr.)” in the Netherlands or “agronom” in Sweden. In Switzerland, titles differ according their institutional, regional or national standardization or recognition: the “Dipl. Chem.-Ing. ETH” is a graduate of the Eidgenössische Technische Hochschule Zürich, while the “architecte diplômé EPF” is a graduate of the École Polytechnique Fédérale de Lausanne. Upon completion of study, future barristers in the canton Bern are awarded the professional qualification of the “Berner Fürsprecherpatent”. In contrast, a graduate in food chemistry is conferred a degree explicitly designating national validity: “Lebensmittelchemiker (eidg. Diplom)”.

10.4 LEVELS OF AWARDS

At many European universities, we note two levels of awards: the first university degree which signals basic academic and possibly professional competence, for example the “Magister” in Austria, and the “Doktor” awarded upon completion of substantial academic work.

In some European countries, additional awards were customary:
- In the United Kingdom and in the Republic of Ireland, we note a stage structure of two university degrees: a first degree mostly named “bachelor’s” and mostly awarded after three or four years of study, and a second degree taken by a majority of those awarded the first degree – mostly named “master’s” and mostly awarded after one additional year of study. It should be noted, though, that both the first and second degree in Scotland are called master’s, that some first degrees in England are called master’s and some second degrees bachelor’s (see British Council 1986).
- In France and traditionally in the Nordic countries, two levels of examinations and awards were customary in the humanities and sciences, a “licence” and
“maîtrise” after three and four years of study respectively in France, and, for example in Norway, a “cand.mag.” after three and a half years of study and a higher candidatus the designation of which refers to a discipline, for example “cand.psychol.” after two additional years of study. This partial two-stage system was discontinued in Sweden during the 1960s and in Finland during the 1970s.

– The advanced degree of a licentiate – for example a “Lic.philos.” in Norway – is customary in Nordic countries. Efforts were made in the 1960s and 1970s to phase out the respective programmes and titles because the time and effort involved was viewed as almost corresponding to a doctorate in other countries, but eventually the award was preserved.

– In some countries, an advanced (post-doctoral) academic qualification is awarded which is generally viewed as the entry gate to the professoriate. This holds true for the “Habilitation” in the Federal Republic of Germany as well as the “doctor scientiae” in planned economies (for example “Doktor habilitowany” in Poland).

Four interrelated factors contributed to a reconsideration of the structure of graduation and awards in Europe: the establishment and expansion of non-university higher education, the concern in some European countries about the long duration of studies, the growing professional relevance of studies, and finally efforts to ease international academic mobility of students and doctoral candidates as well as international professional mobility.

Most non-university higher education institutions newly emerging and established through upgrading – notably in the late 1960s or early 1970s or during the late 1980s and early 1990s – provide programmes of a duration between one and four years and award diploma degrees which are mostly viewed as lower in academic level than universities (cf. the overviews in OECD 1973; de Moor 1978; Vedel 1981; Teichler 1988c, pp. 110-130; Gellert 1993). There are exceptions though: for example, the British and Irish institutions were also entitled to award bachelor’s and master’s degrees, and the Norwegian distrikt hogskoler can award a first university degree as well. The degree programmes of the Grandes Écoles in France are generally viewed as more demanding than those at French universities.

Concern about the long duration of studies – along with debates about the international equivalences of degrees – led to the introduction of a bachelor’s in Denmark in the late 1980s. It is awarded after completion of three years of study – irrespective whether the programme is designed as three-year programme or whether the title signifies a successful completion of an interim stage. Similarly, Spanish universities aimed to upgrade the successful completion of three years of study in the early 1990s.

As a compromise between traditions of university course programmes and changing job requirements universities in various European countries established short post-degree programmes. Credentials conferred at the completion of those programmes vary strikingly. In the Federal Republic of Germany, for example, some are called “Zertifikat” and thus underscore the singular nature of those courses, while others are called “Diplom” thus claiming similarity to regular university degrees with some professional emphasis.
Notably, international or supranational organisations are involved in easing international transparency of studies and degrees and stimulating boundary-crossing mobility. The Council of Europe adopted conventions on the equivalence of qualifications for admission to higher education (1953), on the equivalence of periods of university study (1958) and on the academic recognition of university qualifications (1959) (cf. Council of Europe 1975). Governments of ten planned economies signed the “Convention on the Validation and Mutual Equivalence of Secondary and Specialized Secondary School-Leaving Certificates, of Higher Education Diplomas, and of Diplomas Granted for Scientific Titles and Academic Degrees” 1972 in Prague. In 1979, the respective member states of the UNESCO adopted the Convention on the Recognition of Studies, Diplomas and Degrees concerning Higher Education in the States belonging to the Europe Region (see International Recognition of Studies and Degrees: Challenges and Perspectives 1988). In the framework of the European Community, the European Council adopted directives on academic recognition for professional purposes in some fields (medicine, 1975; veterinary medicine, 1978; architecture, 1985; pharmacy, 1978) (see Commission des Communautés Européennes 1980; cf. also Neave 1984). Eventually in 1988, it adopted a directive according to which graduates having successfully completed three years of study at an institution of higher education in the European Community are, in principle, entitled to be professionally active in any other country of the Community, whereby a country generally requiring additional qualifications for professional recognition and licensing has to provide the opportunity of acquiring the respective qualification and credential through training or examinations (see Bundesministerium für Bildung und Wissenschaft 1992). Finally, the European Commission encouraged mutual recognition of study by providing support for temporary student mobility within networks of cooperating institutions of higher education – the Joint Study Programmes promoted from 1976 to 1986 and the ERASMUS Programme inaugurated in 1987 – under the condition that study achievements abroad are recognized by the home institution upon return (see Dalichow 1987; Preston 1991).

The diplomas which eventually emerged in Europe might be classified in nine categories (see Jablonska-Skinder and Teichler 1992, pp. 23-24).

1. Semi-terminal diploma, such as the “Diplome d’études universitaires générales (DEUG)” in France after two years of study or the “National Certificate” in Ireland after two years of study as well.

2. Short-course diploma – terminal diplomas awarded upon completion of courses shorter than those considered adequate for first degrees in the respective countries, for example, a “Diplome universitaire de technologie (DUT)” in France or a “Diploma in Higher Education (DipHE)” in Ireland.

3. A first university degree based on a relatively short course programme, such as a “licence” in France, a “bachelor’s” in England and Wales and in Ireland and a “cand.mag.” in Norway as well as a degree upon completion of a relatively long course programme at non-university higher education, for example a 'Diplom' supplemented by a “FH” in brackets awarded by German Fachhochschulen or a “baccalaureus” (abbreviated “bc.” or “B.”) conferred since the late 1980s by Dutch “Hogescholen”, formerly called “hoger boroepsonderwijs (HBO)”. 
GRADUATION AND DEGREES

(4) A first university degree based on a course programme requiring at least four years of study, for example a “Magister” in Austria, a “kandidaatti” in Finland, or a “laurea” in Italy.

(5) An advanced university degree in countries where the first university degree is awarded after a relatively short period, for example a “Master’s” in England and Wales, or a “maîtrise” in France. This degree tends to be considered equivalent to a first university degree based on a relatively long course programme.

(6) A supplementary or add-on diploma, certifying a short academic or professional qualification based on studies undertaken after the award of a first academic degree, for example a “Postgraduate Certificate in Education” (PGCE) in the United Kingdom or a “Diplom” or “Zertifikat” after a short “Aufbaustudium” or “Weiterbildungsstudium” in the Federal Republic of Germany.

(7) An advanced university degree following some years after the completion of a degree based on a relatively long degree programme. This is notably the licentiate degree in some Nordic countries.

(8) The academic degree of a “doctor” or similar.

(9) An advanced academic degree, for example a “Habilitation” or a “doctor scientiae”.

The national and international debates about the values of credentials conferred upon completion of study programmes in higher education have eventually led to a widespread agreement according to which duration of study at institutions of higher education is the single most important indicator of study achievement. In comparison to this, the distinction between universities and other institutions of higher education has lost momentum. Around 1990, more experts seem to agree that a distinction of four levels is in place, if it comes to academic equivalences, i.e.

− diplomas beyond the level of a first university degree;
− degrees equivalent to a “bachelor’s”;
− degrees equivalent to a “master’s”;
− doctoral awards.

As regards the professional value, the distinction between the equivalent of a “bachelor’s” and the equivalent of a “master’s” is clear in some countries and professional areas, but blurred in others.

The emphasis on the duration of study as the key criterion for the academic and professional value of study has not led to a complete standardization of the length of course programmes – neither between countries nor within countries. For example, in the 1980s we noted in Europe – even if artistic and medical fields are excluded because they tend to differ from the majority of fields – bachelor programmes ranging from three to five years of study, and programmes considered equivalent to a master’s between four and six years. Within individual countries, the duration of an university degree programme is either strictly standardized (for example four years in the Netherlands) or might vary by one year (various arrangements in the Federal Republic of Germany or one year longer in engineering fields than in others fields in Spain and Italy). In Sweden, a first university degree might vary according to field of study even between three and five years.
Although the required duration of study became the single most important criterion for the value of degrees, the range of the actual duration tends to widen even further. While, for example, most British students tend to complete study in the required period, students in Spain, Finland, Italy, Germany, France, Austria and possibly some other countries seem to prolong their studies on average by more than 50 per cent beyond the officially required period. Prolongation seems to have increased further in most of these countries during the 1970s and 1980s with the exception of the Netherlands, where stricter rules of checking the duration were successfully employed in the early 1980s (see Teichler and Steube 1989; Ciucci 1984; Määttä and Valkonen 1992; Bijleveld 1991).

Thus, the continuous debate on the need for clarification of the value of academic credentials and for the establishment of international equivalences has had some sorting impact but did not lead to a consistent system of diplomas and titles. The inclination to boost the title is not only common internationally in medical fields where a graduate can acquire a doctor title without substantial additional academic work, or in Italy and Czechoslovakia where university graduates in general or at least in some fields are named “dottore” or “JUDr.”, “RNDr.”, etc., but it affects the debates on international equivalences as well. Handbooks can hardly overcome the general lack of information and the confusing details. In the international context, international offices of universities, national information and equivalence offices as well as personnel offices of public institutions and private enterprises have to shoulder a substantial burden in order to cope with this state of affairs.

10.5 ACADEMIC AWARD AND PROFESSIONAL QUALIFICATION

While abundant literature is available about credentials upon completion of study and their academic value, much less is generally known about the links between an award and right to be professionally active. Some typical modes can be stated.

The least regulated or most open link between a degree and professional practice is obviously less widespread in Europe than commonly assumed: it is completely left to the public or private employers whether they consider a degree as a prerequisite for certain positions or whether they also recruit persons for those positions not holding a degree. Similarly, it is open for a person to undertake certain professional activities independently – irspective whether he or she has been awarded a degree.

In some instances, governments might explicitly relativize the value of credentials by holding public qualifying examinations for entry to subsequent training or professional practice. Such a “concours” is undertaken in France for graduates wishing to transfer to teacher training as well as to training for some other public services.

In some countries, laws and other governmental regulations underscore the importance of degrees by protecting certain titles and determining qualifications for access to professions. For example, the title “Ingenieur” became a protected title in the Federal Republic of Germany during the 1950s, i.e. only to be used by persons having been awarded a corresponding degree. Since then, companies cannot designate experienced practitioners that way any longer.
Most Eastern European countries, the Nordic countries as well as a few other European countries adhere to the principle of “effectus civilis”. Accordingly, the degree is a publicly accepted basic qualification for professional practice – irrespective what further processes of formal or informal training and learning might be required to be fully competent for the respective professional practice.

In some cases, government is directly involved in the process of examination and awards a degree at the end of a course programme. This is true for the German “Staatsexamen” upon completion of study which is viewed as an incomplete degree. Only after some period of professional internship and a second examination, these persons are considered to be qualified and are possibly awarded a title (see Händle 1983; Branahl 1983). In some other countries, government is less directly involved, but still plays a substantial role in establishing qualifications to be met (see Becher 1994).

In other cases, a professional training phase upon completion of a degree is provided at institutions of higher education as well. This holds true in some countries for teacher training phases upon completion of a degree in subjects to be taught in schools (see Judge 1992; Bone and McCall 1990), for example in the United Kingdom or in the Netherlands.

In some countries, finally, professional bodies exert a strong power as regards access to a profession (see Goodlad 1984). For example, some professions in engineering and economic areas in the United Kingdom and in Ireland require both the successful passing of a theoretical examination and the positive assessment after an extended practical phase supervised by the licensed professional as a prerequisite for professional licensing. Thereby they might consider the respective university degree as equivalent of the theoretical examination, or they might even require examinations in some areas in addition to the degree – the latter notably if they consider the curricula at some or all higher education institutions as not being in tune with what they consider to be indispensable knowledge.

10.6 SOME CONCLUDING OBSERVATIONS

Around 1990, it was almost an art to read and understand higher education credentials across various countries. Certainly, there have been trends towards standardization and more easy reading in some countries, but there are always inclinations as well to underscore the specifics of an institution, a field or an individual programme as well as to award credentials which are mysterious thus creating a feeling of familiarity and exclusiveness for those who know and possibly some overrating among those who do not. Credentials seem to serve both transparency and intransparency. The proposal made to increase the transparency through the introduction of a Diploma Supplement, i.e. an internationally legible, somewhat more detailed description of the type of programme and the individual qualifications (see Berg and Teichler 1988), therefore met both with overt praise and silent resistance. Will the pressures for standardization and transparency grow when international mobility in education and employment increase, or will the ambivalence between transparency and intransparency persist in the future?
RESPONSES BY HIGHER EDUCATION INSTITUTIONS TO CHALLENGES OF THE WORLD OF WORK (1996)

11.1 THE RANGE OF OPTIONS

Institutions of higher education are constantly confronted with the question of how they should respond to the changing careers and work assignments of their graduates. The specific issues changed over time, but the basic themes remained, for example:

– the extent to which teaching and learning should be inner-directed towards academic knowledge or outer-directed towards the expected tasks of the graduates;
– the extent to which curricula should be structured by disciplines or by professional areas;
– whether the university should focus on the provision of knowledge or, in addition, try to shape the students’ personality;
– whether professional preparation should be pursued in a general way, thus trusting the transfer of knowledge, the students’ abilities to apply this knowledge and the subsequent training process, or whether it should be directly addressed;
– the extent to which a critical and innovative function of higher education institutions is emphasised and best ways to ensure such a critical and innovative role.

The more institutions of higher education became involved in actively shaping the relationships between higher education and employment, the more they became aware of the possible variety of modes in addressing the links between studies and graduates’ career. They might address:

– the institutional patterns;
– curricula, teaching, and learning;
– staffing;
– governance; and
– support services.

Of course, we have to take into account that philosophies about the educative functions of higher education vary between countries. It is generally assumed that French universities have a more positive view as regards professional training and the value of specialisation than universities in many other countries, that German universities focus on knowledge and scholarship, and that British universities have more strongly the well-rounded personality in mind.

We have to be aware as well of the different links between study and career in the various disciplines. In the humanities and some social sciences, academic values are highly appreciated and tend to be viewed as potentially conflicting with professional demands. In the natural sciences, academic paradigms are predominantly interpreted as not conflicting with the professional demands which tend to
be largely isomorphic with modes of scientific discovery. In medical fields, engineering, law, and business, the professional demands have a tremendous impact on curricula and the norms underlying research, teaching, and learning.

Finally, the links between higher education and work tend to be differently interpreted by the universities and by other institutions of higher education. The latter are as a rule more directly geared to work and employment than the former.

These differences, however, do not limit the challenges from the outset. And notably, they do not completely determine the possible options of the individual institutions of higher education and individual departments.

11.2 STRUCTURAL RESPONSES

Multi-disciplinary institutions might split into specialised institutions, and specialised institutions might merge to multi-disciplinary institutions. Specialised institutions might shape the links between study and graduate employment in the most targeted manner, but they might thus reproduce the traditional trends prevailing in the respective discipline. Multi-disciplinary institutions provide the chance of cross-fertilisation between the various disciplines, as far as the balance between their academic, cultural, and professional emphasis is concerned, and they are in a position to create cross-disciplinary study programmes which might address professional tasks hitherto neglected in part, because corresponding teaching competencies had not been available.

The individual institutions of higher education might be actors in changing the institutional patterns of the higher education system – for example non-university institutions striving for an up-grading towards a university or universities establishing short courses. In many countries, institutions might be too confined in nationwide patterns to take any significant initiative in this respect. The aim of the Czech Ministry of Education, in contrast, is to provide the legal basis for a “spectral system”, in which institutions can opt for an individual solution in a given range of options.

A third major structural option is the extent to which and the ways the institutions of higher education provide study opportunities for adults. This might comprise a broad range of different activities (Teichler 1990b), notably:

- advanced academic study;
- advanced professional training for graduates;
- short professional training courses for updating and extending knowledge;
- public lectures and other open forms of dissemination of knowledge to adults;
- regular degree programmes for adults, possibly as part-time and distance arrangements;
- remedial or second-chance provisions for adults;
- short study provisions for adults; and
- in-service training of university staff.

Almost all of these activities are bound to strengthen the professional emphasis of the institutions of higher education. The institutions vary strikingly in their involvement in this area, but most tend to dissociate those activities clearly from the regular affairs of research and the dominant degree programmes for the full-time
RESPONSES BY HIGHER EDUCATION INSTITUTIONS TO CHALLENGES

relatively young students. One might ask in the context of the growing concern about the relationships between higher education and employment not only what the obvious advantages of such segmented approach to adult education are, but also what opportunities integrated models could provide.

11.3 CURRICULAR RESPONSES

Curricula, i.e. the structure of study provisions and the substance of what students are expected to learn, might vary in terms of their emphasis on preparation for research work and the creation of knowledge on the one hand and on the other the reproduction and dissemination of existing knowledge. Study programmes might be highly specialised or relatively broad. They might be fully embedded in a discipline or cut across disciplines. They might focus exclusively on knowledge and cognitive skills, or they might aim to address the non-cognitive dimensions of personality as well. Curricula might differ in terms of their deliberate links to professional work, ranging from being closely geared to occupational preparation on the one hand and on the other not intentionally related to job roles at all.

First, institutions might establish new course programmes and modify existing ones. In the last decades, many key innovations took place in areas cutting across disciplines (for example bio-technology), and many course programmes combining knowledge from different disciplines were established to prepare for newly emerging professional areas of activity (for example European studies or information science for health service). Similarly, students might be given more freedom to choose profiles within fields of study.

Often these changes cannot be realised solely by the respective departments. They also require a flexibility of the higher education institution in general for reallocating resources and regrouping potentials. In many cases, standardisation of curricula hitherto strived for by governments, academic associations, and professional bodies, has to be loosened.

Second, the substance of the courses provided might be modified (Demarez and Thys-Clément 1994; de Weert 1994; Feutrie 1994). For example, the balance between academic and professional demands might be better met if the academic paradigms and the professional problem-solving tasks are systematically confronted in a large number of courses. Two other thrusts gained substantial public support in recent years:

– higher education should aim to lay the foundations for further learning rather than to provide a more or less complete body of knowledge;
– higher education should play a stronger role in shaping the students’ personality. Third, students might be better prepared for the world of work if they have the opportunity to experience professional work linked to their subject during the course of study. Models of this kind have been extended and systematised in many instances in order to ensure a cross-fertilisation of the first experience of professional work tasks and of first professional activities related to one’s field of study as well as to learning of the theories, methods, and the disciplinary body of knowledge.

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11.4 STAFFING

Higher education might better strike the balance between the different functions if their academic staff is not only competent in the respective disciplinary knowledge, but also versatile as regards its professional use. This might be reinforced, if teachers are recruited with respective experience, and if they are encouraged to acquire and reinforce appropriate experience in the course of their career.

A survey conducted in 1992 showed, for example, that on average German university professors had spent about four years, British professors five years, and Swedish professors six years of their professional life outside higher education. The respective figures for those teaching at Fachhochschulen (8 years), polytechnics (9 years), and Swedish university colleges (11 years) was, as one might expect, substantially higher (Enders and Teichler 1995). These data show both the current practices and a realistic range for extension.

The involvement of part-time teachers is another means of strengthening professional preparation within higher education institutions. It is frequently claimed, though, that only a minority of part-time teachers are themselves capable of confronting systematically academic approaches and professional practice.

11.5 GOVERNANCE

Various means have been established to involve external persons in curriculum development and in the governance of the individual higher education institutions. Representatives of enterprises, of professional bodies or of the various branches of the civil service might be members of national or regional commissions for curricula. Practitioners might be members of university boards, senates or faculty meetings.

Reports suggest that these modes of cooperation might be fruitful for the institutions of higher education in terms of understanding professional requirements better. Yet, many practitioners involved in those modes of cooperation are not sufficiently interested and knowledgeable in the inner life of the institution in order to contribute to a stimulating dialogue.

11.6 SUPPORT SERVICES

In Europe, institutions of higher education vary substantially in the extent to which they are involved in direct services which help the students to understand the world of work and to transfer easily to the employment system after graduation. General student guidance and counselling have substantially extended in many European countries over the last few decades.

Other services are less frequent, but seem to spread, for example growing care for professional counselling (see Lange 1994), either in the context of general student counselling or apart from it, placement of graduates (see Porrer 1994), and finally close cooperation with alumni/ae, i.e. former students of the respective institution of higher education. Obviously, many institutions opt for the establishment of those services in spite of financial constraints, because they consider these direct means of support as widely appreciated.
11.7 TOWARDS A SELF-CONSCIOUS BALANCING

During the 1990s, the issue is more salient than in previous decades of how the institutions of higher education respond or actively shape the relationships between higher education and employment:

– In looking at various macro-social scenarios, the state of affairs seems to be not less challenging than in the mid-1970s when the most heated debates could be observed. Unemployment has further risen in the early 1990s, the supply of graduates is expected to increase further. Various experts predict a growth of demand for qualified labour, but those predictions are vaguer than the grand euphoric and pessimistic scenarios of the 1960s and the 1970s. Awareness of the complexity of the state of affairs undoubtedly has grown (Kogan and Brennan 1993).

– In the transformation of the Central and Eastern European countries, we note potentials for more deliberate actions than usually.

– The individual institutions and departments feel more responsible and capable than in previous decades to find their specific ways and to shape their specific profile. This is true as well in respect to their relationships to graduate employment and work.

How will the higher education institutions respond to this state of unpredictable dynamism? There is no obvious recipe, but that should not discourage from searching for improved solutions.

First, higher education institutions have to address the consequences of “massification” of a high level of competencies in the labour force more actively than they did in the past. We note a process of scientification of society, whereby systematic knowledge gains relevance in all spheres of life. Also, the economic and social success seems to depend to an ever-increasing degree on the wide diffusion of knowledge. Therefore, higher education can no longer focus on fostering a few rare talents while letting the others find their ways of making use of their knowledge or just settle without any clear link between study and professional work. Rather, higher education institutions should address the professional tasks in middle-level jobs and thus help raising the quality of problem-solving in areas snobbishly overlooked in the past.

Second, higher education institutions should address the issue of the relationships between higher education and employment in a more self-conscious and balanced manner. Unless they do it more strategically, they will be driven too much by internal inclinations or by external pressures.

Some external observers like to blame institutions of higher education for their lack of concern for the needs of society. A quotation from the 1994 conference in Warsaw on “Professional and Social Competence” might suffice to provide relevant evidence: “Institutions of higher learning must overcome an especially harmful attitude, albeit one which derives from their (no doubt justified) independent status. The malady consists in the tendency of universities to pursue their own faculties’ groups’ interests rather than to orient their teaching and research activities towards meeting the needs expressed by society” (Pescia 1995, p. 35). Analyses undertaken by higher education researchers, however, come to the opposite conclusion, that many institutions and departments change their curricula in order
to prepare better for graduate work (Boys et al. 1988). In a summary of recent trends and debates Guy Neave even asks, whether higher education is constantly driven by an over-emphasis on a single goal of the respective Zeitgeist: whether European institutions, thus, have moved from cultural enhancement via contribution of equity to an overemphasis on the professional preparation (Neave 1992).

We all know that higher education institutions, in principle, have general academic and professional functions. They aim to serve a general advancement of the students’ knowledge and possibly a cultivation of values and attitudes in general. They are also a training ground for the minority of students who eventually become scholars and teach future generations of students. Finally, universities are expected to provide a foundation of knowledge and skills relevant for occupations typically taken over by graduates.

In comparison to other levels and types of pre-career education and training, university teaching and study are least clearly geared to occupational tasks. First, the more cognitively demanding tasks are the less directly they can be trained for. Second, the university is more strongly expected to have a critical and an innovative function. Graduates should not merely be prepared to take over given tasks; rather they are to be capable and willing to reshape the job tasks. They might acquire tools and learn rules, but they also have to be motivated and in the position to question established professional practice and to cope with undetermined work tasks.

Debates within higher education institutions on the relationships between study and employment tend to suffer under the tension that systematic reflection upon this theme is bound to be met with some suspicion in a university where the pursuit of knowledge for its own sake is held in high esteem and reflection on the professional function might be already one step in the direction of yielding to external pressure. This tension cannot be avoided, because the university plays a double role in this respect. The university is the key legitimate defender of a distance between university and society in order to allow a pursuit of knowledge for its own sake, which eventually might turn out to be more fruitful for society through innovation, critical thinking and cultural enrichment than any effort of steering the universities’ activities in a targeted manner. At the same time, as a consequence of its relative autonomy, the university has to create a reasonable synthesis between its own inward-looking academic preoccupation and the legitimate professional demands on graduates – demands which do not only comprise the handling of indeterminate tasks as well as striving innovation and critical thinking, but also learning of some – admittedly complex – tools and rules. Reasoning under these tensions often remains below the reflective capacity of those involved. Only if academics and administrators at higher education institutions are sufficiently aware of this dual ambivalence due to the tensions inherent in the goals and inherent in the roles, they might move as a step forward towards a self-conscious handling of the difficult relationship between the higher education and graduate work.
PART III

COMPARATIVE GRADUATE SURVEYS
CHAPTER 12

GRADUATE EMPLOYMENT AND WORK IN SELECTED EUROPEAN COUNTRIES (2000)

12.1 INTRODUCTION

It is difficult to compare the employment and work situation of higher education graduates and the relationships between higher education and the world of work in the various European countries. The educational systems differ so considerably that we are not certain which institutions and programmes should be included in a comparative analysis. Most available statistics give the stocks of students and of the labour force, but not the transitions, i.e. the number of graduates, recent employees, etc. The definitions in the national statistics vary as regards employment status, occupational categories, etc., and the comparative statistics of EUROSTAT (1995), OECD (1997c), UNESCO (1997c), or other agencies only reproduce national statistics. More in-depth information, such as on the period of search and transition, or the use of knowledge on the job are collected in national surveys and the results cannot be compared internationally.

The aim of this overview is to illustrate the major statistical information provided by OECD and EURYDICE, the agency of the European Commission in charge of educational information, as well as national statistics. Then, the limitations of these statistics will be discussed, as well as the potentials of graduate surveys to fill the gaps left by available statistics. The account of available statistics was compiled for nine European countries in the framework of the research project Higher Education and Graduate Employment in Europe, sponsored by the European Commission’s Targeted Socio-Economic Research (TSER) programme.

12.2 RATIO OF NEW ENTRANT STUDENTS

Statistics on the total number of students are always presented in educational statistics, but these absolute figures are strongly determined just by the size of the total population. It does not come as a surprise to find that the absolute number of students varies from somewhat less than 200,000 in Norway to over two million in France in 1995, since the total population ranges from just over four million in Norway and five million in Finland to almost 60 million in France and the UK and over 80 million in Germany.

All major comparisons on the relationships between higher education and work show that the ratio of those studying and graduating among the respective age groups is more indicative. However, there are not generally agreed upon statistical measures for establishing the proportion of those beginning their studies, those studying, and those graduating from higher education. On the one hand, we find
different definitions of new entry students, first year students, etc. We observe varying definitions of university, higher, tertiary, and post-secondary education, and statistics on the number or quota of graduates can be misleading because, for varying proportions of graduates, a diploma or degree might be viewed as an interim stage of pre-career education. On the other hand, major statistical agencies abandoned the idea of considering a certain “age group” as the one corresponding to entry into higher education, period of study or graduation and thus defining a “ratio of the respective age group” as they did in the past.

Table 1. Approximations to Enrolment Rates (percentages)

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<td>Austria 25.8</td>
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<td>Min. 15 Max. 16</td>
<td>18-21 22-25 26-29</td>
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<td>Finland 42.9</td>
<td>29</td>
<td>Min. 35 Max. 45</td>
<td>12.5 17.4 27.9</td>
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<td>France 55.7</td>
<td>33</td>
<td>Min. 20 Max. 30</td>
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<tr>
<td>Germany 45.2</td>
<td>27</td>
<td>Min. 25 Max. 35</td>
<td>3.6 10.6 12.0</td>
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<tr>
<td>Netherlands 59.6</td>
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<td>Min. 25 Max. 34</td>
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<td>Norway 43.0</td>
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<td>Spain 49.7</td>
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<td>UK 39.2</td>
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<td>Min. 28 Max. 30</td>
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Table 1 provides data which can be understood as an approximation of the ratio of the new entrant students among the respective age group:

– Among the nine EU countries included in the project, the rate of the 20-year-olds enrolled in some kind of (post-secondary) education varied in 1995 according to OECD statistics from about 26 per cent in Austria to about 60 per cent in the Netherlands.

– The “net entry rate” calculated by OECD predicts, with the help of the age distribution of new entrant students, the proportion of the current cohort of secondary leavers likely to take up study in the course of their life. The net entry rate for university-level education varies among the five countries for which it provides information from 26 per cent in Austria to 43 per cent in the UK.

– The peak enrolment rate, i.e. the single age cohort with the highest proportion of students enrolled in higher education (the peak age ranged from 19 years in the UK to 23 years in Germany), varied in 1994/95 according to a chart provided by EURYDICE from about 15 per cent in Austria to about 40 per cent in France.

– According to four-year groups of age cohorts (18-21, 22-25 and 26-29) aggregated in OECD statistics, the highest proportion of students in one of these
groups varied in 1995 from about 12 per cent in Germany (data on Austria were not presented) to 34 per cent in France. It should be taken into consideration that the statistics on new entrant students differ in various respects:

- In some countries, a distinction is made between students at universities and similar institutions or programmes and other (“non-university”) institutions of higher education or programmes. These national demarcations often do not match the distinction made by OECD between university-level and non-university programmes.
- The distinction often made between a university sector and a non-university sector is becoming more and more blurred in many countries. In some countries, it is seen in types of institution, curricular thrusts and levels of programmes, in others only according to one or two of these dimensions, and in others it is hardly visible or was officially discontinued through an upgrading of former non-university institutions.
- The distinction between non-university higher education and post-secondary education (sometimes including elements of upper secondary or vocational education) officially not viewed as higher education is also becoming increasingly blurred. The international agencies that collect statistics are inclined to include post-secondary institutions in the presentations of higher education or tertiary education, often at the request of national governments, even if these continue to define them in their national analyses as being outside higher education (EURYDICE, 1997, p. 77, mentions the German Schulen des Gesundheitswesens as a case, and OECD 1996, pp. 389-402, the training of Techniker in Germany or the Swiss Fachausweis).
- Also, the length of study in post-secondary or higher education cannot be considered a consistent criterion. The suggestion made by the EU in December 1988 to define a higher education qualification as successful completion of three years’ study might still not be satisfactory in international comparisons where, for example, the DUT awarded in France after two years of study by an IUT seems to be as well accepted by the labour market as a three-year degree in some other countries.

12.3 GRADUATION STATISTICS

12.3.1 Ratio of graduates in the age group

This ratio is cited in various national and international statistics. One must bear in mind that the definitions vary in the calculation of these ratios.

(a) First, OECD calculated the ratio of tertiary graduates to the population of the “typical” age (i.e. the graduation age of an educational course without any delay). It comes to the conclusion, as Table 2 shows, that the total number of graduations corresponds to more than 50 per cent of the age group in the UK and to less than 20 per cent in Austria. One must bear in mind, however, that a substantial proportion of persons takes more than one degree in a stage system of degrees (notably in the UK).
## Table 2. Graduation Ratios 1995 (percentages)

<table>
<thead>
<tr>
<th>Country</th>
<th>Non-university certification</th>
<th>Short first university degree</th>
<th>Long first university degree</th>
<th>Second university degree</th>
<th>Ph.D.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Austria</td>
<td>5</td>
<td>–</td>
<td>–</td>
<td>10</td>
<td>8</td>
<td>–</td>
</tr>
<tr>
<td>Finland</td>
<td>22</td>
<td>8</td>
<td>7</td>
<td>13</td>
<td>12</td>
<td>–</td>
</tr>
<tr>
<td>Germany</td>
<td>12</td>
<td>–</td>
<td>.</td>
<td>16</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Italy</td>
<td>7</td>
<td>1</td>
<td>.</td>
<td>11</td>
<td>11</td>
<td>–</td>
</tr>
<tr>
<td>Netherlands</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>19</td>
<td>20</td>
<td>–</td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td>10</td>
<td>9</td>
<td>14</td>
<td>10</td>
<td>–</td>
</tr>
<tr>
<td>UK</td>
<td>17</td>
<td>31</td>
<td>30</td>
<td>–</td>
<td>–</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: OECD 1997c, pp. 333-334

A: Ratio of tertiary graduates to population at the typical age of graduation
B: Net graduation rate
(b) Second, OECD calculated the “net” ratio of graduates from university-level education, where the dispersion of age at the time of graduation is taken into consideration. Data are presented for only six countries, whereby the graduation ratios vary from 42 per cent in the UK to nine per cent in Austria.

As the proportions of the graduations among the respective age groups include multiple degrees (e.g. a bachelor and a master or a licence and a maîtrise in a stage system), the number of higher education-trained persons among persons who are about 30 years of age could provide a more precise picture of the degree holders. But here some time has elapsed since graduation and therefore the proportion of recent graduates among the respective age group is likely to have increased in the meantime.

(c) According to OECD statistics, the proportion of 25-34-year-olds having completed tertiary education was over 30 per cent in Norway; between 20 per cent and 30 per cent in the majority of countries included in the project, but only nine per cent in Austria and eight per cent in Italy (see Table 3).

(d) According to the EUROSTAT labour force survey, the proportion of 30-34-year-olds who were awarded a higher education qualification was between 20 per cent and 30 per cent in most EU countries included in the project: 25 per cent in Finland, 24 per cent each in Germany, the Netherlands, and the UK, 23 per cent in Spain, 22 per cent in France, and about ten per cent in Austria and Italy.

Table 3. Percentage of Persons Having Completed Higher Education in 1995

<table>
<thead>
<tr>
<th>Country</th>
<th>25-34-year-olds with tertiary education</th>
<th>30-34-year-olds with a higher education qualification</th>
<th>25-64-year-olds having completed tertiary education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-34-year-olds^3</td>
<td>30-34-year-olds^2 with a higher education qualification</td>
<td>Non-university</td>
</tr>
<tr>
<td>Austria</td>
<td>9</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Finland</td>
<td>23</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>France</td>
<td>25</td>
<td>22</td>
<td>8</td>
</tr>
<tr>
<td>Germany</td>
<td>21</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Italy</td>
<td>8</td>
<td>9</td>
<td>--</td>
</tr>
<tr>
<td>Netherlands</td>
<td>25</td>
<td>24</td>
<td>--</td>
</tr>
<tr>
<td>Norway</td>
<td>32</td>
<td>.</td>
<td>11</td>
</tr>
<tr>
<td>Spain</td>
<td>27</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>UK</td>
<td>23</td>
<td>24</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: ^1OECD 1997c, p. 40; ^2EURYDICE 1997, p. 172; ^3OECD 1997c, p. 38

The available data suggest that the proportion of recent graduates of the respective age group with at least a three-year degree varied in the early 1990s from about one quarter to less than ten per cent in the countries surveyed. One should take into consideration, however, that in some countries various programmes that were not formally recognised as higher education or that are shorter than three years were recently upgraded and new institutions were established.
CHAPTER 12

The proportion of young higher education-trained persons is greater in all countries surveyed than the ratio of higher education-trained persons in the total labour force. But the actual difference is smaller than one might expect on the basis of higher education statistics. This holds true because the employment statistics may include graduates from institutions which are not yet formally higher education institutions, because not all the expansion of student numbers has translated into a respective expansion of graduates and because the actual expansion of higher education has been moderate in some countries since about the mid-1970s.

The intergenerational differences of graduation quotas become most visible in a comparison between the cohorts of relatively recent graduates and the age groups of the labour force close to retirement. As Table 3 also shows, the proportion of graduates among 30-year-olds is on average almost twice as high as that of higher education-trained persons close to retirement age. This ratio, however, varies according to OECD and EUROSTAT data from about three times in Spain, a country with a relatively late expansion of higher education, to less than one-and-a-half times in Germany where the expansion of higher education started relatively early.

12.3.2 Age at time of graduation

If students pursue an educational career without any interruptions, second-chance options, and prolongation, they might be awarded a short university degree (e.g. a British bachelor or a French licence) between the age of 20 and 23 and a long university degree (e.g. an Austrian Magister, a French maîtrise, a German university Diplom, Magister or Staatsexamen, or an Italian laurea) between the age of 22 and 26.

The OECD statistics, however, show that the average age of graduation is substantially higher. The median age ranges for short university-level degrees from about 22 in the UK to about 26 in Finland and Sweden; for long university degrees between 25 and 28; and for second university degrees (e.g. master subsequent to bachelor) from about 25 to about 30. There is also a substantial difference within the individual countries. For example, the age at which a bachelor degree is awarded in the UK is 21 at the 25th percentile and 25 at the 75th percentile. The respective figures for graduates of long university programmes are 24 and 28 years in the Netherlands and Norway, 25 and 29 in Italy and 26 and 30 years both in Austria and Finland (OECD 1997c, p. 335).

12.3.3 Gender

On average, more women than men graduate. In more than half the countries, the number is clearly higher, as EUROSTAT data of 1994-95 graduates suggest: 59.8 per cent in Finland, 57.0 per cent in Spain, 56.1 per cent in Italy, 55.4 per cent in Norway, and 53.6 per cent in the UK. In some countries, such as Austria, the Czech Republic, and the Netherlands, approximately the same number of women as men graduate. Only in Germany (45 %) was the number of women graduates clearly lower than that of men.
The data suggest that the proportion of men is higher when the time to obtain the respective degree is longer. In all countries, the number of men awarded a PhD or equivalent is higher than that of women.

The ratio of women graduates, however, continues to vary substantially according to subject. They were the majority in humanities in all countries for which data are available (from 76% in Italy to 55% in Germany). In most countries, they dominated in medicine (in Spain 72%), but more men graduated in Germany and Italy in this area. In law/business, women outnumbered men in a few countries, and in the natural sciences, there were almost as many women as men in some countries. In engineering/architecture and mathematics/computer science (the latter except for Italy), women continued to be a clear minority. But again, differences between countries are worth noting. For example, women made up 20 per cent or more of graduates in engineering and architecture in Italy and Norway, whereas they made up only four per cent in Spain.

Table 4. Proportions of Men and Women Graduating of the Typical Age Group 1995 (percentages)

<table>
<thead>
<tr>
<th>Country</th>
<th>Non-university certification</th>
<th>Short first university degree</th>
<th>Long first university degree</th>
<th>Second university degree</th>
<th>Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>W</td>
<td>M</td>
<td>W</td>
<td>M</td>
</tr>
<tr>
<td>Austria</td>
<td>3</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Finland</td>
<td>14</td>
<td>31</td>
<td>10</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>11</td>
<td>14</td>
<td>-</td>
<td>-</td>
<td>18</td>
</tr>
<tr>
<td>Italy</td>
<td>5</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>18</td>
</tr>
<tr>
<td>Norway</td>
<td>42</td>
<td>53</td>
<td>12</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>UK</td>
<td>12</td>
<td>22</td>
<td>30</td>
<td>32</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: OECD 1997c, p.333

12.3.4 Fields of study

The fields of study vary more strikingly than we would expect. According to statistics collected by EUROSTAT:

- the social sciences (including economics) comprise about 25 per cent on average of the degree across the countries surveyed. They range from 37 per cent in the Netherlands to nine per cent in Finland;
- the other fields (with teacher training as the largest component) comprise 20 per cent, varying from 38 per cent in Italy to 12 per cent in the UK;
- 16 per cent on average were enrolled in engineering, ranging from 23 per cent in Finland and Germany to eight per cent in Italy.
– The proportion of medical science graduates was 14 per cent on average, ranging from 30 per cent in Finland to nine per cent in Norway.
– 13 per cent graduated in humanities and fine arts fields, varying from 22 per cent in Norway to six per cent in Finland.
– Only seven per cent graduated in mathematics, natural sciences, and computer sciences, varying from 12 per cent in the UK to three per cent in Norway.
– Finally, five per cent on average were enrolled in law, ranging from 14 per cent in Spain to two per cent in Norway.

This also holds true if we look at major groups of fields. At one extreme, 62 per cent of graduates in Finland but only 21 per cent in Norway were graduates in science and engineering.

The figures vary somewhat less, but still to a considerable extent, if we take into account only university-level degrees as reported by OECD (1997c, p. 340). For example, the percentage awarded in humanities and general fields (including teacher training) ranges from 45 per cent in the Netherlands to 25 per cent in Italy, and that in engineering from 26 per cent in Finland to 11 per cent in Spain.

It would be interesting to examine how far differences in the subject composition of graduates reflect corresponding differences in the occupation and economic structure between the European countries or indicate different links between subjects and occupational areas.

12.4 EMPLOYMENT STATISTICS

The transition from higher education to employment is not addressed in international statistics. But OECD collected data for some countries on employment rates one year after graduation and five years after graduation, as well as unemployment rates of 25-29-year-olds according to educational level.

12.4.1 Unemployment

The data presented in Table 5 suggest that the speed of transition from higher education to employment varies substantially according to country. One year after graduation, the unemployment rate of university graduates from German universities is no longer higher than that of university-trained persons in the labour force. Similarly, the unemployment quota of university-trained persons who are under 30 in Germany and the UK hardly differs from that of all university-trained persons in these countries. In contrast, early unemployment is far more frequent among recent graduates or young higher education-trained persons than among the average of higher education-trained persons in Italy, Spain and France.
Table 5. Unemployment Rates One Year and Five Years After Graduation in 1995 (percentages)

<table>
<thead>
<tr>
<th>Country</th>
<th>One year after graduation¹</th>
<th>Five years after graduation¹</th>
<th>Total labour force²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-university</td>
<td>University</td>
<td>Non-university</td>
</tr>
<tr>
<td>Finland</td>
<td>20</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>France</td>
<td>17</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Germany</td>
<td>.</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td>Italy</td>
<td>.</td>
<td>52</td>
<td>.</td>
</tr>
<tr>
<td>Spain</td>
<td>58</td>
<td>46</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: ¹ OECD 1997c, p.276; ² OECD 1997c, p.252

12.4.2 Participation in the labour force

Available statistics show that the participation of higher education-trained persons in the labour force is very high. Even among men, the labour force participation of persons with a university-level degree is on average eight per cent higher than among all 25-64-year-olds.

Higher education-trained women are much more frequently professionally active than those who did not attend or complete higher education:

- In Spain, we observe the biggest difference: 84 per cent of men as compared to 47 per cent of women. The respective rates for those with a non-university qualification are 94 per cent and 77 per cent, and for those with a university degree 91 per cent and 84 per cent.
- In contrast, the labour force participation of university-trained persons in Finland hardly differs according to gender: the respective ratios are 93 per cent and 89 per cent. This also holds true for those who do not hold a college degree. The overall labour force participation rate was 83 per cent for men and 77 per cent for women.

12.4.3 Higher education and income

The statistics also show the income advantages of graduates. On average they earn more than one-and-a-half times as much as those who have completed upper secondary education. As Table 6 shows, among those who are between 30 and 44 years of age, those having completed non-university higher education earned between 37 per cent (UK) and seven per cent (Germany) more than those having completed upper secondary education. British university degree holders earned 90 per cent more and Dutch graduates 29 per cent more than upper secondary school leavers.
Women had a slightly higher income than men through participation in higher education. One should bear in mind, though, that in the countries surveyed, they earn on average only about two-thirds as much as men holding the same level credentials.

Table 6. Relative Earnings of Higher Education-Trained Persons Aged 30-44 by Gender in 1995 (upper secondary education = 100)

<table>
<thead>
<tr>
<th></th>
<th>Non-university tertiary education</th>
<th>University education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>W</td>
</tr>
<tr>
<td>Finland</td>
<td>121</td>
<td>123</td>
</tr>
<tr>
<td>France</td>
<td>138</td>
<td>139</td>
</tr>
<tr>
<td>Germany</td>
<td>105</td>
<td>114</td>
</tr>
<tr>
<td>Italy</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Netherlands</td>
<td>121</td>
<td>134</td>
</tr>
<tr>
<td>Norway</td>
<td>129</td>
<td>131</td>
</tr>
<tr>
<td>UK</td>
<td>115</td>
<td>159</td>
</tr>
</tbody>
</table>

Source: OECD 1997c, pp. 266-267

OECD calculated rates of return to investment in education for some countries (OECD 1997c, p. 272). High rates are reported for the UK (14% for non-university graduates and 19% for university graduates), France (20% and 13%), and Finland (12% and 14%). Moderate rates are seen in Norway (8% and 13%) and Germany (9% and 8%). They are relatively low in Italy (5% for university graduates). All these calculations refer to higher education-trained persons in general, not to recent graduates.

12.5 OTHER ISSUES

12.5.1 The relevance of the graduation rate

The debate on the relationships between higher education and employment has sometimes been inappropriately overshadowed by the expansion of the number or ratio of new entrant students or the total number of students. When references are made to “mass higher education” and its possible impacts, one tends to refer to these types of data. Actually, however, the quota of graduates among the corresponding age group is considerably smaller than that of new entrant students. This is only partly due to the fact that increases among new entrant students only affect the graduation rate a few years later. More important, though, a substantial proportion of students complete their studies without obtaining a degree or any other credential. Depending on the country, between less than 20 per cent and over 60 per cent drop out.
In the mid-1990s, the quota of graduates among the corresponding age group varied within the European Union from more than 30 per cent to less than ten per cent. One has to bear in mind, however, that the international statistics published by OECD, EUROSTAT, etc. often include students and graduates from institutions which are not officially considered “higher education” institutions in their respective countries. If the statistics followed national definitions of higher education, the quotas would be lower in various countries, and even more diverse across European countries.

In theory, we could explain the different graduation ratios and their links to employment according to three dimensions:

- the extent to which higher education satisfies a “hard” demand, i.e. higher education produces graduates for which a demand is undisputedly conceived by most politicians, practitioners and experts: is it now about ten per cent among recent graduates in most European countries or higher? Does it differ substantially between the European countries?
- the extent to which and in which way higher education serves the labour market beyond such a “hard” demand: how many graduates fill jobs for which prior studies are seen as rather useful or at least useful for some of the assignments, or how many graduates accept jobs where they feel underemployed or face difficulties in finding a job at all?
- the extent to which countries differ in naming institutions and programmes which fall between university-level education and skill-labour training as “higher” or “tertiary”/“post-secondary” education.

One might ask: what are the benefits and what are the drawbacks if the individual countries pursue divergent policies in these respects? To what extent is transparency needed and achieved? Would less divergence be beneficial?

12.5.2 Employment problems of recent graduates

Most studies that discuss issues of graduate employment on the basis of education and employment data are guided by a question which has prevailed since about the mid-1970s: what proportion of graduates succeeds in being employed and taking on assignments which match their studies and level of education, and what proportion, in contrast, ends up with a less fortunate link between study and employment? Many politicians, practitioners, and experts believe that this question has kept its relevance, whereas others call for a paradigmatic shift at the advent of the “massification of higher education”, the “knowledge society” or the “lifelong-learning society”.

In discussing the first question, one tries to establish the extent to which graduates face problems in finding employment, taking a first regular and somewhat demanding job and ending up in a position and with an assignment which can be viewed as appropriate.

More fundamentally, one could raise two questions:

- To what extent do we observe a problem of transition from higher education to employment?
- What do we know, in observing the first years after graduation, about a match or mismatch between higher education and employment/work?

We face a major methodological problem: most of the information available cannot be clearly demarcated according to these dimensions and questions. Thus, it is no surprise that the interpretations of the available data are quite heterogeneous.

It is generally assumed, first, that the number of privileged and intellectually highly demanding positions has not grown over the last few decades in line with the expansion of higher education. Second, the perceived threshold between a somewhat appropriate graduate job and “underemployment” or “inappropriate” employment certainly has changed as a consequence of the growing supply of graduates. Third, it seems obvious that employment in general – and more especially that of higher education-trained persons – has become more risky in recent years than “regular employment” for a graduate in the past.

Beyond that, it seems difficult to make generalisations about changes of graduate employment and work in European countries during the 1990s. The situation seems to have improved in the UK. In some countries we noted ups and downs, for example in France and Norway, and in some other countries prospects for graduates have clearly worsened, e.g. in Austria and Finland.

It is obvious, though, that in the 1990s, the debates on employment and work of higher education graduates tend to remain within the same paradigmatic domain as in about the mid-1990s: there is concern that a certain proportion of graduates will not find employment and work which match the concept of a graduate job, and the question remains as to how grave this concern must be and who are those who are most at risk. There are concurrent debates about a knowledge society, new technologies, etc., but they continue to play at most a supplementary role if currently the employment and work situation of recent graduates is assessed.

12.5.3 Equality of opportunity and graduate employment

Available statistics suggest that parental income and educational attainment continue to be linked to their children’s participation in higher education. Less information, however, is available on the relationships between parental background and education and career in recent years than for 1970.

In contrast, women’s opportunities for study and subsequent employment are among the best documented themes. The available data show, first, that the total number of women graduating from higher education has surpassed that of men in the majority of countries analysed. There remain some advantages for men, as far as graduation from science and engineering fields, being awarded an advanced degree and entry into the labour force are concerned, but the gap has become smaller. The data also suggest that a higher education degree makes a greater difference for women than for men.

Women clearly have fewer career opportunities than men when child-care begins to absorb them, and only few catch up in the career ladder at a later stage. The measures needed to counterbalance this career disadvantage are mostly outside the domain of higher education.
12.6 LIMITS OF STATISTICS AND THE ROLE SURVEYS CAN PLAY

Statistics on graduate employment and on the relationships between higher education and employment are often criticised methodologically. Very often, doubts are raised regarding the comparability of education and employment data. Definitions, for example, vary concerning the sector of higher education or tertiary education and the types of institutions as well as levels of programmes and degrees. Therefore the definitions of university-level education and tertiary education used by OECD or the definition used by the European Commission of higher education do not necessarily coincide with the definitions of the sectors by the respective countries which provided the statistical information to these agencies. Four other limitations are worth noting:

- Available statistics usually inform on only a very small list of variables.
- Statistics often present a snapshot of the learners and the labour force at a given time, thereby neglecting “paths”, “passages”, and sequences in the life course.
- Statistical data are often provided in isolation. They do not allow us to analyse, for example, whether it is the socio-economic background or the type of course that determines the graduates’ career opportunities.
- Official statistical data gathering tends to avoid “subjective” themes. Information is gathered which seems to be factual and “objective” even if the “indicator” might be irrelevant for the issue at stake.

12.6.1 Statistics and surveys – a dubious juxtaposition

Student and graduate surveys do not differ in essence from statistics, since the information compiled in statistics is often based on surveys. Statistical offices often send questionnaires to companies, educational institutions, households or individuals to gather information that is published as statistics. However, statistics tend to be different from survey studies because they are:

- official, i.e. undertaken by public agencies which often have the legal right to request certain information;
- large-scale, i.e. including the whole “population” or at least a large sample;
- short as regards the themes addressed by the individual survey;
- fact oriented and “objective”, as stated above.

Some graduate surveys could be considered “statistics” rather than “surveys” in the way these terms tend to be distinguished in the public debates. For example, a long-lasting tradition exists in the UK of surveying the “first destinations” of university graduates (bachelor level) six months after graduation. The institutions of higher education help to trace the data. The data set has all the strengths and limitations of a short, fact-oriented inquiry. It includes the name of the higher education institution, the field of study, the employment status, and the economic sector.

Some countries have opted for a mix of statistics and surveys in undertaking regular graduate surveys with extended questionnaires which primarily rely on factual information and include some assessments by graduates. This, for example, holds true for Norway and the Dutch HBO sector.
In these countries as well as in others, graduate surveys are undertaken which tend to be broader in the themes addressed. They also tend to trace some elements of the educational and career paths retrospectively and to determine time spans since graduation (instead of age categories predominantly employed in statistical studies). And they include individuals’ perceptions and opinions (cf. the examples presented in Higher Education and Employment 1995; Brennan, Kogan and Teichler 1995).

12.6.2 Themes addressed in graduate surveys

One of the major themes of graduate surveys is the transition from higher education to employment. They might address:

– the collection of information about the graduate labour market;
– the support sought for and provided by employment agencies, institutions of higher education, friends, and relatives, etc.;
– the length of the search;
– search activities;
– search criteria as well as perceived recruitment criteria on the part of the employers;
– transitory activities, such as accepting jobs that are not considered related to one’s professional identity;
– timing of transition to first regular employment;
– characteristics of first employment, e.g. short-term contract, involuntary part-time contract, etc.

Findings show that the transition process is relatively autonomous where smartness and luck might play a major role. It is not merely a stage where the extent to which education shapes and predetermines subsequent careers becomes manifest, but a stage where decisions are at stake.

Links between study and occupational status and job assignments are a second major theme of graduate surveys. Most seem to be based on the assumption that higher education does not serve the expected useful function for the employment system and students’ expectation if it merely helps to secure employment. It is generally expected that study and the kind of work match to a certain extent and that the nature of the employment and work conditions will be assessed as desirable, e.g. in terms of demanding, challenging, relatively autonomous work, etc., and that a relatively privileged status is ensured.

This is clearly the area in which the diversity of theories, socio-political notions, concepts on the part of the graduates and difficulties of measuring and of collecting data lead to great heterogeneity of definitions, measurements, and findings. In summarising available research from the late 1970s to the mid-1980s, I showed that the proportion of “inappropriate employment”, “mismatch”, “underemployment” or similarly defined conditions varied between three per cent and over 40 per cent in surveys undertaken in various European countries. The differences were primarily due to the concepts and methods employed (Teichler 1989).
In the 1990s, the respective concepts and findings do not differ as strikingly as in the past. In the meantime, many graduates, politicians, and experts have adjusted to a middle-of-the-road attitude whereby the majority of graduates will no longer be the “chosen few” but will still expect above-average job assignments and careers. But definitions of “over-education”, etc. still vary substantially, as the following observations underscore.

Some analyses try to infer weak links between higher education and employment in terms of “under-employment” or “inappropriate employment” on the basis of occupational categories. Categories such as “lower white collar”, manual worker jobs, etc. are considered from the outside as not matching a higher education degree. They systematically tend to underestimate the variety of job requirements within occupational categories, the emergence of new demanding job assignments, and upgrading trends. Therefore, most surveys ask graduates to state whether their status is inappropriate, whether they can use their knowledge on the job, whether their job corresponds to their education, etc. They show that a substantial number of graduates employed in occupational categories that do not necessarily require a degree considers that their studies correspond to the appropriate level of preparation for their career.

Studies combining a factual and “subjective” approach also found that a substantial proportion of those employed in jobs that do not necessarily require a degree preferred such employment for other reasons, e.g. living with their partner, job security, temporary involvement in child rearing, political motives, etc. Also, a study showed that the utilization on the job of the knowledge acquired during their studies tends to slightly decline over the years, whereas the proportion of those who consider themselves as holding a position that is appropriate for degree-holders increases over the years after graduation (Schomburg and Teichler 1993). The study also pointed out that two categories of graduates observe a partial mismatch: those employed in higher education and research lack a certain degree of job security, and many socially and politically engaged graduates accept a lower-paid job if the assignment is viewed as relevant and interesting.

Finally, graduate surveys help us to measure the impact of higher education on graduate employment. Already the employment statistics might show the difference of career patterns according to the type of higher institution or the level of degree and how the field of study influences access to certain occupations. Graduate surveys might go a step further and examine whether the choice of a certain institution was meaningful or whether certain characteristics of study programmes, provisions, and conditions put a footprint on graduate employment and work.

12.6.3 Improvement of databases and research

As far as the knowledge base is concerned, we note that comparative statistical data for an analysis of higher education and subsequent careers have improved recently. However, problems not only remain as regards the comparability of data, but also the range of themes to be analysed with the help of statistics has remained small. What improvements could be made?
First, one could call for an improvement of the European education and employment statistics relevant for the relationships between higher education and employment:
  – an extension of themes for which data are collected and aggregated;
  – an improvement of categories in order to increase the relevance of the statistics;
  – a harmonisation of data in Europe in order to increase their comparability.
Second, a more ambitious reporting could be extended. Key Education Data by EURYDICE (1997) and Education at a Glance by OECD (1997c) both show the achievements reached and the possibilities for improvement.
Third, regular comparative graduate surveys should be undertaken in Europe. They can provide information on many important aspects of the relationships between higher education and employment. Though, substantial financial means are required to undertake such regular European surveys, but this would be a far superior solution to the current available scattered surveys which do not really provide any opportunity for comparison across institutions, fields, and countries.
DOES THE PROGRAMME MATTER? FINDINGS OF
THE KASSEL GRADUATE SURVEY
(1993)*

13.1 AIMS AND DESIGN OF THE STUDY

The Kassel Graduate Survey was conducted at the Centre for Research on Higher Education and Work, Comprehensive University of Kassel, Germany, from 1982 to 1991. It aimed to establish the impact of varied study programmes and study conditions at German institutions of higher education on the professional success of graduates. The survey raised four major questions:

– To what extent do study programmes and study conditions vary among institutions of higher education within the same field of study?

– To what extent do the employment and the careers of graduates vary according to the institutions of higher education and the departments from which they have graduated?

– To what extent can differences in the employment and the careers of graduates, to the extent that these differences might be attributed to individual institutions and departments, be causally attributed to study programmes and study conditions, and what other factors (student intake, the regional labour market, etc.) come into play?

– Which elements of study provisions and study conditions are most influential as regards study outcomes as well as employment and careers?

The Kassel Graduate Survey aimed to go beyond a mere stocktaking of the professional situation of graduates in three ways (see also Figure 1):

First, while most analysis of study programmes and study conditions are based only on the views of graduates, the framework of this study included the application of other methods of inquiry. For every field of study considered, detailed information was collected with the help of document analyses, on the spot observations, and interviews with deans, key lecturers, and several students. Thus the study programmes and study conditions could be recorded in a more detailed way and could be compared with the impressions of graduates.

Second, a three-step panel study of students and graduates was carried out: enquiries were made during the examination period, two years after graduation as well as four to five years after graduation. Thus only the study programmes, the start of professional life, and the settling into the latter could be analysed in a more detailed way, (and more importantly) a retrospective view of the study experience could be ascertained before it had been eclipsed by professional experience. More-

* Co-author: Harald Schomburg
over, contrary to the usual method of retrospective inquiry, the graduates inter-
viewed could record their impressions of their transition from study to profession
before these impressions had been distorted by professional consolidation.

Third, the study aimed to establish the degree to which differences in individual
fields of study in given institutions or departments from which a student had
graduated were reflected in difference in positions and careers and the aspects and
conditions of study programmes which were most important for the future profes-
sions of graduates.

The themes of major debates on the relationships between higher education and
work have changed in the Federal Republic of Germany over the last three de-
cades. From the second half of the 1960s to the beginning of the 1970s, a central
question has referred to the extent to which the increase in the student enrolment
quota should be matched by the establishment of various types of institutions of higher education and courses of study which reflected very different relationships between work and study. In this context, as a second type of institution of higher education *Fachhochschulen* were created and several comprehensive universities were established. From the beginning of the 1970s through the beginning of the 1980s – a period characterized by many experiments and the creation of a study reform commission – one question came to the fore: how could insights with regard to the structuring of course programmes and fields of study be gained by an analysis of the work/professional lives of graduates? Since the beginning of the 1980s, a question of increasing significance referred to the extent to which a differentiation of institutions and course programmes of the same type had come about or was desirable.

This study tries to clarify the degree to which a differentiation exists within selected fields of study and the extent to which it might be significant for the future employment/professions of graduates. Moreover, the study tries to ascertain the extent to which the differences could in fact be attributed to the institutions from which they graduated.

The longitudinal analysis comprised graduates from the academic years 1983/84 and 1984/85 in mechanical engineering, economics/business studies, and social work/social education. For each field of study seven institutions of higher education (universities, comprehensive universities, and *Fachhochschulen*) were selected in such a way that a variety of study programmes and study conditions was represented. About 2,500 students in their final year participated in the first survey, comprising 50 per cent of the target population. Two years later, these persons received a further questionnaire which referred mainly to their searches for employment and their initial positions. About 1,600 graduates participated in this second poll, e.g., 75 per cent of those responding initially. Finally, in 1988/1989 the third questionnaire was mailed – about five years after graduation. 1,420 graduates responded, i.e. almost 70 per cent of the responding initially.

Additional institutional analyses were conducted, as already pointed out. Prior to an initial interview, descriptions of study programmes and conditions at individual institutions or faculties were collected with the help of document analyses, interviews with key personnel, and direct information. In addition, regional labour market conditions in the localities of given institutions were investigated with the help of general documents, press advertisements, and interviews of representatives of the employment offices and other organizations.

13.2 STUDY PROVISIONS AND STUDY CONDITIONS

The final-year students were asked to state in detail how they perceived their study programmes and conditions, notably the study/learning environment, the administration of their programmes and institutions, and the approaches of the staff to education, research, and examinations. In this context, one cannot clearly establish in all cases whether or not the university environment is a precondition for the behaviour of students or whether the students shape their environments themselves, either through selection, e.g., choice of courses, or actively, for example in conver-
sation with the teaching staff. As on top of this diversity, perceptions vary, one is not surprised to find that the statements of graduates with regard to identical departments vary substantially.

Taking into account the emphasis placed on a relatively uniform quality of institutions of higher education in the Federal Republic of Germany, the differences as to study/learning environment and administrative study conditions as perceived by the examinees turn out to be remarkably high.

For example, 18 per cent of the respondents considered the localities of their universities as being stimulating for communication. In mechanical engineering, the percentage varied according to institution from 0 per cent to 15 per cent, and in economics/business studies, from two per cent to 35 per cent. In social work, only one per cent to six per cent of the students from four departments gave the above response, while in three other departments the figures ranged from 46 per cent to 78 per cent.

21 per cent complained about the deficiencies of library facilities (with regard to opening hours, reading rooms, lending facilities, etc.). This proportion varied according to institution from 0 per cent to 33 per cent in mechanical engineering, from three per cent to 35 per cent in economics/business studies from eleven per cent to 33 per cent in social work.

Two thirds of the students complained that the overcrowding of courses led to a reduction in work intensity. The proportions varied from 22 per cent to 57 per cent in mechanical engineering, from 34 per cent to 91 per cent in economics/business studies, and from 41 per cent to 97 per cent in social work.

Some 40 per cent of the respondents rated the administration favourably: 21 per cent to 53 per cent of the students in mechanical engineering, 23 per cent to 74 per cent in economics/business studies, and 12 per cent to 93 per cent in social work agreed with the statement: “I think the administration makes an effort to facilitate our orientation at the university.”

13.3 TRANSITION TO EMPLOYMENT

The search for employment turned out to be a complex procedure – 22 job applications on average by each economics/business studies graduate, 16 by social work graduates, and 13 by mechanical engineering graduates; however, the transition to employment was smoother than generally expected. The average duration of job searches was three, four, and six months respectively.

The period from graduation to initial employment was about four months on the average. In mechanical engineering, this transitional period took on average 3.7 months. It was longer for graduates of Fachhochschulen (4.5 months) than for those of universities (2.7 months). The transitional period for economics/business studies graduates took four months, whereby differences according to the two types of institutions turned out to be marginal. For social workers, the average length of the initial job search was 5.6 months. The average transition period varied according to the individual institution from 2.0 to 6.3 months for mechanical engineers, but only from 3.6 to 4.5 months for economics/business studies graduates and from 4.5 to 6.6 months for social workers.
DOES THE PROGRAMME MATTER?

One out of six graduates both from mechanical engineering and economics/business studies were unemployed at least for a short period after graduating and even more than a third from social work. Almost as many graduates took transitional jobs during the first two years after graduation (14% of the mechanical engineers, 15% of the economics/business studies graduates, and 28% of the social workers).

Table 1 presents a typology of employment and work situation two years after graduation:

- privileged job for graduates (25%);
- normal job for graduates (26%);
- job for graduates comprising substantial routine tasks (21%);
- academic position (8%);
- socio-political engagement (8%);
- dissatisfying job (12%).

Table 1. Typology of Graduate Employment and Work two Years After Graduation (percentages)

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Mechanical engineering</th>
<th>Economics/business studies</th>
<th>Social work</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privileged graduate job</td>
<td>25</td>
<td>31</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Normal graduate job</td>
<td>29</td>
<td>26</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Graduate job with substantial routine tasks</td>
<td>22</td>
<td>23</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Academic job</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Socio-political engagement</td>
<td>1</td>
<td>2</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Dissatisfying job</td>
<td>9</td>
<td>11</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Kassel Graduate Survey (second survey)

At this point of career, one out of eight employed graduates was in a position where the educational attainment was clearly not rewarded.

13.4 DIFFERENCES BY TYPE OF INSTITUTION AND INDIVIDUAL INSTITUTIONS

Fachhochschulen are supposed to offer practical training, and Fachhochschule graduates in engineering and economics/business studies are generally supposed to be in greater demand than university graduates. Surprising, though, that university graduates from those fields surveyed reported a higher level of use of knowledge which they had acquired during their courses of study (see Table 2).
fewer social work graduates reached positions generally considered appropriate for graduates of institutions of higher education, but slightly more of them reported a proper utilization of their knowledge than graduates in the other fields surveyed.

University graduates in mechanical engineering earned only three percent more than Fachhochschule graduates four to five years after graduation. The respective income differences were ten percent for economics/business studies graduates and six percent for social work graduates—i.e., substantially lower income advantages than usually provided for in civil service salary scales (about 20%).

Table 2. Graduates’ Perception of the Links Between Study and Work (percentages)

<table>
<thead>
<tr>
<th>Field of study</th>
<th>Mechanical engineering</th>
<th>Field of study</th>
<th>Social work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uni* FH*</td>
<td>Uni FH</td>
<td>Uni FH Total</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected at time of graduation</td>
<td>Mostly/partly</td>
<td>81 77</td>
<td>72 76 81 76 75</td>
</tr>
<tr>
<td></td>
<td>Hardly/no</td>
<td>15 19</td>
<td>25 21 12 15 20</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
<td>4 4</td>
<td>3 3 7 9 5</td>
</tr>
<tr>
<td>Two years after graduation</td>
<td>Mostly/partly</td>
<td>86 75</td>
<td>80 82 85 90 82</td>
</tr>
<tr>
<td></td>
<td>Hardly/no</td>
<td>14 25</td>
<td>20 18 15 10 18</td>
</tr>
<tr>
<td>4-5 years after graduation</td>
<td>Mostly/partly</td>
<td>82 69</td>
<td>79 76 82 83 78</td>
</tr>
<tr>
<td></td>
<td>Hardly/no</td>
<td>18 31</td>
<td>21 24 18 17 22</td>
</tr>
<tr>
<td>Relation between education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and position</td>
<td>Expected at time of graduation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriate</td>
<td>59 57</td>
<td>65 62 21 42 57</td>
</tr>
<tr>
<td></td>
<td>Not (fully) appropriate</td>
<td>27 25</td>
<td>27 30 64 33 30</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
<td>13 17</td>
<td>8 9 15 25 13</td>
</tr>
<tr>
<td>Two years after graduation</td>
<td>Appropriate</td>
<td>74 54</td>
<td>63 55 33 55 60</td>
</tr>
<tr>
<td></td>
<td>Not (fully) appropriate</td>
<td>26 46</td>
<td>36 45 67 45 40</td>
</tr>
<tr>
<td>4-5 years after graduation</td>
<td>Appropriate</td>
<td>73 64</td>
<td>67 55 29 54 62</td>
</tr>
<tr>
<td></td>
<td>Not (fully) appropriate</td>
<td>27 36</td>
<td>33 45 71 46 38</td>
</tr>
</tbody>
</table>

Source: Kassel Graduate Survey
* Uni = university graduates, FH = Fachhochschule graduates; surveys conducted from 1983 to 1988.

Ten criteria were chosen for measuring professional success two years after graduation and eight four to five years after graduation (see Table 3). A variance analysis helped to determine the extent to which differences in professional success
could be attributed to the higher education institution from which one had graduated.

Table 3. Differences between Individual Institutions of Higher Education with Respect to Career and Work Assignments of Their Graduates two Years After Graduation (percentages, range and explained variance)

<table>
<thead>
<tr>
<th></th>
<th>from</th>
<th>to</th>
<th>Explained variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mechanical engineering</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of search(^1) (mean)</td>
<td>2.5</td>
<td>4.2</td>
<td>4.9 *</td>
</tr>
<tr>
<td>Income(^2) (mean)</td>
<td>45.4</td>
<td>55.7</td>
<td>9.3 *</td>
</tr>
<tr>
<td>Utilization of competencies(^3)</td>
<td>73</td>
<td>91</td>
<td>9.5 *</td>
</tr>
<tr>
<td>Appropriate position(^4)</td>
<td>78</td>
<td>93</td>
<td>4.3 *</td>
</tr>
<tr>
<td>Job satisfaction in general(^5)</td>
<td>57</td>
<td>81</td>
<td>2.1</td>
</tr>
<tr>
<td>Status/career possibilities(^6)</td>
<td>10</td>
<td>33</td>
<td>3.1 *</td>
</tr>
<tr>
<td>Work involvement/relation to study(^6)</td>
<td>44</td>
<td>76</td>
<td>8.5 *</td>
</tr>
<tr>
<td>Work autonomy(^6)</td>
<td>29</td>
<td>71</td>
<td>6.0 *</td>
</tr>
<tr>
<td>Utilization of competencies in the future(^3)</td>
<td>70</td>
<td>100</td>
<td>4.9 *</td>
</tr>
<tr>
<td>Appropriate position in the future(^4)</td>
<td>67</td>
<td>86</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Economics/business studies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of search (mean)</td>
<td>3.0</td>
<td>4.7</td>
<td>2.3 *</td>
</tr>
<tr>
<td>Income (mean)</td>
<td>47.2</td>
<td>52.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td>71</td>
<td>85</td>
<td>3.6 *</td>
</tr>
<tr>
<td>Appropriate position</td>
<td>78</td>
<td>87</td>
<td>1.1</td>
</tr>
<tr>
<td>Job satisfaction in general</td>
<td>60</td>
<td>74</td>
<td>0.7</td>
</tr>
<tr>
<td>Status/career possibilities</td>
<td>20</td>
<td>41</td>
<td>1.0</td>
</tr>
<tr>
<td>Work involvement/relation to study</td>
<td>53</td>
<td>68</td>
<td>0.9</td>
</tr>
<tr>
<td>Work autonomy</td>
<td>37</td>
<td>54</td>
<td>0.8</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td>76</td>
<td>85</td>
<td>1.2</td>
</tr>
<tr>
<td>Appropriate position in the future</td>
<td>67</td>
<td>88</td>
<td>1.9 *</td>
</tr>
<tr>
<td><strong>Social work</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of search (mean)</td>
<td>4.4</td>
<td>8.9</td>
<td>10.8 *</td>
</tr>
<tr>
<td>Income (mean)</td>
<td>28.1</td>
<td>32.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td>78</td>
<td>98</td>
<td>4.8 *</td>
</tr>
<tr>
<td>Appropriate position</td>
<td>50</td>
<td>83</td>
<td>5.8 *</td>
</tr>
<tr>
<td>Job satisfaction in general</td>
<td>37</td>
<td>64</td>
<td>4.2 *</td>
</tr>
<tr>
<td>Status/career possibilities</td>
<td>0</td>
<td>15</td>
<td>1.8</td>
</tr>
<tr>
<td>Work involvement/relation to study</td>
<td>43</td>
<td>61</td>
<td>1.6</td>
</tr>
<tr>
<td>Work autonomy</td>
<td>45</td>
<td>75</td>
<td>5.3 *</td>
</tr>
<tr>
<td>Utilization of competencies in the future</td>
<td>62</td>
<td>82</td>
<td>2.5</td>
</tr>
<tr>
<td>Appropriate position in the future</td>
<td>38</td>
<td>64</td>
<td>3.3 *</td>
</tr>
</tbody>
</table>

Source: Kassel Graduate Survey (second survey)

* significant (p ≤ 0.05); \(^1\) in months; \(^2\) income in the year 1985-87; in thousands DM; \(^3\) mostly and partly utilization; \(^4\) appropriate and not fully appropriate position; \(^5\) Values 1 and 2 from a 5 point scale (1 = “Very satisfied”, 5 = “Not at all satisfied”); \(^6\) Values 1 and 2 on a 5 point scale (5 = “Not at all”).
Based on an average of the ten criteria for initial employment, the institution of higher education was held responsible for 5.5 per cent of the variance for mechanical engineering, 1.5 per cent for economics/business studies, and 4.7 per cent for social work two years after graduation.

Based on an average of the eight criteria for the professional situation four to five years after graduation, the institution of higher education was held responsible for 3.7 per cent in the case of mechanical engineering, 1.6 per cent for economics/business studies, and 3.5 per cent for social work.

On the whole, the professional success seemed to be only to a limited extent determined by the higher education institution from which one had graduated. Notably in economics/business studies, the relationship was close to zero. In the other two fields of study, the higher education institution was of less importance for the status of graduates four to five years after graduation than it had been for initial employment.

The variance, however, is explained differently according to the criterion of success examined. As regards the start of a career, it varies from:

- two per cent to ten per cent in mechanical engineering; highest with regard to the income and the extent of the utilization of competences;
- one per cent to four per cent in economics/business studies; highest with regard to the utilization of competences;
- two per cent to eleven per cent in social work; highest with regard to the duration of the job search.

Regarding professional success four to five years after graduation, it varies from:

- one per cent to eight per cent in mechanical engineering; highest with regard to the extent of the utilization of competences;
- just one per cent to two per cent in economics/business studies;
- one per cent to eight per cent in social work; highest with regard to the appropriateness of the position.

The professional success according to the criteria employed allows us to create a ranking order of the institutions of higher education. Actually,

- in engineering, graduates from universities were consistently more successful professionally then graduates from Fachhochschulen, whereby differences between institutions of the same type of higher education institutions turned out to be small in the majority of cases. However, one university stood out positively two years after graduation and another university negatively about four to five years after graduation in comparison to the other universities;

- in economics/business studies, graduates from five institutions fared more or less equally two years after graduation while one highly respected university specialized in these field stood out positively and one Fachhochschule negatively. Four to five years after graduation, graduates from a second university seemed to be professionally very successful as well, while graduates from altogether three institutions were clearly below average;

- in social work, surprisingly, the differences between the individual institutions of higher education turned out to be more striking two years after graduation than in the other two fields of study surveyed, whereby two institutions with religious affiliation stood out positively. Four to five years after graduation, the
range had become smaller, and the institutions with religious affiliation fared below average.

Two years after graduation, the income differences were scrutinized further. Income varied more strongly according to the level of wealth or poverty of a region than according to individual institutions of higher education. Thereby graduates mobile from institutions of higher education in relatively poor regions reached more or less the same income level as graduates from relatively highly respected institutions in wealthy areas who were employed in that region. Thus, income differences between graduates of various institutions of higher education in Germany seem to be to a higher extent a consequence of the wealth of the region where the institution is located than a reflection of the rank of the higher education institution.

13.5 IMPACT OF STUDY PROVISIONS AND CONDITIONS

In addition to measuring the overall impact of the higher education institution, we tried to identify the single elements of the study programmes and other conditions most relevant to the careers and the assignments of graduates. In this analysis, several variables, including the study provisions and conditions of the fields of study, the study behaviour and orientations of students as well as the results of study (in terms of examination marks, self-assessment of proficiencies, etc.) were taken into account. Individual background was also considered. A multiple regression analysis was undertaken separately for the three fields of study according to the type of higher education institution, whereby eight variables apiece for occupational success, two years after graduation, and four to five years after graduation served as dependent variables.

In the first step of the analysis, the impacts of the respective four areas (i.e., all variables regarding study provisions and conditions, and all those regarding study behaviour and orientation, etc) were measured. As Table 4 shows, all the study variables had a moderate impact on the careers and assignment of graduates. The variables of course programmes and study conditions explained seven per cent of the variance two years after graduation and six per cent four to five years after graduation for mechanical engineering, four per cent at both intervals for economics/business studies, and finally seven per cent and six per cent, respectively, for social work. However, the impact of study turns out to be clearly stronger than that of the institutional diversity of the higher education system.

In turning to the individual variables of course programmes and study conditions as a second step in the analysis, we found that only a few links are noteworthy so far as a discernable impact on career and work assignment is concerned.
Table 4. The Impact of Individual Background and the Institution of Higher Education on the Professional Success Four to Five Years After Graduation (proportions of explained variance)

<table>
<thead>
<tr>
<th>Indicators of professional success</th>
<th>Institution attended</th>
<th>Personal background</th>
<th>Institution and personal background</th>
<th>Net effect of institution attended¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mechanical engineering</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>2.5</td>
<td>11.4 *</td>
<td>13.2 *</td>
<td>1.8</td>
</tr>
<tr>
<td>Income</td>
<td>3.5</td>
<td>11.1 *</td>
<td>15.2 *</td>
<td>4.1</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td>8.4 *</td>
<td>5.8</td>
<td>10.7 *</td>
<td>5.0 *</td>
</tr>
<tr>
<td>Appropriate position</td>
<td>1.3</td>
<td>3.6</td>
<td>4.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Job satisfaction in general</td>
<td>1.0</td>
<td>4.2</td>
<td>5.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Status/career possibilities</td>
<td>1.3</td>
<td>4.9</td>
<td>6.2 *</td>
<td>1.3</td>
</tr>
<tr>
<td>Work involvement/relation to study</td>
<td>6.2 *</td>
<td>10.3 *</td>
<td>14.2 *</td>
<td>3.9</td>
</tr>
<tr>
<td>Work autonomy</td>
<td>5.4 *</td>
<td>12.6 *</td>
<td>15.8 *</td>
<td>3.1</td>
</tr>
<tr>
<td>Average</td>
<td>3.7</td>
<td>8.0</td>
<td>10.7</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Economics/business studies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>.8</td>
<td>7.3 *</td>
<td>8.2 *</td>
<td>.8</td>
</tr>
<tr>
<td>Income</td>
<td>1.7</td>
<td>10.8</td>
<td>12.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Utilization of competencies</td>
<td>2.0 *</td>
<td>6.6 *</td>
<td>8.0 *</td>
<td>1.4</td>
</tr>
<tr>
<td>Appropriate position</td>
<td>1.9</td>
<td>7.2</td>
<td>8.5 *</td>
<td>1.3</td>
</tr>
<tr>
<td>Job satisfaction in general</td>
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<td>11.4 *</td>
<td>.7</td>
</tr>
<tr>
<td>Average</td>
<td>1.6</td>
<td>9.1</td>
<td>10.2</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Social work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>4.3</td>
<td>7.0</td>
<td>12.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Income</td>
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<td>11.9 *</td>
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<td>3.5</td>
<td>6.7</td>
<td>10.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Source: Kassel Graduate Survey (third survey)

* significant (p < 0.05)

¹ Proportion of explained variance by institution attended with the statistical control of personal background of the graduates (gender, achievement at school, job experience before start of study, social origin and work values).
In the case of mechanical engineering graduates from universities, the following variables bore some weight: “integration into research”, “institutional support in job search”, “orientation help through examinations”, and “sufficient institutional resources”;

engineering graduates from Fachhochschulen: “emphasis placed on methods”;

economics/business studies graduates from universities: “transparency of achievement standards”, “integration into research”, and “research orientation”, while “emphasis on theories” had a negative impact;

economics/business studies graduates from Fachhochschulen: “transparency of achievement standards” and “emphasis on application”;

social work graduates from universities: “positive social climate”;

social work graduates from Fachhochschulen: “emphasis on methods”, “student-orientated teaching staff”, and “institutional resources”.

These findings demonstrate that we cannot identify any singly element of a study programme and study conditions which have a consistent impact on the subsequent graduate careers and work assignments across fields of study and types of higher education institutions. Rather, different factors seem to play moderate roles regarding each field and type of higher education institution.

13.6 DISCUSSION OF THE RESULTS

The Kassel Graduate Survey, undertaken in the 1980s, challenged various widespread views and perceptions regarding the relationships between higher education and employment in Germany.

Employment problems were less serious in general and less diverse according to field of study than generally assumed.

Employment opportunities for Fachhochschule graduates were less favourable than claimed in public debates.

Women’s career disadvantages varied more substantially according to field of study than the general debate on women’s employment suggested.

The vertical diversification of higher education between individual institutions and departments according to the careers of graduates was less pronounced than it was expected in recent years.

Horizontal differentiation was achieved primarily through the options of students with regard to specialization and at most additionally through different institutional profiles.

No dominant single element of study provision and study conditions could be observed which might have explained study outcomes, careers, and job assignments.

In this study, career success was examined with the help of a broad range of measures rather than with only a few, as often done, such as employment status and income. We noted that the more measures of career success were taken into account, the less career success appears to vary according to the higher education institutions. This finding allows us to conclude that single measures might create artificial differences in assessing the impacts of universities on careers.
The findings of the study might be disappointing for persons believing that only a few major factors determine the quality of higher education and that improvements would require only a few marked changes. Rather, a broad range of factors explains only a small part of the quality of higher education programmes and institutions. Also, infrastructural differences between departments or between institutions of higher education seem to play marginal roles. Finally, we conclude that neither typical measures of educational quality nor those of research reputation best explain the outcomes, but rather factors which lie somewhere between teaching and research, such as work in student assistant positions, contacts between professors and students regarding academic matters, early explanation of the rationales of the given disciplines and course programmes, etc. This observation might confirm the view that universities in Germany are most successful when they emphasize the unity of research and teaching, indeed, the ideal which they in principle profess.

We noted that students’ ways of handling universities play an important role, but clearly not to the extent that the characteristics of universities can be said to be totally negligible.

Further, the findings suggest that the quality of higher education cannot be viewed only vertically but must also be considered horizontally in terms of links between content of learning and work assignments. Last but not least, we come to the conclusion that more attention should be paid to the factors which link the teaching and the research functions of higher education.
CHAPTER 14


14.1 THE CONTEXT

14.1.1 Renewed interest in the relationships between higher education and the world of work

The major themes of the public debates on higher education change rapidly. This is also true for all the topics that touch the relationships between higher education and the world of work. In observing the debates taking place in many advanced societies, as well as those issues addressed by international organisations, we noted a major interest in the relationships between expenditure on education and economic growth and in the links between investment in education and individual returns already in the early 1960s when the expansion of higher education was believed to contribute significantly to economic growth. These debates broadened in the late 1960s and early 1970s when the issue was raised of how an achievement-oriented society was compatible with equality of opportunity. During the 1970s, however, the optimistic view regarding the relationships between higher education and employment faded and concern grew about employment opportunities of the increasing number of graduates who were seeking for a job at times of growing employment problems. Concurrently, the debate focused on curricular changes that would enhance employment opportunities. In the 1980s, emphasis was placed on the increasing diversity of job opportunities in order to reflect both the growing diversity of higher education and the ways students prepared themselves for the world of work. During this period, though, the relationships between higher education and the world of work were not as high on the agenda as many other topics of higher education policy (see the overview in Teichler 1999b).

In the 1990s, interest grew again in the relationships between higher education and the world of work. Various reasons for this development are worth mentioning. Enrolment in higher education had increased again in various countries in the 1980s and growing unemployment in the 1990s fuelled fears that “mismatch” between education and employment might be aggravated. Greater attention was paid to an increasingly complex and often protracted process of transition from higher education to employment. Moreover, rapid changes in technology also suggested that graduates could no longer expect to remain in a single profession or with a few employers: they had to be more flexible and better prepared for lifelong learning. Finally, professional competence seemed to be based to a lesser extent on specific academic and professional knowledge. Students also had to learn to apply their
knowledge, to enhance their socio-communicative skills and they were expected to have developed values and attitudes for success in the world of work.

Across these various issues, we should bear in mind that interest had grown in the 1990s in most European countries to evaluate higher education. Most evaluations on study programmes focused on processes within higher education, i.e. on the knowledge to be transmitted and teaching and learning modes, but it can also be viewed as an obvious task to examine the output and outcomes. Graduate employment and work could be considered as important outcome measures and graduate surveys could be the key sources for the information required.

In the first decade of the twenty first century, interest in the relationships between higher education and the world of work grew further. This is reflected in common European policies to ensure “employability” of those who are awarded the new degrees established in the bachelor-master structure across Europe, as well as in increasing budgets for higher education and research in order to make Europe economically more competitive on a global scale.

14.2 THE INFORMATION BASE

Information on the relationships between higher education and the world of work is far from satisfactory (see Paul, Teichler and van der Velden 2000). It is amazing to note the scarcity of the sources of information on a topic that is so high on the agenda in public debates.

Until recently, most relevant information had to be drawn from official statistics in many countries which show the distribution of graduates in economic sectors and occupations according to age, gender and educational attainment. Similar statistics might be available for unemployment and the income of graduates. These show as a rule that study is worthwhile in terms of securing higher income and reducing the risk of unemployment, but they do not provide evidence about the way in which provisions and conditions in individual universities or the students’ options affect careers. Also, readers of these kind of statistics tend to over-estimate “mismatches” between higher education and employment because, as surveys show, a substantial proportion of graduates who are not employed in a traditional graduate job category consider their job as demanding, autonomous, satisfying, and requiring high-level competences.

Hence, many graduate surveys have been undertaken. They could provide detailed information on the relationships between higher education and graduate employment and work. Unfortunately, many do not exploit the potentials of surveys to the full. We often note three kinds of weaknesses.

First, some large-scale surveys are based on very short questionnaires and, thus, provide limited information. They might provide information that graduates from one university fare better on the labour market than those from another university. But they do not help to examine which elements of the former university might have caused this success or to what extent the difference in employment success should be attributed to varying regional labour markets. Second, many questionnaire surveys address graduates of individual universities or of individual fields of study. Valuable as they might be as feedback to the individual institutions and
Third, many surveys are undertaken one year after graduation or even earlier. Thus, they provide an incomplete picture of the transition process and hardly address professional experience gained in the course of career.

14.3 THE CHEERS STUDY

14.3.1 The conceptual framework

When researchers from various countries decided in the late 1990s to jointly prepare a research design for a major comparative study on the employment and work of higher education graduates, they saw this as an opportunity to reach out beyond the concepts and findings of previous research in two respects:

– They did not consider a large team of researchers from different countries and disciplines as a danger for a coherent research approach, but rather as an opportunity to integrate a variety of concepts, themes and major issues into a single research design.
– Unlike many studies that addressed a large number of countries and focused on common issues in such a way that the specific conditions of the individual countries came into play only superficially, this research project was seen as an opportunity to examine if views on the relationships between higher education and the world of work in economically advanced societies could really be based on a common ground or, on the contrary, if specific characteristics of national higher education systems, various views of the role of higher education in preparing for work, culturally shaped notions of professions, as well as the specific economic and social conditions of graduate employment and work prevailed in the individual countries surveyed.

Debates on the relationships between higher education and the world of work tend to emphasise currently popular issues, such as the contribution of educational expansion to economic growth, the dangers of “over-education”, the diversity of higher education and employment opportunities, the rise of precarious employment, the growing role of “key qualifications” and trends towards a globalisation of the graduate labour markets, but these change quickly. But, obviously, their relevance does not fade away when they are no longer in the limelight of public debate. Therefore, the project aimed to transcend the safe harbour of established disciplinary paradigms and research approaches or the fashionable framework of debates representing the Zeitgeist, i.e. the dominant concerns during a certain period of time, and to address the growing complexity of factors that are relevant in examining the links between higher education and graduate employment and work. However, thematic choices had to be made because the conceptual and thematic range is bound to be influenced by limits of resources and feasible research methods.
14.3.2 The design of the study

In the late 1990s, researchers from various European countries undertook the first major representative, internationally comparative survey. More than 36,000 graduates from 12 countries were surveyed about three to four years after graduation. The study aimed to be representative of graduates with at least a bachelor, licence or equivalent degree and a six-year degree. The study was initially called *Higher Education and Graduate Employment in Europe*, but it also was called CHEERS (Careers after Higher Education – a European Research Survey) by its participants (see Schomburg and Teichler 2006; Teichler 2007c). It included 11 European countries – Austria, the Czech Republic, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, and the UK – and Japan (see also the country studies: Brennan et al. 2001; Schomburg et al. 2001; Yoshimoto 2001). Funds were provided by the European Commission in the framework of the Targeted Socio-Economic Research Programme (TSER).

The questionnaire addressed job searches and the transition period from higher education to employment, as well as the employment and work situation during the first four years after graduation. It also examined the graduates’ competences and their use on the job, the extent to which graduates considered their position and tasks as linked to higher education, as well as their professional expectations and the extent to which these were fulfilled. Finally, questions were asked regarding further education and training after graduation and graduates’ views of their long-term career prospects. Questions on the socio-biographic background of the students, the study conditions and provisions, as well as the grades awarded upon graduation were raised in order to determine how far these factors could explain graduates’ varying employment and work paths. The study finally examined differences of employment and work according to regions, the gender of graduates and the respondents’ international mobility.

The graduates’ willingness to participate in such a survey with a questionnaire requiring more than one hour to answer differed substantially by country. Actually, the return rates ranged from 15 per cent in Spain to 50 per cent in Norway. The analysis is based on responses ranging from about 2,300 to 3,500 graduates, more than 3,000 graduates in nine of the countries included and only less than 3,000 in three countries.

Before presenting the findings of the study, one must look back at the major public debates and research questions in place before this study was undertaken. This could help to explain the value of the results of this study.

14.4 PERSPECTIVES UNDERLYING RESEARCH AND PUBLIC DEBATES

14.4.1 The labour market perspectives

Public debates and research on the relationships between higher education and the world of work tend to be dominated by common assumptions and views. Three issues are widespread:
The contribution of higher education to individual and collective economic and social “successes” and “failures” in terms of economic growth, as well as high remuneration, non-monetary rewards and status.

The widely shared belief that the relationships between higher education and the world of work are strongly based on a reinforcement of the norms of the individual as homo oeconomicus (in the economic version) or status seeker (in the sociological version). The competences required for the economy are provided because the employment system offers the respective rewards and the logic of the differential positions and rewards in a meritocracy-based achievement society makes sure that learners are stimulated to do their best to become well-qualified members of society.

The strong interest in quantitative-structural data, notably levels of educational attainment, types of higher education institutions and degrees, employment status, economic sectors and occupational groups, as well as positions and income levels.

Both in the public debate and in research, questions are raised about how far a balance is struck between demand for and provision of highly qualified labour, as well as about the extent to which a high level of educational attainment is rewarded by a high level of monetary and non-monetary returns and a high status. In some respects, the changing debates and research approaches can be viewed as ways of identifying the imperfections and the endemic deviations from the ideal-type assumption that higher education prepares and selects for high-level occupations in the framework of a more or less perfect match between demand and supply. Over the years, we note the emergence of various new dominant themes concerning these imperfections and the endemic questioning of the traditional assumptions.

First, both policy debates and research were increasingly interested in the dynamic balance between demand and supply: does the expansion of higher education – overall or with respect to certain sectors – match the changes of graduate employment, or can signs of substantial shortages or oversupply in the highly educated labour force be observed? Does the expansion of higher education stimulate or retard the economic growth and modernisation of society?

Second, it soon became obvious that these debates and research approaches were often based on the view that certain categories of higher education were clearly articulated around certain categories of the employment system. A certain degree of openness, vagueness and flexibility became increasingly seen as desirable to take care of the broad variety of occupations, newly emerging job roles and innovative tasks across established occupational categories, innovations in the employment systems triggered off by changes in higher education, equipping students with the abilities to handle indeterminate work tasks and graduates with abilities to cope with uncertain employment conditions.

Third, greater attention was paid to endemic signs of a looser match between education and employment than to the concepts of a market-regulated adaptation of demand and supply and of an achievement society based on educational meritocracy: Is an open education system in a society that rewards high-level education bound to lead to overheated competition for educational success and for continuous “over-education”? Do successful careers upon graduation from certain universities
indicate only to a limited degree the differences of educational quality and predominantly artificial “credentialism” or “degrecocracy?” Are moderate economic rewards for educational attainment and a moderate educational meritocracy the normal state of affairs?

Fourth, attention was increasingly paid to unemployment, precarious employment and employment in low-level occupations and positions of higher education graduates: how do the opportunities and risks differ, how are they caused and what helps students to cope with these conditions?

Finally, the dynamics of the transition process from higher education to employment became one of the key issues of the debate and analysis. This reflected the fact that graduates’ job searches and recruitment became more and more costly, time-consuming and protracted. Lack of information, uncertainties about occupational motivations on the part of the graduates and ambivalences of recruitment criteria on the part of the employers contributed to extended periods of decision-making and trial-and-error.

14.4.2 The knowledge and work perspectives

Higher education has a qualifying function for the world of work and for all life spheres of graduates. It is responsible for knowledge generation, transmission and preservation. Students are taught and are provided with an environment that is conducive to enhance their competences on their own. Therefore, the public debates and research on the relationships between higher education and the world of work have a second major area of emphasis. We also note a variety of perspectives, which we could call the qualification perspectives, in the way “qualification” is used in many languages: as individuals’ acquired abilities that are potentially relevant for professional practice, or the knowledge and work perspectives that address the substantive links between what is learned in higher education and the work tasks. Analyses in this domain focus on the knowledge dimension. They address the students’ competences upon graduation, the ways they have been acquired and their links to job requirements. The issue of an appropriate balance between demand and supply is raised again, but not in terms of quantitative-structural categories of education and jobs or of whole persons, but rather in terms of links between specific dimensions of competences and respective work tasks.

First, there is the question of how well the study programmes prepare graduates so that their competences match the job requirements. And discrepancies are interpreted as calls for curricular reforms. Second, one tends to weigh the strengths of the training of specialists against those of a broad range of knowledge. Views vary with respect to the need for specialised knowledge for successful job performance, the extent to which one can put trust in a broad transfer of knowledge, and the extent to which specialised knowledge should be acquired during the course of study or during initial job training after graduation. Third, the debate on the acquisition and use of knowledge of higher education graduates differs substantially from that of those from other types of schools and vocational training. Graduates are expected to perform well in the framework of established job requirements and professional practices, but they are also trained to constantly reflect and challenge
the established links between knowledge and work tasks. Higher education is training the critical thinking, reflection, innovation, coping with indeterminate work tasks and for pro-active change of occupations on the basis of new knowledge. Views vary considerably regarding the extent to which higher education must be “responsive” to perceived demands or must be pro-active in training students to challenge the perceived demands. Fourth, there has been a growing conviction in the last few decades that higher education should play a stronger role in fostering competences beyond systematic cognitive knowledge. Universities are generally seen as having the core function of transmitting theories, methods and a systematic body of knowledge related to certain disciplines or professional areas. Terms such as “extra-functional qualifications”, “orientation towards practice”, “key qualifications”, “personality”, “employability”, etc. became popular. They signalled that higher education should also foster competences that are relevant for successful professional practice and are based to a limited extent on cognitive and systematic learning. Fifth, claims are frequently made that the qualifying function of higher education ought to be changed in the light of the rapid emergence of new knowledge, the rapid obsolescence of knowledge and frequent changes of the graduate labour market’s job requirements at various career stages. A growing need is seen for “continuing professional education”, “recurrent education” and lifelong learning. Accordingly, graduates should be equipped with a general foundation of knowledge rather than with competences that are of immediate use for professional practice. Students should “learn how to learn”.

14.4.3 The values and options perspectives

Students’ and graduates’ motives and activities cannot really be viewed, as it is often done, as primarily driven by a desire to maximise income and status. Six partly interrelated areas of values must be quoted in this respect.

First, professionals hold in high esteem a pride in good professional work and in the use of their competences. Intrinsic motivation is often seen as a more important driver for good professional practice than the extrinsic motivation for rewards such as income and status. Second, autonomous work, in terms of disposition to decide about the goals, the process, the timing, etc. of one’s assignments, is held in high esteem by a substantial proportion of graduates and is part of the professional pride of highly qualified persons. Third, we note that some values that are closely associated with the innovative function of systematic knowledge are held by many highly qualified persons: opportunities to undertake research, curiosity, interest in further learning, improving and revolutionising society. Fourth, research on job satisfaction has revealed a wide range of work conditions and employment conditions that is generally highly appreciated. Good contacts with colleagues, time for regular leisure activities and other assets of certain job roles could explain the occupational choice and the daily behaviour of the work force. Fifth, values related to the socio-communicative environment outside the world of work have often been pointed at in recent years as highly influential for work-related decisions. The choice of certain regions as place of work or place of residence, as well as career sacrifices for the sake of partnership, family and children are examples of this.
Sixth, gender differences of occupational conditions, values and behaviour have been one of the major themes of debate and research in this framework in recent decades. Analyses do not only address the views of men and women, but also try to establish whether the different values and activities could be considered as adaptations to unequal opportunities or as genuinely distinct values and options.

Views on changes of these values vary over time. On the one hand, a growing weight of intrinsic motives is observed as a shift toward “post-industrial values”: the more a certain wealth of society due to economic dynamics could be taken for granted, the more persons turn to improvements of life and society beyond the material rewards that were previously strived for. Similarly, the values of the highly qualified professions seem to spread in the process of educational expansion. On the other hand, monetary and non-monetary labour market rewards, as well as status motives are viewed as gaining momentum when employment problems grow. Similarly, we noted a revival of the homo oeconomicus when the Zeitgeist was increasingly shaped by neo-liberal economic values.

Prior analyses have shown that some value dimensions that could conflict with those of the homo oeconomicus and status seekers could be interpreted as an appreciation of non-monetary economic rewards within a broad spectrum of status dimensions. Moreover, we often observed a high positive correlation between income and status and work conditions held highly in esteem by professionals, such as autonomous work, opportunity to make use of one’s competences, or opportunities for lifelong learning.

14.5 THE COMPARATIVE APPROACH OF THE STUDY

Many analyses of graduate employment and work are based on general, i.e. not country-specific assumptions on modern economies and societies. They tend to believe in universal mechanisms of societies or at least in common mega-trends of modern societies. No matter whether one addresses the contribution of educational expansion to economic growth, the endemic over-education in educational meritocracies, the shrinking of gainful work as a consequence of automatisation, the relevance of key qualifications for productive work or the impact of globalisation on graduate employment and work, most of these debates are based on the assumption that all countries seek for the best possible solutions according to common criteria. Such approaches, of course, do not negate differences between countries, but they interpret them as indicating the relative position of the individual country according to common criteria.

But, obviously, there are also features of the higher education system, of notions of employment, work and professions, as well as of a desirable social fabric in each country which are clearly distinct from other countries and which are a relatively stable frame of reference for choices of, for example, study programmes, rationales of curricula, recruitment practices or the design of occupational roles within the respective country. Any attempt to rank these features on a scale of modernity or economic rationality is based on cultural imperialism.

It is impossible for a team composed of researchers from a large number of countries to take into account and examine the wealth of concepts that exists in
each country about the characteristics of their higher education system and of specific notions of employment and work as well as other relevant characteristics of their society. In seeking for a feasible approach, two choices were made.

First, it was agreed to pay special attention to characteristics that were widely assumed to be major challenges to the more or less universal assumptions about graduate employment and work. Four issues were addressed:

– In various European countries, the typical notions of educational meritocracy do not seem to have affected the values and activities of the majority of the population. At most, modest intergenerational mobility is taken for granted and more emphasis is placed on social justice between different social groups than on individual opportunity for social mobility. In contrast, Japan is often seen as the country where the values of educational meritocracy are most strongly rooted and where success in pre-career education is considered crucial for careers. The U.S. are often depicted as a country where the opportunity for individual mobility is also the key criterion of social justice, but, in contrast to Japan, the lifelong opportunity for success is held in high esteem.

– We note striking differences between countries as far as general or specific approaches of education and training are concerned. Where a generalist’s view prevails, for example in the Anglo-Saxon countries and in Japan, specialised training is viewed as “narrow” both in terms of restraining professional flexibility and of personality development. Where a specialist’s view dominates, notably in France and to a certain extent in Germany, the acquisition of specific knowledge is considered as a process of exemplary in-depth learning which ensures transfer to other areas of expertise that are compatible with a vast cultural understanding.

– There is also a substantial variety of concepts of employment and work-related identity. In France and Germany, professional identity is viewed as a major base for individual identity. This tradition, for example, has reinforced a high level of professional pride in skilled workers in Germany. In the US, a stronger emphasis on the status and remuneration level is customary, if professional pride is referred to; a clear distinction is made – as in the UK – between (high-level) “professions” and other “vocational” areas. In Japan, affiliation to one’s employing organisation tends to be seen as the key source of work-related identity.

– Finally, the views differ substantially as regards the roles of strategic political action in shaping the relationships between higher education and employment. In the U.S., faith in the self-regulatory forces is most widespread as far as educational preparation for employment and work in a market-driven economy is concerned. In most European countries, in contrast, different degrees of macro-planning and steering of education are considered essential to strike a balance between economic and other social and cultural rationales. The more countries believe in strong market regulation, the more a high degree of vertical differences in income and status is viewed as acceptable and desirable.

Second, the members of the research team agreed to adopt an inductive approach. Whenever graduates from certain countries differed strikingly in their responses to the questions raised in the questionnaire, the researchers of these countries were
asked to examine whether these responses reflected certain characteristics of the higher education system or the professional values and the social fabric.

14.6 GRADUATES’ “SUCCESS”: THE FINDINGS OF THE STUDY

14.6.1 The criteria

The CHEERS study aimed to measure the outcomes of higher education in terms of graduates’ “successes” and “failures” in the world of work in a more multifaceted way than most previous studies. Success was assessed in terms of:

– Transition from higher education to the world of work: for example, the time spent and the efforts made to find desirable jobs, the methods employed in the search process, and the activities undertaken before first regular employment. “Smooth” transition can be viewed as the overarching criterion of success.

– Employment, i.e. the value of “exchange” between employers and employees. Typical measures for successful employment are salary, fringe benefits, full-time employment, job security, social respectability, or career prospects. “High status” is the basic criterion for success as far as employment is concerned.

– Work, i.e. the professional activities and the relationship between knowledge and work. Widely used measures are interesting, demanding and independent work, opportunities for further education, great use on the job of the competences acquired in the course of study, and job satisfaction.

Of course, differing results by country are interesting in this framework. They will be presented first, before attempts are made to discuss the results in a wider framework. Initially, the Czech Republic and Japan will not be taken into consideration to illustrate differences between the ten Western European countries.

14.6.2 Transition to employment

Traditionally, it was taken for granted that the labour market was rather rational in allocating the work force according to the job requirements. In recent years, however, more attention has been paid to the transition process, which could operate smoothly or less smoothly and could be determined by specific dynamics, providing the smart ones of the less qualified graduates with another chance and causing problems for the highly qualified who are not well prepared to handle the transition process.

About 40 per cent of the graduates surveyed in the ten European countries seeking a job around the time of graduation started their search prior to graduation. More than 30 per cent began the search around the time of graduation and less than 30 per cent somewhat later. More than half of the graduates from Norway and Sweden began their search prior to graduation in contrast to less than one fifth of those from Italy and France. About one quarter did not seek for a job because they continued in the job they already had, obtained a job without search, went on with full-time study or embarked on other activities.

In most European countries, the transition to employment seems to have been smoother than the public debates about the problems caused by the expansion of
higher education and the precarious labour market situation in general suggest. In seven of the ten countries, the average search period for the first regular employment after graduation lasted only three to six months. As Table 1 shows, however, the average duration was about nine months in Italy and one year in Spain.

Transition can be viewed in a broader way. Even when graduates find employment for the first time in a fairly regular job, this could involuntarily be a part-time job, the contract could be for a short term, and the position and work tasks could be so far from expectations that the graduates looked for another opportunity. Over the first four years after graduation, actually about five per cent of the respondents had been unemployed most of the time. This percentage was marginal in six countries analysed, as Table 1 shows, but comprised nine per cent in Italy and 18 per cent in Spain. About four years after graduation, only three per cent of the graduates in the ten European countries were unemployed, but seven per cent in France and ten per cent in Spain.

*Table 1. Transition from Higher Education to Employment in Ten European Countries (months; per cent)*

<table>
<thead>
<tr>
<th>Country</th>
<th>Duration of job search (months)</th>
<th>Still on search after 12 months (%)</th>
<th>Mostly short-term/occasional jobs (%)</th>
<th>Mostly unemployed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>3.3</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.9</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Finland</td>
<td>5.1</td>
<td>4</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.4</td>
<td>4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>4.7</td>
<td>3</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>5.5</td>
<td>3</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Austria</td>
<td>6.0</td>
<td>2</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>France</td>
<td>7.1</td>
<td>20</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Spain</td>
<td>11.6</td>
<td>10</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Italy</td>
<td>8.9</td>
<td>4</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6.1</strong></td>
<td><strong>5</strong></td>
<td><strong>13</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

Source: CHEERS Graduate Survey

Altogether, Spain, Italy and France consistently stood out as far as the length of the transition process was concerned. The long duration seemed to be caused by a mix of a post-graduation moratorium that was customary in these countries – often also underscored by graduates continuing to live with their parents – and by a difficult labour market situation for graduates.

About 13 per cent of all the graduates in the ten countries spent the first four years after graduation mainly in occasional jobs or on short-term employment. This reflects difficulties in finding a suitable job, but other factors come into play as
well: some graduates prefer a trial-and-error process to a rapid binding decision, some careers require short-term contract professional training periods, and in some countries short-term contracts have spread to such an extent that they can no longer be viewed as the problem of a minority, but as part of a normalisation of what some experts consider “flexible” and others consider “precarious” employment. This percentage was high again in the countries where the transition problems were most serious (Spain, Italy and France), but also above average in the Netherlands, where the transition seems to work quite smoothly: obviously, an erosion of long-term and indeterminate contracts plays a role in this country.

14.6.3 Employment according to objective indicators

According to the CHEERS survey, about six out of seven graduates in the ten European countries analysed were part of the labour force four years after graduation. Among the remaining ones, some were in advanced academic study, some were still in professional training, some spent most of their time on child rearing and family care, and some opted for a broad range of other activities. Among those in the labour force, the unemployment rate was less than four per cent.

In 1999, the average annual gross income of graduates in full-time employment was about 30,000 Euro four years after graduation. It was clearly above average for the graduates in Germany, Norway and Austria and clearly lower in Spain, Italy, and France, as Table 2 shows.

The categories of occupational groups employed internationally focus on the position and professional status, not on the type of work or on the competences required. In the past, therefore, they had often been used for analyses of “appropriate employment”, “over-education”, etc. Table 2 shows that about three quarters of the graduates of the countries analysed were active as “professionals” or “legislators, senior officials and managers”, i.e. in categories traditionally viewed as “appropriate”, four years after graduation.

Graduate employment tends to be described in terms of economic sectors and occupational groups. The CHEERS survey shows that more than two-thirds of the graduates from most fields of study were concentrated on one or two economic sectors, each of which can be viewed as most closely linked to the respective fields. Only graduates in the humanities and in economics and business studies were widely dispersed across economic sectors.

Four years after graduation, about one fifth of the graduates were in positions of “technicians and associate professionals”, e.g. social workers, para-medical professionals, middle-level administrators, etc. Often, these positions are typical for graduates with short or vocationally-oriented degrees, but experts tend to believe that not all graduates in this category can be viewed as appropriately employed. However, about half of the Norwegian graduates were in this category and all of them believed that their work matched their level of education. Finally, about seven per cent of the employed graduates were working as clerks, low-level sales persons, manual workers, etc. Most experts consider these categories as indicating inappropriate employment of graduates. The share in these categories was above average in Spain (23 %), the UK (11 %), France (10 %), and Italy (9 %).
Table 2. Employment of Graduates About Four Years After Graduation in Ten European Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Employment</th>
<th>Seeking employment (%)</th>
<th>Average Income (1,000 €)</th>
<th>Low Income (%)</th>
<th>Profess./ Techn./assoc. (%)</th>
<th>Clerks, Profess. workers, etc. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>87</td>
<td>1</td>
<td>35.4</td>
<td>2</td>
<td>46</td>
<td>53</td>
</tr>
<tr>
<td>Sweden</td>
<td>83</td>
<td>1</td>
<td>29.9</td>
<td>17</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Finland</td>
<td>93</td>
<td>1</td>
<td>30.7</td>
<td>17</td>
<td>93</td>
<td>5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>87</td>
<td>3</td>
<td>30.6</td>
<td>21</td>
<td>74</td>
<td>15</td>
</tr>
<tr>
<td>Netherlands</td>
<td>93</td>
<td>2</td>
<td>28.4</td>
<td>24</td>
<td>68</td>
<td>25</td>
</tr>
<tr>
<td>Germany</td>
<td>87</td>
<td>2</td>
<td>38.3</td>
<td>9</td>
<td>83</td>
<td>12</td>
</tr>
<tr>
<td>Austria</td>
<td>87</td>
<td>4</td>
<td>33.3</td>
<td>14</td>
<td>95</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>69</td>
<td>7</td>
<td>24.7</td>
<td>44</td>
<td>66</td>
<td>24</td>
</tr>
<tr>
<td>Spain</td>
<td>73</td>
<td>10</td>
<td>16.3</td>
<td>77</td>
<td>73</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td>79</td>
<td>5</td>
<td>20.5</td>
<td>63</td>
<td>61</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>4</td>
<td>30.0</td>
<td>25</td>
<td>72</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: CHEERS Graduate Survey
* Arithmetic mean of annual gross income of full-time employed graduates.
** Less than 20,000 Euro annual gross income of full-time employed graduates.
/ Not asked in the questionnaire.

14.6.4 Subjectively perceived links between study and subsequent employment and work

Graduates are often asked in surveys to rate the links between study and subsequent employment and work. Two dimensions tend to be addressed: the horizontal dimension, i.e. the substantive link between fields of study and knowledge on the one hand and the area of work and the kinds of work tasks on the other, and the vertical dimension, i.e. the appropriateness of the level of employment, e.g. the position in relation to the level of the educational attainment and credentials.

As regards the substantive link, we note, first, that, four years after graduation, about one fifth of the European graduates surveyed saw little or no use on the job of the knowledge and skills acquired in their course of study. This share is by far the highest in France (37 %), but also above average in Spain and the UK (25 % each). As Table 3 (first column) shows, in contrast, few graduates from the Nordic countries perceived little or no professional use of what they had learned during the course of study (5 %-12 %).
Table 3. Perceived Limited Link Between Study and Employment/Work and Job Satisfaction about Four Years After Graduation (percent)

<table>
<thead>
<tr>
<th>Country</th>
<th>Little use of knowledge</th>
<th>Wrong field/HE not necessary</th>
<th>Level of education hardly adequate</th>
<th>Current work situation worse than expected</th>
<th>Dissatisfaction with current job/work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Sweden</td>
<td>12</td>
<td>7</td>
<td>/</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Finland</td>
<td>12</td>
<td>9</td>
<td>6</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>25</td>
<td>27</td>
<td>18</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>16</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Germany</td>
<td>23</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Austria</td>
<td>17</td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>France</td>
<td>37</td>
<td>26</td>
<td>22</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Spain</td>
<td>25</td>
<td>15</td>
<td>17</td>
<td>38</td>
<td>13</td>
</tr>
<tr>
<td>Italy</td>
<td>21</td>
<td>14</td>
<td>22</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>14</td>
<td>14</td>
<td>19</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: CHEERS Graduate Survey

Asked how their field of study is linked to their area of employment and work four years after graduation, about 40 per cent of the respondents stated that their field was the only one possible or by far the best. About the same proportion imagined that other fields could have prepared them as well. Table 3 (second column) shows that about one sixth of the graduates did not see a link between their field of study and the work tasks. This proportion was clearly highest in the UK (27 %) and France (26 %), while such a mismatch was rarely reported in Nordic countries (3 %-9 %).

Asked to consider all dimensions in their judgement, one seventh of the graduates believed that their level of employment and work was hardly or not at all appropriate. The proportion of those who considered themselves not adequately employed was clearly above average in Italy and France (22 % each), as Table 3 (third column) shows as well. In contrast, this view was held only by a few graduates in the Nordic countries and the Netherlands.

Altogether, for most graduates, employment was not a major disappointment one had to adapt to. On the contrary, more than 40 per cent perceived their work situation four years after graduation as better than expected, as compared to only about 20 per cent considering that their situation was worse than expected. Disappointment was most frequent for graduates from Spain (38 %) and Italy (30 %) and also above average for those from the UK (24 %), France (24 %) and Sweden (22 %). In contrast, as Table 3 (fourth column) shows, few graduates from Norway
(7%), the Netherlands (10%) and Austria (13%) were disappointed about their employment and work. Finally, only one ninth was predominantly or completely dissatisfied with their work about four years after graduation. This was most often the case for graduates from the UK and Italy (19% each), as can be seen in Table 3 (fifth column). On the other hand, very few graduates from Norway (4%), the Netherlands (7%) and Finland (9%) were dissatisfied.

14.6.5 A view across diverse measures

Taking all the measures of transition, employment and perceived links between study and subsequent employment and work, we note that most graduates ended up after not too long a period of transition in early career positions and work tasks which could be viewed as more or less matching their knowledge and educational level. Varying according to measures, the situation looks less promising for a minority of about ten to 20 per cent.

According to findings regarding the transition process and according to “objective” measures of employment, there is a clear North-South divide in Europe. A substantial proportion of graduates from Spain, France, and Italy face employment problems, but few from Nordic countries. The graduates’ ratings of their horizontal and vertical links between study and subsequent employment and work, their fulfilled hopes and disappointments as well as their overall satisfaction with their work predominantly confirm this picture, but are different in two respects. First, the Dutch graduates perceived that their employment and work situation on average was as linked to studies, adequate and satisfying as those from Nordic countries, but they reported less stable employment. Second, the proportion of those assessing the links between study and work as negative and the work situation as disappointing and dissatisfying was relatively high amongst British graduates. This is surprising because they retrospectively rated their study conditions and provisions as quite positive, had a relatively smooth transition process to employment and had similar remunerations as the European average.

14.7 CONFIRMING CONVENTIONAL WISDOM AND CONTRIBUTING TO NEW INSIGHT

14.7.1 Discussing the relevance of the results

The CHEERS study analysed graduates’ employment and work outcomes in terms of “successes” and “failures” and the role played by socio-biographic factors, study conditions, provisions and study strategies for their subsequent employment and work (see also Mora 2007). The aim of the subsequent considerations is to show the extent to which the CHEERS study presented results which could have been expected on the basis of prior discussions on the relationships between higher education and the world of work and where it provided surprising findings and new insights.
14.7.2 Higher education, the labour market and successful careers

Expansion beyond a demand or a changing demand? There are no indications in the CHEERS study that the expansion of higher education in the 12 countries surveyed clearly contradicted the development of employment and work opportunities for graduates. For example, 70 per cent of the graduates surveyed who had graduated in the mid-1990s were employed as professionals, managers or in similar occupational categories usually requiring a degree four years after graduation. A comparison with surveys undertaken in the 1970s and 1980s in various countries suggests that this proportion is more or less stable. Also, other findings of the CHEERS survey are in tune with the interpretation that graduates in most countries surveyed did not have fewer opportunities of working in typical graduate jobs. For example, only 12 per cent considered that their occupational situation four years after graduation did not correspond to their level of educational attainment.

There are indications in the CHEERS data, though, that the graduation rates greatly surpassed the respective increase in professional and managerial positions in a few countries. Most graduates in Norway and in Japan were employed in associate professions or other middle-level occupations. The graduation rates among the corresponding age group were exceptionally high in these two countries.

One could argue, though, that the extent to which graduates are employed in these positions is no longer pertinent as an indicator of a link between higher education and the world of work. When higher education expansion reaches a higher level and graduation rates from degree programmes represent more than about one quarter of the age group, employment in middle-level positions is no longer the unfortunate fate of the minority of less successful graduates, and preparation for these positions becomes a regular function of some sectors of the higher education system.

Towards closer links between educational and professional “success”? By and large, the CHEERS survey confirms that learners’ efforts and investments are rewarded when the first few years after graduation are analysed. Most graduates succeeded in finding employment in occupations and positions that are considered typical for graduates.

With the expansion of higher education, rewards for educational investments and the persistence of an educational meritocracy can no longer only be examined by comparing the career of persons with clearly distinct levels of educational attainment (e.g. higher education graduates and school leavers). Rather, one must analyse whether differences such as the type of higher education and programme, the reputation of the institution or the grades obtained during the course of study and in final examinations become increasingly important for graduates’ subsequent employment.

It is often claimed that other types of higher education institutions and short university programmes challenge the established educational hierarchy through more targeted professional training. The CHEERS data suggest, however, that graduates from these programmes were more often than university graduates in positions which they did not consider as corresponding to their level of education. Former graduates saw short and vocational programmes as more clearly linked to
job assignments, but they also considered many of their competences to be of a lower level than those of graduates enrolled in long university programmes.

The reputation of the university was seen to be very important for the subsequent employment of graduates in Japan. In European countries, however, many graduates did not consider this as crucial for their recruitment, and the proportion of those viewing the institution as crucial varied to a lesser extent by country than one would have expected according to conventional wisdom. Differences in reputation were viewed as important in France and Norway, but surprisingly not so much in the UK.

On the other hand, it was widely assumed that more or less automatic career reward for educational achievement had been challenged in recent years and that the trust on the part of students and graduates had declined. It was often claimed that the spreading employment problems were more likely to reduce trust in the relevance of educational success for subsequent professional success than to stimulate students to strive more strongly for educational success. In addition, competences which were only shaped indirectly and to a limited extent during the course of study, e.g. applying knowledge to professional assignment, socio-communicative competences, work styles and work-related values, became more important for future assignments. Moreover, the transition process seemed to develop a dynamic of its own for job-seeking, where relying on personal connections, establishing early contacts with employers, obtaining support from the higher education institution, investing substantial time in the search process, coaching for employment interviews, etc. were widely viewed as being almost as important as the acquisition of competences needed for the job. The CHEERS study does not necessarily confirm these assumptions.

This does not call into question the fact that many students are extremely concerned about their future employment. This is confirmed, for example, by the finding that about 40 per cent of the graduates saw their future employment and work in a more negative light than it actually was. Obviously, many students also sought to improve their employment opportunities by other means than academic success. Amongst them, more than 40 per cent spent a substantial amount of time on training and professional work before they enrolled in higher education. The majority who spent a great deal of the study time on internships and gainful work considered this as a better investment in the future than spending more time on academic study. Further, about 30 per cent reported that personal connections, prior contacts with employers and help from their higher education institutions were the most important ways of finding their first job after graduation, i.e. ways where other criteria came into play.

These findings, however, do not suffice to draw the conclusion that the reward of high educational achievements is seriously challenged. Rather, the relationships between higher education and career can neither be viewed as closely tied nor as marginal, and this can be interpreted as a moderate meritocracy.

The frequency of serious employment problems: Graduates’ employment problems were an issue of concern in many countries of the CHEERS study. One must bear in mind, though, that there is no indisputable yardstick for establishing the number of graduates who faced serious employment problems. We could claim
that it was high, if we look at graduate unemployment a few months after graduation, or if we consider all graduates who are not in a professional or managerial occupation as inappropriately employed.

However, these yardsticks could be too rigid. Some graduates spend a period of search. Four years after graduation only four per cent of graduates were unemployed, i.e. not employed and seeking employment. In addition, of those who found employment, only 15 per cent had been seeking their first job for more than six months after graduation. Moreover, approximately half of the some 30 per cent of professionally active graduates who were not employed in managerial and professional ranks noted close links between study and employment. Hence, the notion of “mismatch” would be an exaggeration.

Only eight per cent of the CHEERS graduates stated that their studies were not at all related to their area of work four years after graduation. 14 per cent considered their professional situation as rather inappropriate, but a substantial proportion opted for it voluntarily because they preferred to live and work in certain localities or considered this work assignment as interesting or the conditions as desirable.

11 per cent of those who were employed four years after graduation had part-time work, and 22 per cent had temporary contracts. The CHEERS study, however, shows that not all of this can be viewed as precarious employment. Indefinite contracts were challenged as the normal pattern of employment in some European countries. In addition, temporary contracts were most widespread at early career stages in the academic profession and in some other public service professions, i.e. in professions which were quite popular amongst graduates. Last but not least, part-time employment was most frequently chosen by women with children four years after graduation.

Pointing out that few students graduating in the mid-1990s faced serious employment problems and hardly noted any link between study and work assignments does not mean that the gravity of the problem should be played down with regard to those most seriously affected. But the CHEERS data suggest that most of those who could consider themselves as being in a difficult employment situation about six months after graduation were likely to interpret these problems later as problems of transition. And by using a multitude of criteria, the CHEERS study shows that employment outside the traditional professional areas of graduates is not consistently an indication of study being irrelevant for employment and work.

Country-specific conditions: The relationships between higher education and graduate employment undoubtedly had common characteristics in most of the economically advanced countries during the 1990s. Differences by country, however, were substantial in some respects:

In Norway and Japan, graduate employment had already reached a new stage which could be called the upgrading of the middle-level professions. While the link between field of study and area of employment was quite close in many countries, great flexibility could be observed in this respect in the UK. Many graduates in the Nordic countries found employment in the public sector, where more graduates saw a closer link between knowledge and job assignment and were more satisfied, but where we noted less flexibility in also absorbing graduates in middle-level occupations. A high degree of job security remained widespread in the late 1990s, ...
GRADUATE EMPLOYMENT AND WORK IN EUROPE

notably in Japan, while long-term contracts were challenged as normal in the Netherlands and Spain. Immediate transition from higher education to employment remained typical for graduates in Japan, whilst in some European countries a search and transition period of up to six months after graduation had become the dominant trend. Graduates from Japanese universities considered the reputation of the university as important for their career more often than their colleagues in Europe, and they considered direct help from the university as crucial in finding their first employment. Graduates in Italy, France, and Spain did not only experience more protracted periods of transition but were more likely to face employment problems and find positions and work tasks that did not correspond to their level of education.

14.8 LEARNING, COMPETENCES AND WORK

Major issues beyond graduate employment: Higher education institutions are responsible for knowledge generation, transmission and preservation. Students are taught and provided with various opportunities of enhancing their knowledge base on their own. As regards the links between the acquisition of knowledge during the course of study and the utilization of this knowledge on the job, five questions were seen as most intriguing: Do the study programmes and the knowledge acquired in these correspond to the job requirements? How far are the relationships between higher education and the world of work flexible? Are there areas where the discrepancies between study and the immediate job requirements could challenge outmoded practices and contribute to innovation, upgrading occupations and societal change? To what extent are competences required by systematic cognitive knowledge, and to what extent have students acquired abilities to apply their knowledge in work tasks, conductive working styles and values, socio-communica- tive skills and similar competences? Finally: how does the growing need for lifelong learning affect the relationships between pre-career study and learning during the first years and the job assignment?

The CHEERS study elicited interesting findings in most of these aspects. However, its contribution is marginal as far as understanding the changing links between higher education and the world of work amidst a growing popularity of concepts of lifelong learning is concerned, because continuing education does not play a substantial role during the first four years after graduation.

Links between study and work assignments: How close, flexible and dynamic? Four years after graduation about half of the graduates reported that they made great use of the knowledge they had acquired in their course of study, and only 21 per cent perceived little professional use of their knowledge. Other responses with respect to their professional status and job satisfaction suggest that many graduates considered it normal and satisfactory that study was quite useful for their professional work; a very close link and a targeted preparation for the work assignments did not seem to be the common expectation. Only 38 per cent considered their field of study as the only one possible or by far the best for their area of work. 38 per cent also believed that other fields of study could also prepare for their area of work, and 11 per cent stated that the field of study was not important with respect
to their work assignment. This flexible link was perceived more often than a “mismatch”: only nine per cent saw another field as more useful and eight per cent saw no use at all in having studied.

For the majority of graduates, great use of one’s knowledge and challenging and demanding work tasks were related to the status and income categories they expected. The available data, however, suggest that at least one third of the graduates who were in a lower position than a graduate would expect as normal also stated that they made some professional use of the knowledge they had acquired during their course of study.

By and large, a closer link between study and job assignment was perceived by graduates working in the public sector. This reflects in part the public control of professions for which a certain field of study is the required entry qualification, in part a general tendency of the public sector to foster a close link between curricula and work assignment, and in part lesser flexibility of the middle-level occupational areas with respect to upgrading.

The graduates’ perceptions of links between study and work assignments differed greatly by country: a close link was reported by a large proportion of graduates in the Nordic countries, but only by a small number in France and Japan. For example, little utilization of knowledge was stated by 12 per cent or even fewer of the graduates in Finland, Norway and Sweden, but by 37 per cent in France and 47 per cent in Japan. These differences cannot solely be explained by the expansion of higher education. Rather, as already discussed, different quotas of employment in the public sector and in the professions came into play. Moreover, the educational and professional traditions of specialisation in France could reinforce high expectations with respect to a close link, which, in turn, elicit a radical negation of such a link if it is only loose.

Questions in the CHEERS survey were not formulated in a way which would help to disentangle how far graduates acted in an innovative and critical way with respect to the prevailing job “requirements”. However, 57 per cent stressed the fact that they had opportunities of pursuing their ideas, and 64 per cent stated that they could organise their work independently. 46 per cent believed that they could do something useful for society, but only 22 per cent found many opportunities of exercising a political influence through their professional work.

The graduates’ retrospective assessment of study cannot be perceived as overwhelming praise. More than 40 per cent missed practical emphasis. This did not mean, however, that those who had been enrolled in study programmes and institutional types that advocate a more targeted job preparation and a stronger practical orientation than typical university programmes saw themselves as better prepared for their future assignments. Many of these graduates retrospectively appreciated these “vocational” approaches, but, on average, they noted greater discrepancies between their competences upon graduation and the job requirement, and a higher proportion stated that their profession did not correspond to their level of educational attainment, even though many had a relatively high income.

*Competences beyond systematic cognitive knowledge:* On average, graduates considered both the field-related knowledge and the broad general knowledge which they had acquired during their course of study as corresponding to the re-
quirements of their job. However, deficiencies were noted with respect to all of the other areas of competences addressed in the CHEERS survey. According to a comparison between the competences at the time of graduation and the job requirements four years after graduation, graduates saw a need to enhance their competences, notably with respect to negotiation, planning, applying rule, decision-making, leadership, time-management, and working under pressure. In addition, a need to enhance computer skills was also frequently noted (see Figure 1).

Figure 1. Graduates’ Job Requirements Four Years After Graduation and Competencies at the Time of Graduation (mean* of the graduates employed)

Source: CHEERS Survey
Question E1: Please, state the extent to which you had the following competencies at the time of graduation in 1994 or 1995 and to what extent they are required in your current work.
*1 = “To a very high extent” to 5 = “Not at all”.
An abundance of terms and concepts concerning the competences to be acquired by graduates is found in the public debate and prior research debates. The CHEERS questionnaire, reflecting this, was based on the assumption that abilities of applying knowledge to work tasks, working styles, socio-economic skills and motives and values that were conducive to work were the most widespread areas of competences under consideration, but it opted for the formulation of an even wider range of aspects in order to ensure conceptual reconsideration with the help of multi-variate analyses.

The authors of the CHEERS study presented three different ways of classifying competences and job requirements. They all considered socio-communicative competences as an important dimension in its own right. They also agreed that graduates perceived deficiencies in operative and organisational competences, whereby abilities of knowledge transfer, work styles and values were classified differently. Finally – though using different terms – they seemed to agree that competences of reasoning, reflection, and creativity were domains of their own which graduates wished to enhance.

In comparing the respondents' retrospective views on their study programmes and competences upon graduation we noted, not surprisingly, a greater visible impact of programmes on systematic cognitive knowledge than on other competences. For example, those who noted great emphasis on the quality of teaching tended to rate their general knowledge highly, and those who noted an emphasis of their study programme on theories considered themselves well qualified in theories and methods. This does not mean, however, that other dimensions were not related to study: Those who had experienced a strong practical emphasis of the study programme considered themselves relatively well prepared for leadership and management tasks, and those who had noted a strong emphasis on communication between teachers and students, as well as among students, considered themselves able to adapt and communicate with other people.

14.8.1 The professional relevance of values and orientations

The more intellectually demanding job roles are the less clearly they are determined by rules, instruments, work environments, and social control. Rather, highly qualified workers are expected to handle indeterminate work tasks, to reflect on established professional practice and to seek innovative solutions, and they have many opportunities of interpreting their work tasks and choosing possible options. Therefore, graduates’ values and orientations can play a crucial role in constantly redefining job “requirements” and in shaping professional work and its outcomes.

The high relevance of the graduates’ values and orientations can be viewed as conventional wisdom. Debates and research on the “professions” and “leadership” tend to address the relevance of intrinsic motivation, professional ethics and socio-political views held by graduates. This notwithstanding, a substantial proportion of well-known research projects neglected students’ and graduates’ values and orientations or took for granted that the norms of the homo oeconomicus and the status seeker prevailed. The CHEERS study, in contrast, attempted to map the graduates’
values and orientations and to measure the extent to which they explain their professional activities.

*Values other than income, status and employment conditions seem to play a major role.* For example, graduates quoted personal development, work and home and family more frequently as central than money, social prestige and varied social life. Job satisfaction was more closely associated with autonomous and challenging work and the opportunity of using competences than with income, position, job security, time for leisure, and other dimensions of employment. Graduates considered themselves to be more strongly driven by intrinsic than by extrinsic motives.

A closer look reveals that the composition of values varied substantially:

– One out of seven graduates was *predominantly status-oriented and income-oriented* with little concern about the intrinsic dimensions.

– For more than a quarter of the graduates, *intrinsic and extrinsic motives seemed to coincide*: they either stated high or low ambitions in both respects.

– More than half, however, stressed their *interest in the challenges of their work* or *their appreciation of self-development*, while they perceived income, status and other employment conditions as being less important.

Not surprisingly, though, many graduates considered their *work situation as not fully meeting their desires*. Discrepancies between orientations and actual work situations seemed to occur almost as often with respect to status and income, opportunities of pursuing own ideas and using knowledge as with respect to opportunities of spending time on leisure and family. Some graduates accepted these discrepancies and adapted to them, while others tried to transform their work and employment conditions to meet their values and orientations.

There were differences in the values and orientations by country. For example, a status orientation that was not strongly linked to professional intrinsic motives could be observed more frequently in the Netherlands and in the UK than in the other countries. Altogether, these differences were less striking than those of the employment conditions and work situations.

Finally, the relevance of values and norms affected career choices differently in various respects. In some countries, affiliation with a region was held in such high esteem that some graduates forewent bright career opportunities in order to live in a certain region. There were indications that international mobility was greatly appreciated by some graduates for many reasons other than income, status and satisfactory employment conditions. Last but not least, child care continued to be a central issue for women; we noted a strong preference by women for employment in the public sector, especially in countries where political efforts were made to counterbalance their professional disadvantages.

14.9 CONCLUSION

The CHEERS study on graduate employment and work provided such a wealth of information that any attempt to summarise the findings in just a few sentences is bound to be futile. Obviously, many findings confirmed conventional wisdom, whilst others were surprising and called for new interpretations. Many underscored
basically common issues of economically advanced countries, whilst others revealed varieties across countries.

An internationally comparative survey of persons who enrolled in the early 1990s, graduated in the mid-1990s and were surveyed at the end of the decade is likely to paint a portrait of graduate employment and work of a certain period. The 1990s were a period of continuous growth of higher education and of a growing belief that societies were moving towards a “knowledge society”. Employment problems grew in many economically advanced societies. Neo-liberal views spread with their gospel that a society was well served by stronger market regulations and incentive mechanisms. Finally, the idea that globalisation would challenge the distinctions between nation states gained momentum.

The results of the study, however, could be seen as indicating less dramatic changes in the relationships between higher education and the world of work than the discussions about macro-tends of modern societies would suggest. Upgrading of middle-level occupations towards typical areas of graduate employment had progressed substantially in only a minority of economically advanced countries. Graduates were exposed to serious employment problems to a lesser degree than the public debates suggest, and the graduates themselves anticipated this while they were still enrolled in study programmes. Intrinsic professional motives did not seem to weaken under conditions of a Zeitgeist in favour of the homo oeconomicus and status seeker. And national characteristics of study, graduate employment and work did not seem to give way rapidly to convergent pressures of globalisation. Future research will tell us whether the relationships between higher education and the world of work will change faster in the future than in the recent past.
EMployment and Work of University Graduates in Japan and Germany
(2002)*

15.1 INTRODUCTION

It is widely assumed that the relationships between higher education and the world of work have much in common in industrialized societies due to the universalistic nature of many elements of knowledge and due to many common challenges of modern economies and societies. Besides, both, the higher education systems and the employment systems as well as the relationships between them have developed many characteristic features in each country. In comparing Japan and Germany (see Nihon Rodo Kenkyu Kiko and Tokyo Doitsu Bunka Senta 1997; Kaneko and Teichler 1997), for example, we know that the ratio of university graduates among the respective age group is substantially higher in Japan than in Germany. In most occupational areas, Japanese graduates seem to be expected to be “raw material” shaped subsequently in the first years of employment, while German graduates are expected to be already prepared to a certain extent for the subsequent work assignment. Japanese employment-related identity was that of employees of certain companies or other organizations, while German graduates tend to understand themselves as professionals. Japanese graduates transfer to higher education at an earlier point in their life than German ones. In Japan, the transition process from higher education to employment tends to start earlier and to run more smoothly than in Germany.

This is a list of widespread beliefs about differences and common elements. But detailed factual information had been scarce until recently. The aim of this contribution is to present the results of a recent survey of graduates from institutions of higher education in Japan and from 11 European countries. The emphasis will be placed on a Japan-Germany comparison.

In 1999/2000, a survey was conducted of about 40,000 graduates from 11 European countries and from Japan about four years after graduation. The study “Careers After Higher Education: A European Research Survey” (CHEERS) was funded predominantly by the European Commission in the framework of the Targeted Socio-Economic Research Programme (TSER). Initially, nine European countries had prepared the research proposal jointly. Subsequently, two European countries and Japan (JP) joined the project. The European countries included are Austria (AT), the Czech Republic (CZ), Finland (FI), France (FR), Germany (DE), Italy (IT), the Netherlands (NL), Norway (NO), Spain (ES), Sweden (SE), and the

* Co-author: Harald Schomburg
United Kingdom (UK). The comparative study was coordinated and the German survey (see Schomburg et al. 2001) was conducted by Ulrich Teichler and Harald Schomburg (Centre for Research on Higher Education and Work, University of Kassel). The Japanese country study, funded by the Japan Institute of Labour, was coordinated by Keiichi Yoshimoto (Kyushu University) and Reiko Kosugi (Japan Institute of Labour) (see Yoshimoto 2001).

The study addressed the job search and transition period from higher education to employment as well as the employment situation during the first years after graduation. The study also examined the graduates’ competences and their utilization on the job, the extent to which the graduates consider their position and work tasks linked to higher education, graduates’ expectations and the extent to which these expectations were fulfilled. Finally, questions were asked regarding further education and training and regarding the graduates’ view of their long-term career prospects. Some questions on the socio-biographic background of the respondents, on the study conditions and provisions, and on the study achievements and grades were asked as well in order to determine the extent to which these factors might explain varying employment and work paths of graduates (see Schomburg and Teichler 2006; Teichler 2007).

15.2 TRANSITION TO EMPLOYMENT AND EARLY CAREER

Traditionally, analyses of the relationships between higher education and the world of work did not put much emphasis on the period of transition from study to employment. It was taken for granted that the labour market works more or less rational in allocating the labour force as far as possible according to job requirements. In recent years, however, more attention was paid to the transition process, which might operate more or less smoothly (see OECD, 1999). Also, the transition period might be a stage with specific dynamics which, for example, possibly provide the smart ones of the less qualified students another chance and possibly cause problems for the highly qualified students not well prepared to handle the transition process.

Japan is known for a very smooth transition process from education to employment (cf. Yoshimoto 1996; Teicher and Teichler 2000; cf. also Yoshimoto, Inenaga and Nakajima 2004). At least, until the early 1990s, the facts confirmed the conventional wisdom. This survey of 1995 graduates by and large confirms this, even though employment problems of recent Japanese graduates have increased since 1992.

According to the 12-country study, 97 per cent of Japanese graduates began their job search prior to graduation (most decisions are actually taken more than 6 months prior to graduation). In contrast, one third of German graduates started the job search only around the time of graduation and about one fifth only after graduation (see Table 1).

The German data are close to the European average. It is worth noting that many graduates from Southern European countries started the job search after graduation.
## Table 1. Timing of Start of Job Search, by Country (per cent)

<table>
<thead>
<tr>
<th>Country</th>
<th>Prior to graduation</th>
<th>Around time of graduation</th>
<th>After graduation</th>
<th>Total</th>
<th>Count (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>16</td>
<td>42</td>
<td>42</td>
<td>100</td>
<td>(2,158)</td>
</tr>
<tr>
<td>ES</td>
<td>24</td>
<td>34</td>
<td>43</td>
<td>100</td>
<td>(2,105)</td>
</tr>
<tr>
<td>FR</td>
<td>18</td>
<td>18</td>
<td>64</td>
<td>100</td>
<td>(1,060)</td>
</tr>
<tr>
<td>AT</td>
<td>31</td>
<td>38</td>
<td>31</td>
<td>100</td>
<td>(1,434)</td>
</tr>
<tr>
<td>DE</td>
<td>48</td>
<td>33</td>
<td>19</td>
<td>100</td>
<td>(2,265)</td>
</tr>
<tr>
<td>NL</td>
<td>42</td>
<td>37</td>
<td>21</td>
<td>100</td>
<td>(2,233)</td>
</tr>
<tr>
<td>UK</td>
<td>48</td>
<td>23</td>
<td>29</td>
<td>100</td>
<td>(2,886)</td>
</tr>
<tr>
<td>FI</td>
<td>44</td>
<td>40</td>
<td>16</td>
<td>100</td>
<td>(1,737)</td>
</tr>
<tr>
<td>SE</td>
<td>54</td>
<td>33</td>
<td>14</td>
<td>100</td>
<td>(2,167)</td>
</tr>
<tr>
<td>NO</td>
<td>63</td>
<td>23</td>
<td>14</td>
<td>100</td>
<td>(2,592)</td>
</tr>
<tr>
<td>CZ</td>
<td>48</td>
<td>26</td>
<td>26</td>
<td>100</td>
<td>(1,676)</td>
</tr>
<tr>
<td>EUR</td>
<td>41</td>
<td>31</td>
<td>27</td>
<td>100</td>
<td>(22,313)</td>
</tr>
<tr>
<td>JP</td>
<td>97</td>
<td>2</td>
<td>1</td>
<td>100</td>
<td>(2,475)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
<td><strong>29</strong></td>
<td><strong>24</strong></td>
<td><strong>100</strong></td>
<td><strong>(24,788)</strong></td>
</tr>
</tbody>
</table>

Source: CHEERS Survey

Question C2: When did you start looking for a job? Exclude search for casual and vacation jobs.

As far as the survey provides information, Japanese and European students and graduates spent a similar amount of *time and energy on the job search*. Both sought on average for a period of half a year and both contacted about 20 employers, while German graduates again are close to the European average.

It is widely known that higher education institutions in Japan strongly assist their students’ job search. Taking this in consideration, it is surprising to note that “only” 30 per cent of the Japanese graduates stated that the *help of their institution of higher education* or of their teacher was actually instrumental for getting employed for the first time after graduation. But this figure clearly surpasses that of the European graduates where only five per cent get employed through the help of their higher education institution or their teacher. About 30 per cent of the Japanese graduates get employed through responses to advertisements. In contrast, many European graduates found their job through contacting employers themselves (i.e. not in response to vacancies announced). The respective proportion was only three per cent in Japan (see Table 2).
Table 2. Most Important Method for Getting the First Job After Graduation (per cent)

<table>
<thead>
<tr>
<th>Method</th>
<th>Japan</th>
<th>Germany</th>
<th>Europe (range)</th>
<th>Europe (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I applied for an advertised vacancy</td>
<td>31</td>
<td>33</td>
<td>11-55</td>
<td>31</td>
</tr>
<tr>
<td>I contacted employers without knowing about a vacancy</td>
<td>3</td>
<td>25</td>
<td>12-33</td>
<td>20</td>
</tr>
<tr>
<td>I used other personal connections/contacts (e.g. parents, relatives)</td>
<td>13</td>
<td>11</td>
<td>6-31</td>
<td>14</td>
</tr>
<tr>
<td>I established contacts while working during the course of study</td>
<td>1</td>
<td>10</td>
<td>4-11</td>
<td>8</td>
</tr>
<tr>
<td>I was approached by an employer</td>
<td>6</td>
<td>4</td>
<td>3-12</td>
<td>6</td>
</tr>
<tr>
<td>I contacted a commercial employment agency</td>
<td>5</td>
<td>0</td>
<td>1-21</td>
<td>5</td>
</tr>
<tr>
<td>I enlisted the help of the careers/placement office of my university</td>
<td>21</td>
<td>1</td>
<td>0-6</td>
<td>2</td>
</tr>
<tr>
<td>I contacted a public employment agency</td>
<td>2</td>
<td>3</td>
<td>0-11</td>
<td>4</td>
</tr>
<tr>
<td>I enlisted the help of teaching staff of the institution of higher education</td>
<td>9</td>
<td>3</td>
<td>1-4</td>
<td>2</td>
</tr>
<tr>
<td>I started my own business/self-employment</td>
<td>0</td>
<td>2</td>
<td>0-4</td>
<td>1</td>
</tr>
<tr>
<td>I launched advertisements by myself</td>
<td>0</td>
<td>1</td>
<td>0-2</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>8</td>
<td>2-14</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: CHEERS Survey

Question C5: Which method was the most important one for getting your first job after graduation in 1994 or 1995?

Ten per cent of German graduates as compared to one per cent of Japanese graduates got their first employment with the help of contacts established during the course of study. Germany belongs to those European countries where internships during the course of study are fairly common; actually German students spent on average six months during the course of study on internships, occasional employment or regular employment linked to their field of study or their future employment.

The relatively smooth process of transition from higher education to employment in Japan is also underscored by the graduates’ major activities during the first four years after graduation: only one per cent of the Japanese graduates, as compared to two per cent of the German and to five per cent of all the European graduates, reported that they were unemployed most of the time. Only three per cent of the Japanese, as compared to 11 per cent of the German and 12 per cent of all the European graduates made their living predominantly with the help of temporary jobs.
EMPLOYMENT AND WORK OF UNIVERSITY GRADUATES IN JAPAN AND GERMANY

A smooth transition process is often seen as a favourable indicator of a desirable articulation between education and employment. In recent years, however, critical voices in Japan were more often heard than in the past. They ask whether the Japanese modes of transition create disadvantages for those who do not choose the regular track of transition, or do not work well if the labour constellation is shaken by economic problems, and whether they discourage graduates to correct their choice of employment when they are disappointed, thus contributing to job dissatisfaction.

Four years after graduation, however, these differences have almost disappeared. Four per cent of the Japanese graduates as compared to 2 per cent of German and three per cent of all European graduates reported that they were unemployed (see Figure 1).

*Figure 1. Kind of Major Activity Four Years After Graduation, by Country (per cent)*

Source: CHEERS Survey
Question C10: Please inform us on your current major activity.

Four years after graduation, German graduates had the highest average income (37,300 EURO gross annual income on average of full-time employed graduates) followed by Norwegian (32,800 EURO) and Austrian graduates (31,200 EURO). It is surprising to note that Japanese graduates, as Figure 2 shows, rank on fourth place (30,200 EURO) because the Japanese graduates are paid relatively low salaries in the early years of their career.
Students already get acquainted with their future job requirements in the transition process. They might collect information about possible assignments, and they get to know the employers’ expectations. In the 12-country study, graduates were asked what aspects their employers appreciated when they recruited the respondents. As far as information on study is concerned, Japanese employers seem to take into consideration the reputation of the higher education institutions more strongly than their European counterparts, whereas the European employers more often see the field of study as crucial for employment.

These findings confirm the conventional wisdom that the higher education system in Japan is characterized by a steeper hierarchy of the institutions than the European systems and that Japanese employers more often expect graduates not to be specialists for certain occupational areas. There are differences among the European countries, but there is not a single European country among the 11 countries surveyed in which the reputation of the higher education institution plays such an important role and in which the field of study plays such a limited role as we observe in Japan.

Table 3 shows, in addition, that the European employers much more strongly emphasize additional competences which are not necessarily an integral part of the study programme: work experience, international experience, foreign language proficiency, and computer skills. European graduates, in fact, believe that the ac-
acquisition of those additional competences turned out to be beneficial for them in the search for employment and desirable work assignments. The German graduates viewed their employers’ criteria similarly to the European average. They rated the role of final grades (42%) as more important than graduates from other European countries. Japanese graduates did not rate their potential professionally-relevant competences upon graduation very favourably. In retrospect, Japanese graduates believe substantially less frequently than their European counterparts that they were prepared to work independently. Among the Europeans, German graduates considered themselves relatively strong as regards disciplinary knowledge and working independently, but less regarding various working competences and social skills.

Table 3. Importance of Recruitment Criteria According to the Graduates’ Perception, by Country (per cent “important”; responses 1 and 2)

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Germany</th>
<th>Europe (range)</th>
<th>Europe (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality</td>
<td>80</td>
<td>78</td>
<td>61-84</td>
<td>73</td>
</tr>
<tr>
<td>Field of study</td>
<td>37</td>
<td>77</td>
<td>68-85</td>
<td>72</td>
</tr>
<tr>
<td>Main subject/specialisation</td>
<td>32</td>
<td>51</td>
<td>36-73</td>
<td>49</td>
</tr>
<tr>
<td>Practical/work experience acquired during course of study</td>
<td>16</td>
<td>55</td>
<td>20-55</td>
<td>40</td>
</tr>
<tr>
<td>Computer skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendations/references from third persons</td>
<td>17</td>
<td>44</td>
<td>19-47</td>
<td>40</td>
</tr>
<tr>
<td>Exam results</td>
<td>27</td>
<td>27</td>
<td>21-49</td>
<td>32</td>
</tr>
<tr>
<td>Foreign language proficiency</td>
<td>28</td>
<td>42</td>
<td>8-42</td>
<td>28</td>
</tr>
<tr>
<td>Reputation of the institution of higher education</td>
<td>13</td>
<td>24</td>
<td>9-42</td>
<td>26</td>
</tr>
<tr>
<td>Practical/work experience acquired prior to course of study</td>
<td>41</td>
<td>16</td>
<td>15-24</td>
<td>20</td>
</tr>
<tr>
<td>Experience abroad</td>
<td>5</td>
<td>29</td>
<td>10-30</td>
<td>22</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>13</td>
<td>10-21</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: CHEERS Survey

Question C8: How important, according to your perception, were the following aspects for your employer in recruiting you for your initial employment after graduation, if applicable? Scale of answers from 1 = “Very important” to 5 = “Not important at all”.

Even as regards broad general knowledge, the ratings of Japanese graduates were less positive than those of the European graduates. Only with respect to competences such as adaptability, loyalty, and leadership, the responses of the Japanese and the European graduates were similar on average (see Table 4).
Table 4. Selected Competences at Time of Graduation and Job Requirements Four Years Later (per cent “high”; responses 1 and 2)

<table>
<thead>
<tr>
<th>Competences at time of graduation</th>
<th>Job requirements four years later</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JP</td>
</tr>
<tr>
<td>Broad general knowledge</td>
<td>44</td>
</tr>
<tr>
<td>Disciplinary theoretical knowledge</td>
<td>53</td>
</tr>
<tr>
<td>Planning, co-ordination, organising</td>
<td>18</td>
</tr>
<tr>
<td>Problem-solving ability</td>
<td>39</td>
</tr>
<tr>
<td>Creativity</td>
<td>29</td>
</tr>
<tr>
<td>Working under pressure</td>
<td>36</td>
</tr>
<tr>
<td>Working independently</td>
<td>31</td>
</tr>
<tr>
<td>Working in a team</td>
<td>46</td>
</tr>
<tr>
<td>Adaptability</td>
<td>59</td>
</tr>
<tr>
<td>Loyalty, integrity</td>
<td>70</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>43</td>
</tr>
<tr>
<td>Leadership</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: CHEERS Survey

Question E1: Please, state the extent to which you had the following competencies at the time of graduation in 1994 or 1995 and to what extent they are required in your current work. Scale of answers from 1 = “To a very high extent” to 5 = “Not at all”.

According to the graduates, the job requirements for Japanese and European graduates four years after graduation are relatively similar. European graduates perceived somewhat higher demands for independent work and critical thinking, while Japanese graduates perceived a higher need for broad general knowledge. Otherwise, differences were marginal.

The data presented up to now still would allow to assume that the higher discrepancy in Japan between competences upon graduation and job requirements could be a transient phenomenon, whereby Japanese graduates are less prepared for the work tasks upon graduation but catch up soon in a process of more intensive in-company training than their German and other European counterparts (see Yoshimoto 2002). The subsequently presented data, however, do not confirm such a view.

In the 12-country study, graduates were also asked to characterize their job expectations and their real work situation. Responses suggest that Japanese graduates are similar in their expectations to their European counterparts (see Figure 3). They are substantially more moderate in their hopes and expectations only as regards the opportunity of being assigned coordination and management tasks, and they harbour slightly more modest expectations regarding challenging work tasks and good
career prospects. On the other hand, Japanese graduates hope more frequently than European graduates that their job provides them an opportunity to do something useful for society, and they also expect more frequently that their job will leave time for leisure activities.

*Figure 3. Work Orientation of Graduates in Japan and Europe (per cent “important”*)

Japanese graduates actually described their real work situation less favourably than their European counterparts. They less often were assigned coordination and management tasks, they less often had independent, varied, and challenging assignments, and they could pursue their own ideas less frequently. They rated the social climate at work less favourably, and they were also less optimistic about their long-term career prospects and their opportunities of combining work and family tasks. Altogether, the Japanese graduates less often perceived their expectations as fulfilled than the European graduates, whereby the German graduates by and large match the European average both in expectations and perceived real job situation.

Finally, the graduates were asked to assess the links between their study, on the one hand, and on the other employment and work in a general way. As Table 5 shows

— only 22 per cent of the Japanese graduates believed that they utilize their knowledge which they had acquired in the course of study to a considerable extent on
the job. The respective proportion was higher in all 11 European countries surveyed. It varied from 28 per cent to 74 per cent and was 53 per cent on average (43 % among German graduates);

– similarly, only 43 per cent of Japanese graduates considered their status and level of position as appropriate to their level of education; the respective proportion was 70 per cent among European graduates;

– 49 per cent of Japanese graduates stated that their work meets or even surpasses their expectation as compared to 81 per cent of the European graduates.

The differences are smaller in regard to the overall satisfaction with their work (48 % as compared to 66 % of all European graduates; 62 % of German graduates). Almost as many Japanese as European graduates believe that their study will turn out to be useful for their long-term career (51 % as compared to 59 %).

Table 5. Perceived Links Between Study and Employment (per cent)

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Germany</th>
<th>Europe (range)</th>
<th>Europe (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of knowledge and skills</td>
<td>22</td>
<td>43</td>
<td>28-74</td>
<td>53</td>
</tr>
<tr>
<td>The only or best field of study</td>
<td>23</td>
<td>40</td>
<td>20-54</td>
<td>40</td>
</tr>
<tr>
<td>Appropriate level</td>
<td>43</td>
<td>61</td>
<td>48-87</td>
<td>70</td>
</tr>
<tr>
<td>Work meets expectations</td>
<td>49</td>
<td>83</td>
<td>62-93</td>
<td>81</td>
</tr>
<tr>
<td>Satisfaction with work</td>
<td>48</td>
<td>62</td>
<td>49-78</td>
<td>66</td>
</tr>
</tbody>
</table>

Source: CHEERS Survey

It is not surprising to note that fewer Japanese than European graduates believe that their field of study is the only one or the best one for their work assignments (23 % as compared to 40 %), because the links between area of knowledge and occupational field seem to be more flexible in Japan. However, substantially fewer Japanese than European graduates state that they would choose the same field of study again (46 % as compared to 65 %).

The observed discrepancies and the stated disappointments notwithstanding, almost all Japanese graduates state that they would study again if they could choose again (94 %). This is also true for European graduates (96 %). Whatever the critical thoughts are, foregoing study is not viewed as a real choice.

A regression analysis was undertaken in order to establish the relative importance of various conditions of employment and work for the overall job satisfaction of graduates. This analysis confirms the responses to the question regarding the job expectations: Japanese graduates have a surprisingly similar view compared to European and notably German graduates as regards what they consider a good job. The job satisfaction of graduates in Japan as well as in Germany and Europe in general, is most strongly shaped by the content of the work tasks and the autonomy of work. Status and career are of secondary relevance, almost equal to knowledge and skills as well as social climate. This again confirms the view that the lower job
satisfaction of Japanese graduates cannot be explained convincingly by a presumed modesty of ratings.

15.4 CONCLUDING OBSERVATIONS

The survey of graduates from higher education institutions in 12 countries indicates, as expected, that Japanese graduates begin the job search earlier than graduates in Northern and Western European countries and they also transfer more rapidly to the employment system. The duration of job search and the number of companies or other employing agencies contacted, however, hardly differ. In southern European countries, the transition, on average, begins later and takes a substantially longer period.

The 12-country survey suggests that the competences potentially relevant for work acquired upon graduation are substantially lower in Japan than in most European countries. Four years later, this is not made up for, and Japanese graduates note a higher discrepancy between their expectations and their real job situation. They note both that they are less prepared for the job and that they utilize their knowledge to a lesser extent on the job. Finally, Japanese graduates express more often dissatisfaction with their employment and work than their European counterparts. As regards most of these aspects, German graduates represent more or less the European average.

The difference of ratings between the Japanese graduates on the one hand, and the German and other European graduates on the other can be explained only to a very small degree by the relatively young age of Japanese upon graduation and by the level of degree (all Japanese graduates as compared to a minority of the European graduates surveyed were bachelor holders). However, we cannot exclude on the basis of the survey about four years after graduation that the differences might get smaller in subsequent stages of their career.

Altogether, the job motivation and expectations of Japanese graduates seem to be very similar to those of German and other European graduates. Also, a regression analysis provides evidence that the factors determining job satisfaction are very similar in Japan to those in Germany and other European countries. The discrepancy between what one hopes for and what one experiences as reality is clearly more marked in Japan than in the European countries.

About four years after, very few Japanese graduates were employed abroad and only about two or three per cent of graduates from higher education institutions in countries of the European Union. There are no significant competitive pressures on the labour market for creating more desirable employment and work conditions for Japanese graduates. Still, the results of this survey might suggest more need for improvement in Japan than in Germany or other European countries, even though the findings could be viewed as a challenge for European countries as well.
16.1 THE RENEWED INTEREST IN THE THEME SINCE THE 1990s

The major themes of the public debates on higher education change quickly. This is true also for all the topics which touch upon the relationships between higher education and the world of work. In observing the debates in many advanced societies and in those addressed by the OECD – an international organisation quite influential in these debates – we noted

– a major interest in the relationships between expenditure in education and economic growth as well as in the links between investment in education and individual returns in the early 1960s.
– These debates broadened in the late 1960s and early 1970s when the issue was raised how an achievement-oriented society was compatible with equality of opportunity.
– During the course of the 1970s, the optimistic view regarding the relationships between higher education and employment faded, and concern grew about employment of the increasing number of graduates seeking for a job at times of growing employment problems in general. Concurrently, the debate focussed on curricular changes which could enhance employment opportunities.
– In the 1980s, emphasis was placed on the diversity of graduates’ opportunities which reflect both the diversity of higher education and the varied ways the students to prepare themselves for the world of work: during this period, however, the relationships between higher education and the world of work were not high on the agenda compared to other topics of the higher education policy (cf. Teichler 1999b).

It would be misleading, though, to pay attention only to the changing major debates. The links between higher education and the world of work continue to be important in two respects. Higher education, first, is expected to help students acquiring “knowledge”, “skills” or “competences” potentially relevant for employment in work. In contrast to lower levels of education, higher education is strongly expected to prepare the graduates for indeterminate tasks; it also does not merely have to provide the knowledge of “tools” and “rules”, but has to train students also to constantly call into question the established “tools” and rules”. Second, the links between higher education and employment can be described as being part of an educational meritocracy. Ideally, students have the opportunity of being educationally successful irrespective of their socio-biographic background, and the higher the level reached at the end of pre-career education, the more the person is
likely to be successful in employment and work according to more or less all dimensions of what is generally considered a desirable job or situation in society, notably income, status, power, and social influence.

In the 1990s, interest grew again in the relationships between higher education and the world of work. There were various reasons for this development. Enrolment in higher education had increased again in various countries in the 1980s, and, on the other hand, growing unemployment in the 1990s fuelled fears that “mismatch” between education and employment could be aggravated. More than in previous periods, attention was paid to the transition between higher education and employment. Moreover, rapid changes in technology suggested that graduates, in future, could not expect to remain in a single profession or with only a few employers anymore: they would have to be more flexible and be better prepared for lifelong learning. Finally, professional competence seemed to be based to a lesser extent on professional knowledge. Students also had to learn to apply their knowledge, to enhance their socio-communicative skills and they were expected to have developed values and attitudes promising for successful action in the world of work.

Across these various substantive issues, we should bear in mind that in the 1990s in most European countries interest has grown to evaluate higher education. Most evaluations on study programmes focus on processes within higher education, but it can be viewed as an obvious task of evaluation in higher education to examine the output and outcomes. Graduate employment and work might be considered as the very important outcome measures in evaluating universities and study programmes, and graduate surveys might be the key sources for the information required.

16.2 THE CHARACTERISTICS OF THE HIGHER EDUCATION-EMPLOYMENT RELATIONSHIPS IN GERMANY

Most concepts put forward by research and by actors in the higher education system suggest that links between higher education and employment are basically similar all over the world. In a “highly educated society” and “knowledge society” characterized by open access to education and remuneration and high social status based on achievement, the “invisible hand” of the labour market, as a rule, will ensure that university graduates will reach salaries and social positions which visibly reward their high level of educational attainment, and they will face a lower risk of being unemployed or ending up in positions not appropriate to their level of education. If these rewards do not become true, this would be a clear indicator of “over-education” or other ways of a “mismatch” between the needs of the economy and the supply of the higher education system.

A closer look, however, reveals that the relationships between higher education and employment vary substantially by country. Therefore, it is necessary to take into consideration characteristics of higher education and the employment system of the individual countries, in this case Germany (cf. Teichler and Sanyal 1982; Kehm 1999).
In Germany, first, the university tends to be viewed as strongly research-minded. Employers often criticize that the universities aim to educate the next generation of scholars and expect the students to concentrate on the theories and academic knowledge, but do not sufficiently take into account the future job tasks of the majority of students. Also, although employers want to have graduates able to cope with unexpected job tasks and to contribute to innovation, they are concerned that the universities stress too much their critical function. Therefore, employers praise the Fachhochschulen, the second type of higher education institutions, which put emphasis on the application of knowledge.

Second, in spite of the research-emphasis, German universities in some respects are institutions of professional training in a professional world of work. Students expect that the choice of a field of study is more or less a choice of a profession, and job satisfaction will be largely determined by a close link between the competences acquired in the course of study and the subsequent job tasks.

Third, government plays a strong role in Germany in the relationships between higher education and employment. The climate of universities is strongly shaped by fields such as medicine, law and teacher education, i.e. fields preparing for the public sector. Government has to ensure, according to the German constitution, that the capacity of the higher education system is primarily determined by the individual demand for higher education. And about 98 per cent of students are enrolled in public higher education institutions.

Fourth, German higher education institutions are very similar in their quality. They receive more or less the same level of funding by government. About 70 per cent of the students choose a university close to their home. Differences in reputation have only a small effect on the careers of the graduates.

16.3 QUANTITATIVE AND STRUCTURAL DEVELOPMENT

After World War II, we noted a more or less continuous growth of enrolment in the universities. In the Federal Republic of Germany, about five per cent of the age group began to study in 1950, and about nine per cent in 1960. During the 1960s, ideas spread in many industrial societies that an expansion of higher education was needed in order to stimulate economic growth. Also, expansion of higher education was believed to help reducing inequality of opportunity.

However, politicians were convinced that it was impossible to increase enrolment substantially, if all students were studying for a long period and if teaching at all institutions of higher education was closely linked to research. Therefore, in 1968 a decision was made to upgrade engineering colleges and advanced-level vocational schools to a second type of higher education institutions, called Fachhochschulen (in recent years translated into English as “universities of applied sciences”).

Thus, the rate of beginner students increased to 15 per cent in 1970 and eventually to 19 per cent in 1973. Among them, about two-thirds began to study in universities and about one third in Fachhochschulen.
There was certainly an increase of the demand of higher education trained persons in the labour force, but at the same time concern about “over-education” was wide-spread. In 1968, a manpower forecast came to the conclusion that the number of graduates would be about twice as high as the number of vacant positions for graduates. Many employers and experts argued that the graduates surpassing the demand would become an “academic proletariat”, i.e. would get low-level positions, would be highly dissatisfied and would become even a danger for the social order. Eventually, when the so-called “oil-crisis” of 1973 shook the economy of many countries of the world, concern grew about graduate unemployment.

It should be noted that comparative statistics at that time showed that in the Federal Republic of Germany the number of graduates from higher education institutions among the corresponding age group was below average of highly industrialized countries. Most German experts, politicians and employers did not view this finding as a reason for concern. They were convinced that vocational training in Germany was strong and sufficient for many jobs for which other countries offered higher education programmes.

The growing concern about graduate employment led to a stagnation of the rate of beginner students around 19-20 per cent from 1973 to 1985. This notwithstanding, the number of graduates increased from about ten per cent in 1970 to about 13-14 per cent in the 1980s. And the quota of higher education trained persons among the total labour force grew regularly from about six per cent in 1970 to about nine per cent in 1980 and about 12 per cent in 1990 (see Table 1).

Table 1. Development of the Number and the Quota of Graduates and Degree Holders in the Federal Republic of Germany

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) New graduates* (1,000)</td>
<td>77</td>
<td>110</td>
<td>113</td>
<td>133</td>
<td>148</td>
<td>208</td>
<td>214</td>
</tr>
<tr>
<td>b) Proportion of graduates among corresponding age group (%)</td>
<td>9.4</td>
<td>13.1</td>
<td>13.0</td>
<td>14.3</td>
<td>13.3</td>
<td>16.9</td>
<td>15.7</td>
</tr>
<tr>
<td>c) Degree holders in the labour force (mio.)</td>
<td>1.4</td>
<td>1.8</td>
<td>2.3</td>
<td>2.6</td>
<td>3.2</td>
<td>5.0</td>
<td>5.5</td>
</tr>
<tr>
<td>d) Proportion of degree holders in the labour force (%)</td>
<td>5.2</td>
<td>7.3</td>
<td>8.5</td>
<td>10.3</td>
<td>11.5</td>
<td>14.4</td>
<td>16.0</td>
</tr>
</tbody>
</table>

Source: Schomburg 2000, p. 192

* Total number of examinations, excluding doctoral examinations preceded by previous examinations.
** Since 1995 including the territory of the former GDR.
When concepts about education as investment for economic growth and forecasts of manpower demand got popular in the 1960s in many industrialized countries, among them the Federal Republic of Germany, it was widely assumed that one could clearly define a "match" between the education attained and the job role. Correspondingly, everything which was not a "match" was considered as a "mismatch".

According to surveys, employers in the Federal Republic of Germany believed that the annual demand for higher education-trained persons would grow by about one per cent. The number of higher education-trained persons grew, however, from 1975 to 1980 by more than 30 per cent. If the employers had not hired more graduates than they needed according to their traditional notions of demand, the unemployment rate of higher education-trained persons would have been higher than the rate of all other groups of the labour force, and a substantial proportion of higher education-trained persons would have been in low positions without hardly any link between study and employment.

In reality, however, more graduates than expected got jobs in Germany – and in other countries – which were conceived as typical graduate jobs and most of those who did not get a typical graduate job took over positions which were only moderately lower, as far as income, status and demanding work was concerned. The flexibility in the relationships between education and employment was much higher than the debate about "match" and mismatch" had suggested. We called this phenomenon "vertical substitution" and considered it a normal process. We have to mention, though, that the term "displacement" was widely used in the 1970 and 1980s to characterize this process. Accordingly, the superfluous graduates from higher education took over the positions for which persons in advanced vocational schools and training schemes were trained (cf. Teichler 2003).

Just to provide a few examples, Table 2 shows the development of unemployment in Germany by educational level. Always the graduate unemployment rate was not higher than half of the unemployment rate in the total labour force.

*Table 2. Unemployment Rates in Germany by Educational Attainment (per cent)*

<table>
<thead>
<tr>
<th>Year</th>
<th>University degree</th>
<th>FH degree</th>
<th>Advanced voc. training</th>
<th>Vocational training</th>
<th>Without voc. training</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975*</td>
<td>1.2</td>
<td>2.8</td>
<td>1.5</td>
<td>2.9</td>
<td>6.1</td>
<td>3.9</td>
</tr>
<tr>
<td>1980</td>
<td>1.9</td>
<td>1.8</td>
<td>1.3</td>
<td>2.2</td>
<td>5.9</td>
<td>3.2</td>
</tr>
<tr>
<td>1985*</td>
<td>4.6</td>
<td>4.0</td>
<td>2.7</td>
<td>6.1</td>
<td>14.9</td>
<td>8.1</td>
</tr>
<tr>
<td>1990*</td>
<td>3.5</td>
<td>2.5</td>
<td>2.1</td>
<td>4.3</td>
<td>12.8</td>
<td>5.9</td>
</tr>
<tr>
<td>1995</td>
<td>4.0</td>
<td>3.4</td>
<td>2.9</td>
<td>6.2</td>
<td>20.0</td>
<td>8.2</td>
</tr>
<tr>
<td>1999</td>
<td>4.0</td>
<td>2.6</td>
<td>appr.8</td>
<td></td>
<td>23.4</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Source: BMBF 2002, pp.412-413
* Only West Germany
Another example: in 1989, 75 per cent of the employed higher education-trained persons were active in professional and managerial occupations which usually are considered to require a degree from higher education institutions. About ten per cent were in advanced positions in some cases held by graduates, and 15 per cent were employed in middle-level or low-level positions which, as a rule, do not require a degree.

Finally, graduate surveys are valuable tools in providing information beyond occupational categories. Surveys can show – according to the graduates’ perception:

– the extent to which graduates use the knowledge which they have acquired in the course of study on the job,
– the extent to which graduates consider their position as appropriate to their level of education.

A longitudinal graduate survey undertaken in the mid- and late 1980s in the Federal Republic of Germany suggests that about four to five years after graduation slightly more than 20 per cent of graduates of higher education institutions noted hardly any use of their knowledge acquired in the course of study on their job. And slightly less than 20 per cent of the graduates considered their position really as inappropriate for their level of education (see Table 2 in Chapter 13).

All these data show some employment problems of graduates, but these problems were by far less frequent, as prior pessimistic forecasts had predicted. Altogether, available information on the relationships between higher education and employment suggest, that

– the period of search for a job and the overall transition from higher education to employment got more protracted and requires more efforts on the part of the students,
– “vertical substitution” took place, while only a small proportion of graduates took over positions for which a degree is clearly superfluous,
– that the job opportunities became more varied according to field of study, individual institution of higher education, grades achieved in the course of study as well as “key skills” graduates have acquired which are at most linked to the learning process in higher education.

There are many indications that the expansion of higher education has stimulated innovation in the world of work. The unexpected high supply of graduates was more or less absorbed by the employment system, and many graduates taking over a job previously held by a non-graduate worked in a way that the complexity and quality of the work increased.

16.5 A COMPARATIVE ANALYSIS

In the 1990s, the labour market for graduates in Germany became more complex than it was before, and, as in some other European countries, the unemployment rate increased during the early 1990s. In addition, the East German economy struggled after the unification, and the unemployment rate is twice as high as in the Western part of Germany. At the same time, there were shortages of graduates in
International mobility is a topic of educational and labour policies in the European Union. Since 1987, student mobility within European countries is supported on large scale by the European Commission in the framework of the ERASMUS programme. Since 1988, university graduates from each country of the European Union are in principle recognized in the other EU countries. In 1992, the European Union introduced a more or less open labour market for all citizens of the European Union.

Actually, among all highly qualified employees in the European Union, four per cent were foreigners in 1999, among them slightly less than two per cent citizens of other European Union countries. In Germany, five per cent of the highly qualified labour forces were foreigners, among them three per cent citizens of other countries of the European Union. About one per cent of the professionally active Germans in positions requiring a high level of qualification, about one per cent worked in other countries of the European Union (see Jahr, Schomburg and Teichler 2002). Thus, mobility of highly qualified labour remained small.

In the 1990s, however, the interest in international comparisons or European comparisons increased substantially in Germany as well as in other economically advanced countries. This interest was certainly influenced by moves towards increased European integration and by the perception that globalisation of the economy is a rapid trend.

In the wake of this growing interest in Europeanisation, internationalisation and globalisation, our Centre for Research succeeded in raising funds from the European Commission and other sources to undertake a study on higher education and employment in 11 European countries and Japan in cooperation with researchers from the participating countries. More than 40,000 persons who graduated in the academic years 1994/95 were surveyed in 1999, i.e. about four years after graduation.

This survey provides information whether German graduates from institutions of higher education fare better or worse than graduates from other European countries. As far as transition from higher education to employment is concerned (see Table 1 in chapter 14),

- German graduates spent on average 5.5 months for the search of a job as compared to 6.1 months of the European graduates surveyed,
- 11 per cent of the German graduates spent most of the first four years in short-term employment or on occasional jobs as compared to 13 per cent of the European graduates, and
- two per cent of the German graduates were most of the time unemployed as compared to five per cent of the European graduates.

The transition to employment, thus, was more favourable for the German graduates than for the European average.
As regards the objective situation of employment and work four years after graduation (see Table 2 of chapter 14),
- only two per cent of the German graduates were still seeking employment four years after graduation as compared to four per cent of the European average,
- German graduates had the highest income,
- only five per cent of the German graduates were in positions of clerks, workers and other low-level positions as compared to seven per cent of the European graduates.

Again, the employment situation four years after graduation of graduates from German institutions of higher education was more favourable than that of the average of European graduates surveyed.

As regards the perceived links between study and the world of work, however, graduates from German institutions of higher education had a less favourable view than the European graduates on average (see Table 3 of chapter 14). Notably, 23 per cent of German graduates as compared to 19 per cent of the European average stated that they hardly could use on the job the knowledge they had acquired during the course of their study.

Altogether, we note that German graduates experienced more favourable links between higher education and employment than the European average. However, the situation was almost consistently better in the Nordic countries (Norway, Sweden und Finland). On the other hand, the situation was consistently worse in the southern European countries (Spain, Italy and also France).

16.6 TOO FEW GRADUATES?

As already mentioned, the enrolment quota and the graduation quota in the Federal Republic of Germany was below the average of economically advanced countries the whole time since the OECD began to publish comparative statistics. For many years, however, this was not an issue of major concern in Germany. The majority of experts, politicians, academics, and employers believed that the statistics on enrolment and graduation were “not comparable”, because Germany had a strong vocational training system which trained technicians, laboratory specialists, semi-professionals in health occupation, middle-level administrative and sales employees, etc. as well as fewer short higher education programmes than many other countries.

This mood, however, has changed since the mid-1990s. We note OECD reports according to which the economy was more successful in countries with high graduation quotas (OECD 1998c). And we note more and more German comments expressing concern about the below-average graduation quota in Germany.

According to an OECD publication, 19 per cent of the respective age group graduated in Germany from “tertiary-type A” programmes in the year 2000, actually 13 per cent from universities and six per cent from Fachhochschulen. The average in OECD countries (as far as comparative statistics were available) was 26 per cent (see Table 3).
### Table 3. Tertiary Graduation Rates (2000)

Ratio of Tertiary Graduates to the Population at the Typical Age of Graduation, Multiplied by 100, by Programme Destination and Duration of Programme

<table>
<thead>
<tr>
<th>Country</th>
<th>Tertiary-type B programmes (first-time graduation)</th>
<th>Tertiary-type A programmes (first time graduation)</th>
<th>Advanced research programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Australia</td>
<td>m*</td>
<td>36.3</td>
<td>29.1</td>
</tr>
<tr>
<td>Austria</td>
<td>m</td>
<td>16.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Canada</td>
<td>m</td>
<td>27.9</td>
<td>19.7</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>4.8</td>
<td>13.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Denmark</td>
<td>24.5</td>
<td>9.2</td>
<td>m</td>
</tr>
<tr>
<td>Finland</td>
<td>14.3</td>
<td>36.3</td>
<td>17.2</td>
</tr>
<tr>
<td>France</td>
<td>18.3</td>
<td>24.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Germany</td>
<td>10.7</td>
<td>19.3</td>
<td>6.2</td>
</tr>
<tr>
<td>Iceland*</td>
<td>5.5</td>
<td>33.2</td>
<td>29.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>15.2</td>
<td>31.2</td>
<td>30.0</td>
</tr>
<tr>
<td>Italy</td>
<td>0.6</td>
<td>18.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Japan</td>
<td>28.8</td>
<td>30.9</td>
<td>27.2</td>
</tr>
<tr>
<td>Poland</td>
<td>m</td>
<td>34.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Slovak Rep.</td>
<td>2.2</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Spain</td>
<td>7.8</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.2</td>
<td>28.1</td>
<td>27.2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>m</td>
<td>10.4</td>
<td>n</td>
</tr>
<tr>
<td>United States</td>
<td>8.3</td>
<td>33.2</td>
<td>18.8</td>
</tr>
</tbody>
</table>

Country mean 11.2 25.9 15.6 10.0 1.7 1.0


*Note: x indicates that data are included in another column. The column reference is shown in brackets after “x”, e.g., x(2) means that data are included in column 2.

1 Excluding students who subsequently completed a longer programme.

2 Net graduation rate is calculated by summing the graduation rates by single year of age, except for Belgium, France, Ireland, Japan, Korea, the Netherlands and the United States.

m, n, a = missing

Since 1999, ministers of education of European countries agreed in the so-called “Bologna Declaration” that they want to introduce a bachelor and master structure of higher education programmes and degrees. German legislation was already changed in 1998 to allow the institutions of higher education to introduce bachelor and master programmes. In the past, all first-degree university programmes were considered equivalent to a Master, and Fachhochschulen considered their pro-
grammes almost as equivalent to a Master. Although the implementation of this reform is slow and it is not yet certain whether the European goal will achieve of transferring all European study to bachelor and master programmes, the change of the programmes might have a profound impact on the graduation ratios:

- Many representatives of German universities are in favour of admitting less than half of the bachelors to master programmes and thus reduce the ratio of masters to clearly less than ten per cent.
- Some politicians are in favour of expanding academic secondary education in order to increase the ratio of beginner students in higher education from about 30 to about 40 per cent within a decade.
- It might be possible that the “tertiary-type B” programmes according to the OECD terminology will be upgraded to bachelor programmes. In that case, the sector of advanced vocational training will be upgraded in a similar way as about 30 years ago when the upper level of vocational schools became Fachhochschulen.

In Germany we currently note both a concern that a proportion of about 20 to 25 per cent of graduates from institutions of higher education face problems on the labour market and that need is widely seen to increase the proportion of graduation among the labour force.

I consider it most likely that the advanced level of vocational training will be upgraded to bachelor programmes in the near future. In that case, it is likely that the increased number of graduates will be absorbed easily. The question remains what such an upgrading actually means: a change of names and titles without a change of substance or a real substantive change? The famous American scholar Martin Trow once tried to explain the effect of expansion of higher education. In higher education – even in the colleges of moderate academic reputation – students are expected to acquire the rules of tools needed for professional work and to question the established rules and tools. Expansion of higher education, thus, increases the number of persons in middle level jobs who are not only good in taking over required tasks, but to challenge conventional wisdom, revamp the jobs, take a critical view, and contribute to innovation. For a long time, we were nervous in Germany that expansion to higher education would lead to an oversupply of persons who want to get high-level and supervisory positions and too few who accept the established rules and tools. It was argued that we would end up in having “too many chiefs” and “too few Indians”. Now, on the way towards a “knowledge society”, the conviction is spreading that we need both high professional knowledge and critical thinking more and more often in middle-level occupations.
17.1 INTRODUCTION

In 1999 and in 2005, graduates from institutions of higher education in select European countries and Japan were surveyed a few years after graduation. Thus, a comparison of these two studies provides for the first time the opportunity to examine within an international comparison the extent to which employment and work are stable or change within a few years.

CHEERS ("Careers after Higher Education: A European Research Study"), the first survey, addressed persons having graduated in 1995 (more precisely: in the academic year 1994/95) on average about somewhat less than four years after graduation. About 40,000 graduates from 11 European countries and Japan, i.e. about 40 per cent of those contacted, responded to quite a long questionnaire (about 600 variables). The study, sponsored by the European Commission in the framework of its Targeted Socio-Economic Research Programme (TSER), by various agencies of the participating countries and additionally by the participating universities and research centres, was coordinated by Ulrich Teichler and Harald Schomburg of the Centre for Research on Higher Education and Work (later renamed into International Centre for Higher Education Research – INCHER), University of Kassel, Germany (see publications of the major results in Schomburg and Teichler 2006; Teichler 2007).

REFLEX ("The Flexible Professional in the Knowledge Society"), the second survey, addressed persons having graduated in 2000 (during the academic year 1999/2000) about five years after graduation. More than 40,000 graduates from 15 European countries and Japan, i.e. about 35 per cent of those contacted, responded to a questionnaire of about two-third of the length of the CHEERS questionnaire. The study, again sponsored by the European Commission, this time within the Framework Programme VII for the promotion of research, by various agencies of the participating countries and additionally by the participating universities and research centres, was coordinated by Rolf van der Velden and Jim Allen of the Research Centre for Education and the Labour Market (ROA), University of Maastricht, the Netherlands. The final report of this study is not yet published.

* Co-author: Harald Schomburg
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The opportunity to analyze change over time, first, is influenced by the participation of countries. Actually, ten European countries participated in both surveys. As the links between higher education and employment in Japan differ in several respects clearly from those in Europe and as thus would require detailed explanation, the subsequent comparison addresses 10 European countries: Italy, Spain, France, Austria, Germany, the Netherlands, the United Kingdom, Finland, Norway and the Czech Republic.

Second, change over time can be measured only through comparison of two surveys, if the key questions raised are identical or similar in most cases. Although the key researchers of the participating countries were the same in most countries in both studies, the second questionnaire was not only shortened, but reformulated in many instances. Thus, limits are set for the purpose of this analysis on change over time.

The subsequent comparison addresses only a few findings of both studies. It also does not address a key question raised in both studies, i.e. the impact of various aspects of socio-biographic background, study conditions and provisions as well as study behaviour on employment and work. Yet, this select analysis on change over time is valuable in assessing the extent to which graduate employment and work changes within a few years.

It should be noted that the percentages of “European graduates” in the subsequent analysis do not refer to all graduates analyzed, but rather to country averages. It does not mean that $x$ per cent of all respondents of the 10 countries ticked a certain category, but rather $x$ percentage of graduates on average each from the 10 countries analyzed. This calculation deliberately excluded both the effects of the size of the countries and that of the number of respondents in the representative country surveys. Actually, the percentages and means for all countries are presented in the same way as data presented in OECD’s annual statistical overview “Education at a Glance”.

17.2 TRANSITION TO EMPLOYMENT

The job search starts relatively early on the part of many graduates. 38 per cent of the 1995 European graduates eventually employed later and not having their first job already prior to graduation started looking for a job already prior to the time of graduation, 31 per cent did so around the time of graduation, and only 30 per cent began some time after graduation. Among the 2,000 graduates, only 31 per cent began to look for employment before graduation, while 31 per cent waited up to the time of graduation, and 38 per cent started the search some time afterwards (see Table 1).
Table 1. Start of Job Search by Graduates Seeking for a Job After Graduation in Europe (percentage of graduates seeking a job)

<table>
<thead>
<tr>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. 1995 graduates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to graduation</td>
<td>16</td>
<td>24</td>
<td>18</td>
<td>31</td>
<td>48</td>
<td>42</td>
<td>47</td>
<td>44</td>
<td>63</td>
<td>48</td>
<td>38</td>
</tr>
<tr>
<td>Around the time of graduation</td>
<td>42</td>
<td>34</td>
<td>18</td>
<td>38</td>
<td>33</td>
<td>37</td>
<td>24</td>
<td>40</td>
<td>23</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>After graduation</td>
<td>42</td>
<td>43</td>
<td>64</td>
<td>31</td>
<td>19</td>
<td>21</td>
<td>29</td>
<td>16</td>
<td>14</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<td>100</td>
<td>100</td>
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<td>100</td>
</tr>
<tr>
<td>Count</td>
<td>2158</td>
<td>2105</td>
<td>1060</td>
<td>1434</td>
<td>2265</td>
<td>2233</td>
<td>2717</td>
<td>1737</td>
<td>2592</td>
<td>1676</td>
<td>19976</td>
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<tr>
<td><strong>b. 2000 graduates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to graduation</td>
<td>14</td>
<td>13</td>
<td>32</td>
<td>22</td>
<td>33</td>
<td>26</td>
<td>42</td>
<td>42</td>
<td>58</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Around the time of graduation</td>
<td>24</td>
<td>41</td>
<td>26</td>
<td>39</td>
<td>38</td>
<td>37</td>
<td>20</td>
<td>36</td>
<td>22</td>
<td>27</td>
<td>31</td>
</tr>
<tr>
<td>After graduation</td>
<td>62</td>
<td>46</td>
<td>42</td>
<td>39</td>
<td>28</td>
<td>37</td>
<td>38</td>
<td>22</td>
<td>20</td>
<td>51</td>
<td>38</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<td>100</td>
</tr>
<tr>
<td>Count</td>
<td>1729</td>
<td>2509</td>
<td>921</td>
<td>940</td>
<td>1039</td>
<td>1901</td>
<td>966</td>
<td>591</td>
<td>1469</td>
<td>1322</td>
<td>13388</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

The data suggest that job search moved to later stages in all the 10 countries. At both points in time, early search was frequent among Norwegian and British students; in the latter survey, Finnish students started the job search earlier on average than students from other countries.

The 1995 European graduates reported an average duration of the search period of 6.0 months, while the 2000 graduates spent only 4.3 months on average for the search (see Figure 1).

According to these data, the average job search period became most strikingly shorter in countries in which it had been especially long in the mid-1990s, i.e. in
- Spain (from 11.6 months to 7.1 months),
- Italy (from 8.9 months to 6.3 months), and
- France (from 7.1 months to 4.3 months).
In contrast, the duration of job search changed little in those countries where the duration was relatively short already in 1995 (about 4 % in the United Kingdom and about 3 % each in Norway and the Czech Republic at both points in time). The reduction of the period of search is to some extent due to a shift from early to late search. The available data suggest that the job search in European countries with a relatively long period of job search tends to be briefer among graduates who start seeking relatively late; obviously, a late start necessitates a more intensive search activity.

In both surveys, employed graduates were asked which method of job search has turned out to be most important for getting their first job. Although the categories provided for response differed somewhat, the responses allow us to conclude that applying for a vacancy advertised (in journals, newspapers, internet, etc.) is the most frequent way of eventually getting a job.
Other relatively frequent methods were
- contacting employers on one’s own initiative (22 % of the 1995 graduates and 25 % of the 2000 graduates), and
- through personal connections and contacts (16 % and 12 %).
Two methods were less common, but gained some importance:
- through internships or other prior work activities (8 % and 6 %), and
- having been approached by the employer (5 % and 6 %).
Less frequent remained help by one’s institution of higher education (through career offices or help by teachers etc.), by a public employment agency and by a private employment agency (around 4-5 % each). Altogether, differences by countries remained similar: Connections played a more important role in Italy and Spain, internships and prior work experiences in central European countries, public employment agencies in France and private employment agencies in the Netherlands and the United Kingdom.

### Table 2. Most Important Method for Getting a First Job After Graduation, by Country (percent; only the three most important methods are presented)

<table>
<thead>
<tr>
<th></th>
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<th>NL</th>
<th>UK</th>
<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. 1995 graduates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I applied for an advertised vacancy</td>
<td>11</td>
<td>20</td>
<td>17</td>
<td>25</td>
<td>33</td>
<td>24</td>
<td>40</td>
<td>31</td>
<td>55</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>I contacted employers without knowing about a vacancy</td>
<td>20</td>
<td>14</td>
<td>29</td>
<td>33</td>
<td>25</td>
<td>15</td>
<td>12</td>
<td>25</td>
<td>13</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>I used other personal connections/contacts (e.g. parents, relatives)</td>
<td>31</td>
<td>28</td>
<td>19</td>
<td>16</td>
<td>11</td>
<td>8</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td><strong>b. 2000 graduates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Through advertisement in newspaper</td>
<td>9</td>
<td>14</td>
<td>9</td>
<td>22</td>
<td>17</td>
<td>18</td>
<td>26</td>
<td>21</td>
<td>39</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Contacted employer on own initiative</td>
<td>23</td>
<td>18</td>
<td>33</td>
<td>34</td>
<td>28</td>
<td>18</td>
<td>14</td>
<td>27</td>
<td>20</td>
<td>36</td>
<td>25</td>
</tr>
<tr>
<td>Through family, friends or acquaintances</td>
<td>23</td>
<td>22</td>
<td>8</td>
<td>12</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

### 17.3 EMPLOYMENT A FEW YEARS AFTER GRADUATION

The questions addressing the employment history from the initial normal job up to the moment, when the survey was conducted, varied somewhat in the two surveys. The former survey collected information over all the stages of the early years, while the later survey paid attention primarily to the first employment.
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Questions were similar, though, regarding professional mobility since graduation. In both surveys, about 40 per cent of European graduates stated that they did not change their employer since their first employment after graduation. And the mean number of employers was 2.3 in both surveys (see Table 3). Taking into account that the first survey was conducted on average almost four years after graduation and the second about five years after graduation, the on average identical data have to be interpreted as an indication of a slight decrease of mobility, or in reverse as slight increase of stability of the employment of graduates.

<table>
<thead>
<tr>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Percentage “One employer”/“no mobility”</td>
<td>37</td>
<td>39</td>
<td>48</td>
<td>37</td>
<td>43</td>
<td>31</td>
<td>33</td>
<td>39</td>
<td>37</td>
<td>53</td>
<td>40</td>
</tr>
<tr>
<td>1995 graduates</td>
<td>40</td>
<td>26</td>
<td>46</td>
<td>34</td>
<td>46</td>
<td>38</td>
<td>31</td>
<td>43</td>
<td>35</td>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>2000 graduates</td>
<td>2.5</td>
<td>2.3</td>
<td>2.1</td>
<td>2.3</td>
<td>2.1</td>
<td>2.5</td>
<td>2.6</td>
<td>2.3</td>
<td>2.2</td>
<td>1.7</td>
<td>2.3</td>
</tr>
<tr>
<td>b. Mean number of employers since graduation</td>
<td>2.2</td>
<td>3.1</td>
<td>2.2</td>
<td>2.3</td>
<td>2.0</td>
<td>2.3</td>
<td>2.5</td>
<td>2.2</td>
<td>2.3</td>
<td>1.7</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

The unemployment rate four years after graduation was 4 per cent among the 1995 graduates. It was 5 per cent five years after graduation among the 2000 graduates (see Table 4). The differences are too small to draw any conclusion about stability and change of the unemployment risk; moreover, graduates were asked in a different way whereby a different interpretation of “unemployment” on the part of the respondents cannot be excluded.

<table>
<thead>
<tr>
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<th>FI</th>
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<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates*</td>
<td>6</td>
<td>13</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2000 graduates**</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

* The questions addressed “current major activity”.
** The question asked: “Are you currently in paid employment?”

The percentage of those self-employed a few years after graduation among the professionally active persons was eight per cent in the first survey and 11 per cent in the second survey. Obviously, there was some increase within a few years, especially among graduates from France, Austria, Germany, Finland and Czech Republic.
The *average working hours* (including overtime and other paid work) per week was 42 hours in 1999 and in 2005. In both surveys, Austrian graduates reported the highest number of weekly hours (47 each) followed by Czech Republic graduates (1999 47 hours; 2005 44 hours) and German graduates (44 hours each).

*Figure 2. Average Working Hours (including overtime and other paid work) per Week in Europe 1999 and 2005 (arithmetic mean)*

*Full-time employment* was reported by 80 per cent of the employed graduates responding to the first survey and by 81 per cent of those responding to the second survey. The CHEERS survey had shown, as one might expect, that part-time was more frequent among women (28 %) than among men (11 %). As the REFLEX survey was undertaken about five years after graduation and the CHEERS survey about four years after graduation, one might have expected a higher proportion of women on part-time employment, because the available data and other data suggest that a substantial proportion of women turn to part-time employment when begin to rear a child. However, the percentage of part-timers among employed women slightly decreased from 28 per cent in the CHEERS survey to 26 per cent in the
REFLEX survey; concurrently, the proportion of part-timers among men decreased from 11 per cent to ten per cent.

Table 5. Full-time Employment by Gender and Country 1999 and 2005
(percent of employed graduates)

<table>
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<tbody>
<tr>
<td>1995 graduates*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>81</td>
<td>82</td>
<td>90</td>
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<td>91</td>
<td>92</td>
<td>87</td>
<td>95</td>
<td>93</td>
<td>89</td>
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<tr>
<td>Female</td>
<td>65</td>
<td>69</td>
<td>68</td>
<td>72</td>
<td>64</td>
<td>68</td>
<td>82</td>
<td>69</td>
<td>78</td>
<td>82</td>
<td>72</td>
</tr>
<tr>
<td>2000 graduates*</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Male</td>
<td>90</td>
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<td>92</td>
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<td>70</td>
<td>75</td>
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<td>68</td>
<td>55</td>
<td>84</td>
<td>74</td>
<td>80</td>
<td>84</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

The percentage of those graduates employed on unlimited term contract increased from 74 per cent among the 1995 graduate cohort four years after graduation to 77 per cent among the 2000 graduate cohort five years after graduation (see Table 6). Altogether, we can assume that this difference was to be expected if we survey four years after graduation and five years after graduation. Thus, the data indicate a relative stability.

Table 6. Unlimited Term Contract of Employed Graduates a Few Years After Graduation in Europe 1999 and 2005 (percentage)

<table>
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<th>NO</th>
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</thead>
<tbody>
<tr>
<td>1995 graduates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995 graduates</td>
<td>71</td>
<td>50</td>
<td>81</td>
<td>70</td>
<td>77</td>
<td>79</td>
<td>82</td>
<td>65</td>
<td>83</td>
<td>84</td>
<td>74</td>
</tr>
<tr>
<td>2000 graduates</td>
<td>69</td>
<td>60</td>
<td>84</td>
<td>78</td>
<td>76</td>
<td>80</td>
<td>83</td>
<td>70</td>
<td>86</td>
<td>88</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data

However, a look at individual countries shows that there are other factors in play as well. Unlimited term contracts are notably higher among the REFLEX respondents than among the CHEERS respondents in Spain, Austria and Finland. In Spain, labour legislations were changed in terms of making long-term contracts less stable; this, in turn, seems to have increased the employers’ readiness to grant long-term contracts. In Spain, the more recent survey in contrast to the earlier one included non-university higher education; a larger proportion of graduates from those institutions than from universities are employed in private sectors, where employers are more readily inclined to grant indeterminate contracts to their employees in relatively early stages of career, while the public sector – more under pressure to keep persons on long-term contracts actually employed all over their career – tends to delay decisions to grant permanent employment.
The average income of graduates, differentiated in both surveys according to regular income, additional income on the major job, and from other jobs, was surveyed in the CHEERS survey as “annual” income and in the REFLEX survey as “monthly” income. The former measurement certainly is more appropriate because the latter does not guarantee that seasonal bonuses, “13th month” payments other payments varying by country are included in the calculation of monthly income. Actually, the European CHEERS graduates reported an average annual income from the current major job (excluding overtime and extra payments) of about 24,000 EURO (see Garcia-Moltalvo, Mora and Garcia-Aracil 2007), while the REFLEX graduates report a monthly average income, in both studies controlled by purchasing power, of 2,400 EURO (see Table 7). The data, thus, on a first glance suggest that the European graduates’ real income from the major job has substantially increased from 1999 to 2005. However, as they already were more than one year longer on the job than the CHEERS graduates at the time the survey was conducted, it is not certain whether the increased graduate income experienced a growth over time.

Table 7. Annual Income of Graduates from Major Job a Few Years After Graduation in Europe 1999 and 2005 (in thousand EURO; standardised by purchasing power)

<table>
<thead>
<tr>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates</td>
<td>20.3</td>
<td>17.7</td>
<td>20.3</td>
<td>26.2</td>
<td>31.2</td>
<td>25.5</td>
<td>26.4</td>
<td>25.5</td>
<td>25.5</td>
<td>18.3</td>
<td>24.0</td>
</tr>
<tr>
<td>2000 graduates</td>
<td>18.7</td>
<td>18.9</td>
<td>24.8</td>
<td>28.5</td>
<td>34.7</td>
<td>27.1</td>
<td>29.0</td>
<td>28.0</td>
<td>31.9</td>
<td>16.7</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Source: CHEERS and REFLEX survey data
Excluding overtime and extra payments, standardised by purchasing power; the monthly income of the 2000 graduates was multiplied by 12 to get the annual income.

Both studies, though, showed similar variations of the income, controlled by purchasing power, by country. In both surveys, the average income of graduates from German institutions of higher education surpassed that of graduates of all other countries by more than ten per cent. On the other end of the scale, the income, again controlled by purchasing power, was very low in the case of graduates from institutions of higher education in the Czech Republic and Spain; in the REFLEX survey, also the income of graduates from Italian institutions of higher education was reported as similarly low.

17.4 Links Between Study and Employment

The most frequently used indicator of appropriate employment of graduates from institutions of higher education is that of occupational categories. According to the two surveys compared,

77 per cent 1999 and slightly more 2000 (79 per cent) were employed as professionals and managers, i.e. the professional categories considered to be typical jobs for university graduates,
– 16 per cent of the graduates surveyed in the CHEERS study and 15 per cent of those surveyed in the REFLEX study were employed on associate professional positions, i.e. positions not always considered appropriate for university graduates, but certainly for graduates from other sectors of higher education, and
– 6 per cent each were employed in other categories, mostly considered as inappropriate for graduates from institutions of higher education (see Table 8).

**Table 8. Occupational Level of Graduates a Few Years After Graduation in Europe 1999 and 2005 (per cent; ISCO 88-Com major group)**

<table>
<thead>
<tr>
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<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professionals and managers</strong></td>
<td>61</td>
<td>66</td>
<td>95</td>
<td>83</td>
<td>68</td>
<td>73</td>
<td>93</td>
<td>82</td>
<td>77</td>
</tr>
<tr>
<td>Technicians and associate professionals</td>
<td>30</td>
<td>24</td>
<td>3</td>
<td>12</td>
<td>25</td>
<td>15</td>
<td>5</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Clerks and other</td>
<td>9</td>
<td>10</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Count (n)</td>
<td>2356</td>
<td>2070</td>
<td>2019</td>
<td>2747</td>
<td>2578</td>
<td>2806</td>
<td>2439</td>
<td>2616</td>
<td>19631</td>
</tr>
</tbody>
</table>

**b. 2000 graduates**

<table>
<thead>
<tr>
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<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionals and managers</td>
<td>72</td>
<td>79</td>
<td>94</td>
<td>85</td>
<td>71</td>
<td>60</td>
<td>92</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>Technicians and associate professionals</td>
<td>19</td>
<td>17</td>
<td>5</td>
<td>11</td>
<td>22</td>
<td>24</td>
<td>6</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Clerks and other</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Count (n)</td>
<td>2336</td>
<td>1301</td>
<td>1387</td>
<td>1434</td>
<td>2911</td>
<td>1247</td>
<td>1195</td>
<td>2552</td>
<td>14363</td>
</tr>
</tbody>
</table>

Source: CHEERS (1999) and REFLEX (2005) survey data. The coding of occupations was done according to ISCO 88-Com. Data from Spain and Norway are not presented due to coding problems.

The question of the horizontal match of study and work tries to analyse to what extent graduates are working closely related to their field of study. In the REFLEX study the graduates were asked “What field of study do you feel is most appropriate for this work?” and the following answers were given (frequencies in parenthesis):
– exclusively own field (33%),
– own or a related field (52%),
– a completely different field (7%),
– no particular field (8%).

More or less, these findings are in accordance with the findings about the occupational position. The vast majority of graduates (85%) are working “field related”.

In the CHEERS survey a close link was phrased by the items “My field of study is the only possible/by far the best field” and “Some other fields could prepare for the area of work as well”, while in the REFLEX survey the formulations “exclusively own field” and “own or related fields” were chosen. Although the link between field of study and work was addressed differently in the two surveys we can inter-
interpret the difference between 78 per cent affirmative responses in the first survey and 85 per cent affirmative responses in the last (see Table 9) as an indication of a trend towards a growing link between field of study and work. Besides Norway, where we already 1999 found the closest link (94%), we can see the same trend in all countries.

Table 9. Link between Field of Study and Work Viewed by Employed Graduates a Few Years After Graduation in Europe 1999 and 2005 (percentage “field of study related work”)

<table>
<thead>
<tr>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates*</td>
<td>81</td>
<td>79</td>
<td>67</td>
<td>74</td>
<td>78</td>
<td>80</td>
<td>67</td>
<td>86</td>
<td>94</td>
<td>77</td>
</tr>
<tr>
<td>2000 graduates**</td>
<td>85</td>
<td>82</td>
<td>86</td>
<td>85</td>
<td>88</td>
<td>83</td>
<td>71</td>
<td>90</td>
<td>94</td>
<td>85</td>
</tr>
<tr>
<td>Differences</td>
<td>+4</td>
<td>+3</td>
<td>+19</td>
<td>+11</td>
<td>+10</td>
<td>+3</td>
<td>+4</td>
<td>+4</td>
<td>0</td>
<td>+12</td>
</tr>
</tbody>
</table>

Source: CHEERS (1999) and REFLEX (2005) survey data

*1995: Question F2: How would you characterize the relationship between your field of study and your area of work? Answer categories: “My field of study is the only possible / by far the best field” and “Some other fields could prepare for the area of work as well”

**2000: Question F9: What field of study for you is most appropriate for this work? Answer categories: “Exclusively own field is most appropriate for this job” and “Own or related field is most appropriate for this job”

Another indicator of the relationship between study and work can be provided by the statements about the utilisation of knowledge. In the CHEERS survey, graduates were asked to rate the extent to which they use knowledge and skills acquired in the course of study. Actually, 52 per cent stated high use. In the REFLEX survey graduates where asked again about the use of knowledge and skills, but not explicitly with reference to knowledge and skills acquired in the course of study, thus possibly including knowledge and skills acquired after graduation. Actually, 58 per cent stated high use (see Table 10) with respect to the first job and 73 per cent with respect to the current job. This difference cannot be interpreted as indicating a change over time, because it might be due to the formulation of the question.

Further, the graduates in both surveys were asked to rate the appropriateness of the position to the level of education. Although the formulations of the questions are a little bit different, it seems possible to compare the results. In the CHEERS survey, 77 per cent of the graduates stated to have an appropriate employment (“same level” or “higher level”). In the REFLEX survey, even 86 per cent of the graduates stated that a higher level of tertiary education or the same level of tertiary education they graduated from in the year 2000 would be felt as most appropriate for the current job (see Table 11). The same trend of a growing vertical match is visible in all countries except Norway.
CHAPTER 17

Table 10. High Utilisation of Knowledge and Skills Viewed by Employed Graduates a Few Years After Graduation in Europe 1999 and 2005 (percentage)

<table>
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<tr>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates*</td>
<td>49</td>
<td>48</td>
<td>28</td>
<td>55</td>
<td>43</td>
<td>51</td>
<td>48</td>
<td>69</td>
<td>74</td>
<td>54</td>
<td>52</td>
</tr>
<tr>
<td>2000 Graduates**</td>
<td>52</td>
<td>47</td>
<td>62</td>
<td>61</td>
<td>58</td>
<td>57</td>
<td>46</td>
<td>70</td>
<td>73</td>
<td>50</td>
<td>58</td>
</tr>
<tr>
<td>2000 Graduates ***</td>
<td>69</td>
<td>67</td>
<td>74</td>
<td>76</td>
<td>73</td>
<td>72</td>
<td>68</td>
<td>81</td>
<td>82</td>
<td>67</td>
<td>73</td>
</tr>
</tbody>
</table>

Source: CHEERS (1999) and REFLEX (2005) survey data
Responses 1 and 2 on a scale from 1 = “not at all” to 5 = “to a very high extent”

* Question F11: To what extent are your knowledge and skills utilized in your current work? Scale of answers from 1 = “not at all” to 5 = “to a very high extent”

** Question D11: To what extent were your knowledge and skills utilized in this work? (First job) Scale of answers from 1 = “not at all” to 5 = “to a very high extent”

*** Question F11: To what extent were your knowledge and skills utilized in your current work? Scale of answers from 1 = “not at all” to 5 = “to a very high extent”

Table 11. Appropriateness of Employment and Work a Few Years After Graduation to Graduates’ Level of Education 1999 and 2005 (percentage)

<table>
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<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates</td>
<td>69</td>
<td>70</td>
<td>66</td>
<td>74</td>
<td>72</td>
<td>84</td>
<td>75</td>
<td>87</td>
<td>91</td>
<td>86</td>
<td>77</td>
</tr>
<tr>
<td>2000 graduates</td>
<td>82</td>
<td>76</td>
<td>88</td>
<td>90</td>
<td>87</td>
<td>88</td>
<td>85</td>
<td>90</td>
<td>88</td>
<td>90</td>
<td>86</td>
</tr>
<tr>
<td>Differences</td>
<td>+13</td>
<td>+6</td>
<td>+22</td>
<td>+16</td>
<td>+15</td>
<td>+4</td>
<td>+10</td>
<td>+3</td>
<td>-3</td>
<td>+4</td>
<td>+9</td>
</tr>
</tbody>
</table>

Source: CHEERS (1999) and REFLEX (2005) survey data
1995 graduates: Question F3b: What is the most appropriate level of course of study/degree for your employment and work in comparison to that which you graduated from in 1994 or 1995? Responses: “higher level” and “same level”

2000 graduates: “What type of education do you feel is most appropriate for this work?” Subcategory: current job relative to study programme graduated from in 2000. Responses: “higher level of tertiary education” and “same level”

Job satisfaction can be seen as a kind of subjective stock taking of different aspects of the professional situation in the light of individual work orientations. The question regarding overall job satisfaction was asked in an identical way in both surveys. The results are in accordance with the previous one. In both surveys about two-thirds of the graduates stated that they were altogether satisfied (see Table 12).
Table 12. Overall Job Satisfaction of Employed Graduates a Few Years After Graduation in Europe 1999 and 2000 (percentage)*

<table>
<thead>
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<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995 graduates</td>
<td>49</td>
<td>59</td>
<td>65</td>
<td>69</td>
<td>62</td>
<td>72</td>
<td>57</td>
<td>73</td>
<td>78</td>
<td>74</td>
<td>66</td>
</tr>
<tr>
<td>2000 graduates</td>
<td>58</td>
<td>64</td>
<td>69</td>
<td>74</td>
<td>69</td>
<td>67</td>
<td>65</td>
<td>64</td>
<td>74</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>Differences</td>
<td>+9</td>
<td>+4</td>
<td>+4</td>
<td>+5</td>
<td>+7</td>
<td>-4</td>
<td>+8</td>
<td>-10</td>
<td>-4</td>
<td>-2</td>
<td>+2</td>
</tr>
</tbody>
</table>

* Responses 1 and 2 on a scale from 1 = Very satisfied to 5 = Very dissatisfied
Source: CHEERS (1999) and REFLEX (2005) survey data

Altogether, the aggregate findings as regards the links between study and subsequent employment and work are more or less identical in the CHEERS study and in the REFLEX study. In 2005, clearly more graduates have field of study related work tasks as compared to the 1999 graduates (better horizontal match) and also the appropriateness of employment and work to the level of education seems to have improved 2005 (better vertical match).

17.6 MAJOR FINDINGS AND METHODOLOGICAL PROBLEMS

Both comparative surveys of the 1995 and 2000 graduates from institutions of higher education in more than ten European countries and in Japan provide valuable results. Both studies by and large come to the same conclusion.

Most graduates from European countries are quite successful in their early career as far as many dimensions of employment and work are concerned. For most of them, the transition process is smooth, employment is privileged and the work situation has many desirable features. Transition from study to employment has become a complex and energy-consuming process, but most graduates seeking a job get employed within half a year, and many others find decent employment thereafter. Depending on the criteria chosen the employment situation and the work situation is characterized as not desirable by between about one tenth and one quarter of the graduates. Thus, it does not come as a surprise that about two third of the employed graduates are satisfied with their employment and work situation a few years after graduation.

The two surveys show as well that Europe is quite diverse according to country, as far as graduate employment and work are concerned. Among the 10 European countries surveyed smooth transition as well as desirable employment and work is most often endangered in Spain and Italy, and to a certain extent as well in France. Moreover, income of graduates is low in the Czech Republic and Spain even if controlled by purchasing power. It is interesting as well that a relatively high proportion of graduates from the United Kingdom consider their job not as closely linked to their area of study and as inappropriate. On the other hand, graduates from institutions of higher education in Nordic countries consider their employment and work situation most frequently as desirable. German graduates report the highest average income of graduates.
Taking into account various prior national studies, we do not see any reason to conclude that graduates perceive their employment and work situation to have significantly declined in quality over the years. In comparing employment and work of the 1995 graduates with those of the 2000 graduates, one notes in many respects stability or slight improvements especially in Italy, Spain and France.

However, it is not possible to present a minute picture on the extent of stability or change as regards graduate employment and work from the earlier to the later cohort. There are many differences in the formulation of questions and in the categories for responses presented. Moreover, the latter survey addressed the graduates more than one year later after graduation than the former one. Last but not least the former study compared the job requirements with the competencies upon graduation while the latter one compared the job requirements with competencies acquired up to five years after graduation. These differences aggravate a detailed analysis over time to such an extent that we can argue that we note a “missed opportunity” for measuring changes over time. If graduate surveys were undertaken regularly and if they were expected to inform the various stakeholders about changes in the links between higher education and the world of work, a higher degree of stability of the survey instruments would be necessary.
PART IV

THE “BOLOGNA PROCESS”
18.1 THE SITUATION AND THE PERSPECTIVES IN THE LATE 1990s

In the late 1990s, the view spread in Europe that a convergent structure of study programmes and degrees should be established across all European countries and that this would be a crucial step to found a European Higher Education Area. The Bologna Declaration signed in 1999 by a large number of ministers of European countries in charge of higher education suggests that the new bachelor-master structure as well as various accompanying measures are decisive to increase the attractiveness of higher education in European countries for students from all over the world and for facilitating intra-European mobility of students – during their course of study, but certainly also in their subsequent career.

What was the situation like at that time? On the basis of available statistics, we estimate that in the late 1990s about three per cent of the students at European institutions of higher education were nationals of other European countries. We also estimate that about two per cent of highly qualified labour in Europe or slightly more were nationals from other European countries. There is evidence that both ratios were on the rise, but no dramatic increase could be observed. According to these figures, we could argue that both student mobility within Europe and professional mobility of highly qualified labour within Europe might have increased in the past from a rare exception to one among many options, but certainly was not on the way towards such a frequency that it deserves a major reform of higher education for the sake of all students and their subsequent careers.

Obviously, the Bologna Declaration not only aimed at a minority of two or three per cent of students and graduates or slightly higher numbers as consequence of regular trends. In addition,

- it was known that the proportion of students studying in another European country at least for some period during their course of study was substantially higher than the proportion of students registered in another European country in any single year,
- compared to those employed in another European country, a higher proportion of higher education-trained persons in Europe is professionally active abroad by being sent to another country for some period by their home employers,
- facilitating mobility across Europe could also ease mobility across continents,
- mobility and the acquisition of competences relevant for mobility are also valuable for work tasks at home, were foreign language proficiency, knowledge of other countries and international understanding is useful,
CHAPTER 18

– border-crossing mobility and international learning at home could also enhance the students’ competences and the graduates’ job performance in general, for example through fostering maturity, coping with unexpected work tasks, etc.
– The Bologna Declaration, in calling for “greater compatibility and comparability of higher education” and in referring once to the “European labour market” does not only have in mind border-crossing mobility and international learning and work tasks, but also all study and its links to the world of work in the European region in general. The borderline between similar national policies in neighbour countries and joint policy for a larger region is blurred.
– Last not least, the Bologna Process could facilitate employment in Europe for persons who come from other parts of the world to Europe not only for the purpose of study, but also for possible subsequent employment.

Therefore, this analysis of the links between the Bologna Process on the move towards a European Higher Education Area and the European labour market, will, as a first step, explore the magnitude of student mobility and professional mobility. In addition, attention will be paid to European and international study of graduates’ visible European and international work tasks. Further, emphasis will be placed on employment and work of formerly mobile students in order to establish the impact of student mobility and thus possibly the impact of the Bologna Process as envisaged facilitator of student mobility. Finally, the issue will be raised how reforms undertaken in the framework of the Bologna Process affect the hitherto “normal” graduates who neither are mobile across borders nor have substantial visible European or international work tasks.

This study will seek for empirical evidence notably on the basis of available statistics and survey results. We note ample speculations about the role the Bologna Process might play for graduate employment and work, but seldom any effort to provide systematic information.

A note of caution, however, is necessary. Most relevant statistics and surveys available have not been designed to respond to the questions raised by the Bologna Process. Moreover, it takes time until the Bologna reform is implemented within higher education and changes have put their footprints on graduate employment and work. Though most of the information provided addresses situations and trends prior to the envisaged changes, it is certainly helpful to ascertain what can be expected on the way towards a European Higher Education Area and towards European graduate employment and work.

18.2 ACTUAL DEVELOPMENTS OF STUDENT MOBILITY IN EUROPE

Statistical data regularly collected by UNESCO show that the number of students studying in a country different from that of their nationality has increased more than ten times since World War II up to more than two million. But as the total number of tertiary students increased at a similar pace, the ratio of foreign students remained more or less constant at about two per cent all over the world. Most student mobility could be called “vertical”, i.e. from poorer to relatively richer countries and from universities with lower standards to those with assumed higher standards (see Teichler 2004b). According to the UNESCO statistics, the propor-
tion of foreign students in “more developed countries”, however, grew at a higher speed, because the overall enrolment increased at a higher pace in other parts of the world both due to demographic developments and to a late-coming process of growth: thus, similar proportions of outwards flows from other parts of the world led to increasing ratios of inwards mobility in the economically advanced countries.

In 2006, the Academic Cooperation Association (Kelo, Teichler and Wächter 2006, p. 15-16) showed for 32 European countries that about 1.1 million of the altogether 19.4 million students in 2003 (the academic year 2002/03) had a foreign nationality, i.e. 5.8 per cent; almost exactly half of the foreign students, i.e. 2.9 per cent of all students, were nationals from other European countries; similarly, about 575,000 students from these 32 countries studied abroad – a figure corresponding to 3.1 per cent of students from these countries studying at home; about 82 per cent of European students studying abroad (i.e. 2.5 % of all European students) did so in other European countries.

The Bologna Process aims to facilitate student mobility – a phenomenon that has not been paid attention to in the traditional education statistics compiled by supra-national agencies on the basis of national statistics. The number of mobile students in Europe differs from that of foreign students notably in three respects (see ibid.). First, many foreign students already lived and learned in the country of study before they enrolled in tertiary education. They cannot be viewed as mobile students in terms of crossing the border for the purpose of study in another country. Second, students studying abroad temporarily (i.e. ERASMUS and other exchange students), mostly for half a year or one year, are only partially included or not included at all in the statistics of foreign students in many countries. Third, some youth lived and learned abroad prior to study before going to the country of their nationality for the purpose of study. These obviously mobile students (“returners”) by definition are not included in statistics of foreign students.

As regards temporary student mobility, we know that the number of ERASMUS students, according to statistics of the European Commission, has increased from 97,571 in 1997/98 to 123,897 in 2002/03 (ibid., p. 164). The growth of 27 per cent within this five-year period actually was somewhat smaller than the growth of all foreign students in European countries during that period. On the basis of scattered pieces of information we estimate that about 250,000 to 300,000 students in Europe had been mobile in 2003 for a temporary period, but we do not know how many of them were recorded in the official statistics on foreign students.

The proportion of internationally mobile students during their course of study is higher than the proportion of mobile students at any point in time. In a survey of 1994/1995 graduates from ten Western European countries undertaken in 1999, 17 per cent of the respondents – ranging from 12 per cent of Spanish to 29 per cent of Dutch graduates – reported that they had studied for some period abroad. Among them 11 per cent had been mobile for the purpose of study, two per cent for an internship, four per cent for both study and internship, and only less than one per cent for other purposes (Teichler 2001, p. 13). According to a similar survey of 1999/2000, the average proportion of those going abroad during the course of study
had increased to 26 per cent – ranging from 16 per cent of Spanish to 36 per cent of Austrian students (Teichler 2007b).

The survey of 1994/1995 shows additional means of international experience. Two per cent had another citizenship when they were born; most of them attended already secondary education in the country of their higher education study. Seven per cent lived for some time abroad before they enrolled at higher education institutions.

In summing up the various findings we might estimate that about two per cent of students from European countries study abroad for a degree, among them more than three quarters within Europe. More than 20 per cent participate in temporary study, internships or other study-related activities abroad at some time during the course of study, among them again most within Europe. Thus, facilitating mobility within Europe is not an issue relevant for few, but for many students, and it might even be viewed as paving the way for next steps towards the ambitious goal formulated in the Sorbonne Declaration that most students in Europe should spend some period abroad.

18.3 ACTUAL PROFESSIONAL MOBILITY

In 1999 – the year of the Bologna Declaration – about 34 million persons trained in tertiary education were professionally active in the European Union. As Table 1 shows, about four per cent of them were foreigners. Additionally available information allows us to estimate that more than half of them were nationals of other European countries. Taking aside the small country of Luxembourg, the ratio of foreign tertiary-trained labour ranged from about one per cent each in Italy, Spain, and Finland to eight per cent in Austria.

Table 1. Foreign Employees with Highest ISCED Educational Level in the EU 1999 (thousands and percentage)

<table>
<thead>
<tr>
<th>Country</th>
<th>Domestic citizenship</th>
<th>Foreign citizenship</th>
<th>Foreign citizenship/total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>2,436</td>
<td>25</td>
<td>1%</td>
</tr>
<tr>
<td>Spain</td>
<td>3,508</td>
<td>52</td>
<td>1%</td>
</tr>
<tr>
<td>France</td>
<td>5,400</td>
<td>187</td>
<td>3%</td>
</tr>
<tr>
<td>Austria</td>
<td>401</td>
<td>37</td>
<td>8%</td>
</tr>
<tr>
<td>Germany</td>
<td>8,233</td>
<td>418</td>
<td>5%</td>
</tr>
<tr>
<td>UK</td>
<td>6,887</td>
<td>255</td>
<td>4%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1,749</td>
<td>62</td>
<td>3%</td>
</tr>
<tr>
<td>Finland</td>
<td>755</td>
<td>6</td>
<td>1%</td>
</tr>
<tr>
<td>Sweden</td>
<td>1,146</td>
<td>46</td>
<td>4%</td>
</tr>
<tr>
<td>Belgium</td>
<td>1,234</td>
<td>85</td>
<td>6%</td>
</tr>
<tr>
<td>Denmark</td>
<td>668</td>
<td>19</td>
<td>3%</td>
</tr>
<tr>
<td>Greece</td>
<td>759</td>
<td>23</td>
<td>3%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>20</td>
<td>16</td>
<td>45%</td>
</tr>
<tr>
<td>Portugal</td>
<td>432</td>
<td>10</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Teichler and Jahr 2001, p. 445 (based on Eurostat data)
In the 1950s and 1960s, the proportion of foreign unskilled and skilled labour in Europe was substantially higher. Thereafter, occupational mobility declined in Europe – partly as a consequence of increasing unemployment and oversupply of labour, partly in response to the success of the European policy of reducing economic disparities across Europe. In contrast, international mobility among highly qualified persons tended to be small, notably because often sophisticated knowledge of the country’s language, customs and rules is indispensable for professional success and thus is a major barrier for foreigners in a large number of occupations requiring a high level of educational attainment. Only recently, professional mobility of the highly skilled got momentum in Europe.

The above named survey of 1994/1995 graduates undertaken about five years later shows that a substantially higher proportion of university graduates are professionally active abroad than the statistics on the nationality of higher education-trained persons might suggest (Jahr and Teichler 2007). Of the respondents from ten Western European countries having graduated in the country of their nationality, as Table 2 shows, three per cent were employed abroad about four years after graduation; six per cent were employed abroad previously but not anymore at the time the survey was conducted about four years after graduation; finally, 13 per cent were commissioned abroad by their employers for some period during the first about four years after graduation.

Table 2. International Professional Mobility of 1994/1995 Graduates from 10 European Countries, by Country of Graduation (percentage, home graduates only)

<table>
<thead>
<tr>
<th>Country of Graduation</th>
<th>Working abroad 4 years after graduation</th>
<th>Previously employed abroad</th>
<th>Previously commissioned abroad</th>
<th>Total mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>1.2</td>
<td>3.1</td>
<td>10.3</td>
<td>14.6</td>
</tr>
<tr>
<td>Spain</td>
<td>1.1</td>
<td>2.3</td>
<td>8.0</td>
<td>11.4</td>
</tr>
<tr>
<td>France</td>
<td>5.1</td>
<td>5.4</td>
<td>19.3</td>
<td>29.8</td>
</tr>
<tr>
<td>Austria</td>
<td>5.8</td>
<td>4.1</td>
<td>8.8</td>
<td>18.7</td>
</tr>
<tr>
<td>Denmark</td>
<td>2.2</td>
<td>2.8</td>
<td>7.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.8</td>
<td>15.2</td>
<td>36.6</td>
<td>54.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.4</td>
<td>10.8</td>
<td>12.4</td>
<td>27.6</td>
</tr>
<tr>
<td>Finland</td>
<td>6.6</td>
<td>4.9</td>
<td>17.5</td>
<td>29.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>6.6</td>
<td>10.8</td>
<td>10.1</td>
<td>27.5</td>
</tr>
<tr>
<td>Norway</td>
<td>0.4</td>
<td>2.3</td>
<td>9.2</td>
<td>11.9</td>
</tr>
<tr>
<td>Total</td>
<td>3.3</td>
<td>5.7</td>
<td>12.9</td>
<td>21.8</td>
</tr>
</tbody>
</table>

Source: Teichler and Jahr 2001, p. 451 (based on CHEERS survey data)
Actually, the US, the United Kingdom (12% each), Germany (11%), nine other European countries (24% altogether) and Japan (1%) were the most frequent destinations.

The survey of 1999/2000 graduates showed that three per cent of those who had graduated in the country of their nationality were employed abroad about five years after graduation. But a further 13 per cent had worked abroad for some period during the first few years after graduation (Teichler 2007b).

Altogether, the data available indicate that employment abroad and temporary work assignments abroad were not rare exceptions, as the employment statistics could suggest, but were already part of the early careers of about one fifth of persons graduating from Western European institutions of tertiary education before the Sorbonne Declaration and the Bologna Declaration put facilitating student mobility so high on the agenda.

18.4 VISIBLE INTERNATIONAL WORK ASSIGNMENTS

Graduates from European higher education institutions often experience that their work tasks are visibly international. This often holds true, as the above named graduate survey shows, even if they are not professionally mobile across borders (see column 4 of Table 3).

Table 3. High Importance of Competences for Work Four Years After Graduation of Mobile and Non-Mobile 1994/1995 Graduates from 10 European Countries (per cent)

<table>
<thead>
<tr>
<th>Competences</th>
<th>Working abroad 4 years after graduation</th>
<th>Previously employed abroad</th>
<th>Occasionally commissioned abroad</th>
<th>Non-mobile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional knowledge of other countries</td>
<td>58</td>
<td>37</td>
<td>36</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>Knowledge/understanding of international differences in culture and society</td>
<td>71</td>
<td>51</td>
<td>46</td>
<td>32</td>
<td>36</td>
</tr>
<tr>
<td>Working with people from different cultural backgrounds</td>
<td>82</td>
<td>62</td>
<td>63</td>
<td>42</td>
<td>47</td>
</tr>
<tr>
<td>Communicating in foreign languages</td>
<td>82</td>
<td>55</td>
<td>6</td>
<td>32</td>
<td>39</td>
</tr>
<tr>
<td>Count (n)</td>
<td>(664)</td>
<td>(1,139)</td>
<td>(2,609)</td>
<td>(15,739)</td>
<td>(20,151)</td>
</tr>
</tbody>
</table>

Source: Teichler and Jahr 2001, p. 455 (based on CHEERS survey data)
Of course, the competences were more frequently required from graduates who were actually professionally mobile across borders. For example, among those working abroad about four years after graduation (see the first column of Table 3),
- 58 per cent used professional knowledge on other countries to a high extent on their job, i.e. almost three times as many as those always working in the home country;
- 82 per cent often communicated in a foreign language, i.e. again almost three times as many;
- 71 per cent considered knowledge and understanding of other cultures and society as a meaningful element of their assignments, i.e. more than twice as many, and
- 82 per cent considered the ability to work with people from different cultural backgrounds as an important feature of the requirements on their job, i.e. about twice as many as those always working in the home country.

Overall, graduates are cautious to claim that the acquisition of visibly international competences is so important that they are in the forefront when employers hire graduates. Only 24 per cent of the 1994/1995 graduates stated that foreign language and 13 per cent that international experience were important criteria for their employers to recruit them (Jahr and Teichler 2002, p. 129). Academic knowledge, personality and abilities such as practical problem solving are generally in the forefront, and visibly international competences seem to be an important additional asset for some graduates.

18.5 COMPETENCES, EMPLOYMENT AND WORK OF FORMERLY MOBILE STUDENTS

Facilitating student mobility within Europe is expected not only to enhance the academic knowledge, to contribute to personal maturation, and to foster visibly international competences but also to contribute favourably to employment and work subsequent to study. Therefore, graduate employment and work is an area in which evidence has to be sought.

Between 1989 and 1994, a longitudinal survey was undertaken of a sample of ERASMUS 1988/1989 students (Maiworm and Teichler 1996; see also Teichler and Maiworm 1997). Various findings are worth to be mentioned here:
- About five years after the study period in another European country, 18 per cent of those employed at that time actually were employed abroad, half of them each in the host country of their ERASMUS experience and half of them in a third country.
- A substantial proportion of graduates believed that their temporary study period in another country was helpful in being invited by employers and actually getting employed. Almost two thirds of the graduates believed that foreign language proficiency and about half of them that study abroad were among the important criteria of their first employer to recruit them.
- About half of the former ERASMUS students reported that they make frequently use of their foreign language proficiency on the job. About one third each stated that they use frequently the academic knowledge acquired abroad,
– On average, former ERASMUS students did not believe that their income and status was higher than that of their peers who had not studied abroad. The authors interpreted this as follows: “It might be disappointing, at first glance, for some advocates of study abroad to note that these did not reach higher positions and higher salaries during the early stages of their careers... One should bear in mind, though, that... ERASMUS was clearly a public investment stimulating publicly desirable changes in the composition of competences... the individual can expect to be rewarded for his or her non-monetary investments... in terms of interesting work rather than status advantage” (Teichler and Maiworm 1997, p. 200).

Altogether the findings of the first longitudinal study of ERASMUS students from the year after the ERASMUS period to about five years later suggested that ERASMUS does not contribute to exceptionally high-flying careers, but that ERASMUS facilitates the career start, leads to a greater readiness for international professional careers and contributes to a greater ability to take over international job assignments irrespective whether the former ERASMUS students were professionally mobile across borders or worked in their country of origin.

The additional survey on international dimensions named above which addressed 1994/1995 graduates from five countries about four years later, provided for the first time a comparison of study, employment and work between former ERASMUS students, other mobile students and students not having been temporarily mobile during their course of study. The survey shows that former ERASMUS students rated their competences slightly lower on average, were less frequently internationally mobile and took less frequently over visibly international work assignments than students who were temporarily mobile during their course of study in other contexts. The authors offer the following interpretation: “This is probably due to the fact that ERASMUS does not rely solely on the high motivation and international orientation of students of the kind who tend to go abroad anyway. Rather, ERASMUS aims to contribute to a mobilisation of those students who are not necessarily inclined to do so and for whom support could be crucial to consider studying in another European country” (Jahr and Teichler 2002, p. 135).

Altogether, however, the survey of 1994/95 shows more striking differences between those who had been mobile (whether in the framework of ERASMUS or in other contexts) and those who had not been mobile during their course of study.

Altogether, the various surveys undertaken do not provide any consistent findings whether formerly mobile graduates could be considered superior in their professional competences other than the visibly international competences to those former students who had not been mobile during the course of study. According to a survey of 1994/95 graduates, those formerly mobile rated a few of their competences to be higher at the time of graduation than those formerly not mobile. According to the survey of 1999/2000, no major differences could be observed in the self-rating of those competences five years after graduation. Former ERASMUS students of the academic year 2000/01 believed five years later that their level of competences at the time of graduation was slightly higher according to most of the
dimensions of professionally relevant competences addressed in the survey. Currently undertaken surveys of university leaders, those responsible in institutions of higher education for student mobility and employers all confirmed the impression that ERASMUS students are slightly superior in many professionally relevant dimensions of competences (Bracht et al. 2006).

18.6 A DECLINING PROFESSIONAL IMPACT OF STUDENT MOBILITY?

In 2005/06, the professional value of ERASMUS was analysed with the help of a representative survey of former students five years after having spent an ERASMUS-supported period in the academic year 2000/01. In addition, surveys were undertaken and workshops conducted including employers, university leaders, teachers and persons responsible for international exchange (ibid.). The results of the study “The Professional Value of ERASMUS” (VALERA) confirm that formerly mobile students note a substantial impact of their international study experiences on visibly international competences, careers and work assignment. Among others, the proportion of those reporting that they had been employed at least for some time in another country had slightly increased from 18 per cent of the 1988/89 ERASMUS cohort to 20 per cent of the 2000/01 ERASMUS cohort. The 2005/06 study also confirms an at most moderate impact of temporary study abroad on the general employment and work situation some years later. Moreover, the recent study shows that ERASMUS study is more professionally valuable for students from Central and Eastern European countries than for students from Western European countries. In the studies addressed above, Central and Eastern European countries hardly had been discussed.

In comparing the results of the most recent study to those of the prior studies, we note, however, some indications that the professional value of temporary study abroad might have declined over the years. This seems to be the case in various respects.

First, as Table 4 shows, the ERASMUS experience was viewed as having a declining positive influence on the employment in general, i.e.  
- obtaining the first job (from 71 % for 1988/89 ERASMUS students to 56 % for 2000/01 students);
- types of work tasks involved (from 49 % to 39 %), and
- income level (from 25 % to 16 %).

Second, the VALERA study also shows that former ERASMUS students of recent years see fewer opportunities of using their visibly international competences on the job. According to Table 5, for example,
- using frequently the language of the host country on the job fell from 47 per cent to 38 per cent within slightly more than one decade.
- Similarly, frequent use of knowledge of the host country’s culture and society declined from 30 per cent during that period to 24 per cent.
Table 4. Perceived Positive Influence of the ERASMUS Study Period on Employment and Work – a Comparison Between Various Surveys of Former ERASMUS Students (per cent of employed graduates)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining first job</td>
<td>71</td>
<td>66</td>
<td>54</td>
</tr>
<tr>
<td>Type of work task involved</td>
<td>49</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>Income level</td>
<td>25</td>
<td>22</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Bracht et al. 2006 (based on VALERA survey)

Table 5. ERASMUS-Related Work Tasks of Former ERASMUS Students – a Comparison Between Various Surveys of Former ERASMUS Students (per cent of employed graduates)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the language of the host country orally</td>
<td>47</td>
<td>42</td>
<td>38</td>
</tr>
<tr>
<td>Using the language of the host country in reading and writing</td>
<td>47</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Using firsthand professional knowledge of host country</td>
<td>30</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Using firsthand knowledge of host country culture/society</td>
<td>30</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>Professional travel to host country</td>
<td>17</td>
<td>18</td>
<td>146</td>
</tr>
</tbody>
</table>

Source: Bracht et al. 2006 (based on VALERA survey)

The authors interpret these findings as an indication that students not being internationally mobile prior or during the course of study increasingly acquire international competences – as a consequence of internationalisation of daily life and increasing “internationalisation at home” at higher education institutions, e.g. increasing international elements of curricula and contacts with teachers and students from other countries. Therefore, the advantage of formerly mobile students in being prepared for international work tasks is bound to decline. The authors suggest that ERASMUS support should be concentrated more strongly on more ambitious modes of international cooperation and mobility where it can also “make a difference” in the future.
18.7 THE PROFESSIONAL RELEVANCE OF THE BOLOGNA PROCESS FOR THE NON-MOBILE STUDENTS AND GRADUATES

18.7.1 The implications of the Bologna approach

The Bologna Declaration of 1999 calls in its core for a restructuring of levels of study programmes and degrees. This was primarily advocated for purposes of border-crossing mobility: to achieve “greater compatibility and comparability of the systems of higher education”. But it was obvious that a new structure was bound to have direct or indirect impact on the relationships between study and subsequent career for all students, i.e. not only the mobile ones. European higher education policies do not only address the “European labour market” in terms of border-crossing but also as the sum of national labour markets within Europe – the latter certainly under the assumption that the constructs of “national labour markets” become increasingly fuzzy in the process of growing European economic and social interaction.

First, the Bologna Declaration only once refers explicitly to this theme: “The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification.” As universities in many European countries had been accustomed to longer programmes than those of the first Bologna cycle, they were challenged in the Bologna Process to find ways how shorter programmes could lead to an end meaningful not only as one of successive stages of learning, but also as an entry qualification to the labour market.

The reference in the Bologna Declaration to the labour market relevance of a short study programme echoes the widespread critique according to which universities believe all to easily that training for academic careers and for top careers outside academia is more or less compatible and therefore gear their preparation for the world of work only to the needs of the “chosen few”, thus neglecting the professional perspectives of the majority of students. If the bachelor-master structure was not viewed by the universities as a force to consider the professional perspectives of the majority of students, the bachelor degree could hardly have any professional value, but rather only a value as preparatory stage for a master study.

The interim evaluations of the Bologna Process undertaken in 2005 (Reichert and Tauch 2005; Alesi et al. 2005), in fact, underscore a widespread belief among employers, politicians and representatives of the higher education system, that a bachelor awarded by higher education institutions not being universities would follow into the footsteps of previous degrees awarded by Fachhochschulen, hohescholen, AMK, and similar institutions and that these bachelors would be highly welcomed on the labour market. In contrast, concern was widespread in various European countries that persons awarded a bachelor from a university face problems of acceptance on the labour market. In some countries, surveys were undertaken on transition to employment of graduates from the newly established bachelor programmes, but it is premature to assess whether the new bachelors face risks only at the beginning of the implementation of the Bologna Process or whether such risks are persistent. Moreover, it is premature to assess whether bachelor programmes aiming to emphasize the professional relevance of study in various
respects are substantially more successful than other ones helping to reinforce their graduates’ careers.

Second, the Bologna Declaration points at “cycles” and at the duration of study programmes as the single most important dimensions of structuring higher education institutions and programmes, thereby downgrading the traditional relevance of the distinction between types of higher education institutions. It remains to be seen whether this upgrades the status of other higher education institutions vis-à-vis the universities or whether it weakens them by undermining the relevance of their traditional characteristics and thus invites predominantly to a further “academic drift” of the programmes in other institutions of higher education.

Third, the emphasis placed by the Bologna Process on a reform of levels of degrees obviously draws attention to the question of how the changing levels of degrees are articulated to entry levels of the professional life. There are clearly two different concepts under debate:

– The bachelor level can be conceived as a general entry qualification to all highly qualified occupations, whereby a master degree might increase the likelihood to be employed in the most attractive areas. This notion has been widespread historically in many occupational areas in the United Kingdom.

– The master degree is conceived to be the entry qualification to the highest careers, while the bachelor degree leads to the second-highest careers. This notion, for example, is applied in Germany in entry regulations to the civil service.

Again, we might expect that around 2010 in-depth information can be collected about the role of bachelors and masters as entry qualification in the various European countries and within the countries in the various sectors of the employment system.

Fourth, the Bologna Declaration named various additional measures to be undertaken. Obviously, a spread of credit systems in higher education has an influence on the modes of teaching, learning and examination and thus shapes possible improvement and deterioration of competences acquired in the course of study. Moreover, the provision of the Diploma Supplement is envisaged to increase the transparency of the knowledge and competences actually acquired by the students in the course of study not only for foreign employers but also for employers of the home country. It will be interesting to note whether this increased transparency has an impact on the recruitment of graduates, for example in terms of a less credentialist selection of applicants.

18.7.2 The subsequent “employability” and “qualification framework” debate

In the wake of the Bologna Process, the increase of the “employability” of graduates gradually became one of the key goals (cf. Haug 2005; Witte 2006), and it figures prominently in communiqués of the subsequent ministerial conferences in Prague (2001), Berlin (2003) and Bergen (2005). This cannot be viewed as an immediate outgrowth of the logic and the spirit of the Bologna Declaration (see Teichler 2004a), but two other factors came into play.
First, we note a general change of the climate of higher education policy. Calls are made frequently for gearing higher education more strongly to economic success: the aim of achieving “the most competitive economy”, the vision of a “knowledge economy” and the use of the term “employability” are vocal expressions of such a paradigmatic shift.

Second, the communiqués of the ministerial conferences in the Bologna Process call increasingly for measures of indirect curricular steering to accompany the structural core reform of introducing levels of study programmes and degrees. The increasing emphasis placed in the communiqués on “quality assurance”, “competence-based learning”, “qualification frameworks”, and “employability” can be interpreted that the confidence is fading in the desirable impact of structural reforms as such; even if this interpretation is not shared, it is undisputable that the key documents of the Bologna Process call increasingly for a combination of structural measures, measures indirectly affecting the substance and processes of learning as well as measures directly addressing the substance and processes of learning in order to increase the professional relevance of the study programmes.

The popular term “employability” is bound to create misunderstandings. Prior to the debates in the wake of the Bologna Process, it was a clearly established term in the domain of labour market policy where it refers to the issue what could be done to provide “youth at risk” under unfavourable labour market conditions to get a job at all. Obviously, the term “professional relevance” would have been more suitable for the Bologna Process (ibid.).

In the framework of the Bologna Process, a multitude of issues is addressed with the term “employability”, e.g.:

- information, knowledge and competence relevant to cope successfully in the job search process;
- smooth transition processes and early careers successes can be viewed as indicators of “employability” of students and graduates, whereby “employability” remains a “black box”;
- quantitative and structural reallocations to increase the number of students and graduates in areas of presumed high demand;
- changes of the substance and the processes of curricula, teaching and learning, e.g. specialisation, emphasis on generic or key skills, competence-based learning, internships, etc. in order to prepare the students in a more targeted way for future professional work;
- a stronger emphasis on “learning to learn” and “lifelong education” in order to cope with changes of professional assignments, obsolescence of knowledge, retraining needs for changing the occupation, etc.;
- fostering the ability of managing one’s own career.

The controversial debate in Europe about the changing links between higher education and the world of work in the wake of the Bologna Process has not yet been analysed systematically. But major semi-official documents, such as the recommendations formulated at the official Bologna Seminar “Enhancing European Employability”, held in 2006 in Swansea, or the “qualifications frameworks” formulated by the respective Working Group in 2005, suggest that not any single of the controversial interpretations of “employability” succeeded in dominating the scene.
Issues of the links between higher education and the European labour market are under deliberation in the framework of the Bologna Process in two respects. First, “European” means the various European countries or the European area as a whole. While the Bologna Declaration of 1999 calls for structural convergence while preserving the variety of the national higher education systems and thus the variety of curricular thrusts across Europe, voices seem to get increasing acceptance which call for a certain degree of curricular convergence as well. “Qualifications frameworks” are advocated by signatory governments of the Bologna Process as one of these measures: they are expected to ensure a minimum of common understanding of the types and levels of competences to be acquired upon award of the respective level of degree. Moreover, the term “employability” began to penetrate the official and semi-official documents of the Bologna Process. This term is misleading, because it means in labour market terminology to find some ways to insert those persons into employment who are hardly able to work at all. It is predominantly employed in the framework of the Bologna Process to point at various measures to gear study programmes closer to work tasks and to strengthen various measures for facilitating the transition from higher education to employment. Other, in contrast, point out that higher education is expected to be professionally relevant irrespective where study programmes are positioned between emphasis on the pursuit of academic knowledge for its own sake, personality development, critical thinking, and preparation for unexpected tasks on the one hand and direct preparation for qualified professions on the other hand; therefore the term “employability” would only call for attention to be paid to the relationships between higher education and the labour market, but would not call for a certain option. Actually, though the term “employability” spread all over Europe, the respective national calls for reforms in higher education are strikingly different across countries and disciplines as well as individual institutions and actors. For example, while in Germany this led to recommendations to introduce separate training courses of “key skills” into curricula, the British debate focuses on the extent to which higher education programmes in general should reinforce professional knowledge and understanding vis-à-vis generic competences.

Second, “European labour market” refers to border-crossing mobility in the context of the Bologna Process as well as to international work tasks. Various studies have been undertaken to analyse the links between European temporary student mobility and subsequent employment and work and also on international professional mobility and international assignment of graduates from various European countries who had not been mobile during the course of study. They suggest that professional mobility has remained scarce in Europe, but short-term professional assignments abroad and visibly international job assignments have substantially spread. Temporary study in another European country seems to lead to at most only moderate enhancements of professional competences and career chances in general, but clearly to higher international competences, more frequent international mobility and more frequent assignments of international job tasks. This difference, however, seems to get smaller over the time, most likely as a consequence of a greater spread of international experience also among students and graduates.
who do not spend periods of study and work abroad. Most of the information available refers to a time when the new bachelor-master structure of study programmes and degrees in Europe did not yet exist or was in its infancy. It remains to be seen how the spread of the bachelor-master structure and accompanying changes will affect the professional mobility and the international assignments of graduates.
CHAPTER 19

INTERNATIONAL MOBILITY OF STUDENTS AND EARLY CAREER
(2007)*

19.1 INTERNATIONAL MOBILITY AND THE EUROPEAN HIGHER EDUCATION AREA

The Bologna Declaration signed in 1999 by almost 30 ministers of European countries in charge of higher education suggests that the new bachelor-master structure as well as various accompanying measures are crucial for increasing the attractiveness of higher education in European countries for students from all over the world and for facilitating intra-European mobility of students – during their course of study, but certainly as well in their subsequent career. Mobility and the acquisition of competences relevant for mobility are often expected to be valuable for work tasks at home, were foreign language proficiency, knowledge of other countries and international understanding is useful. Border-crossing mobility and international learning at home might also enhance the students’ competences and the graduates’ job performance in general, for example through fostering maturity, coping with unexpected work tasks, etc.

But does international mobility, especially temporary mobility during study, really have such positive effects? Do we find empirical evidence for the professional value of student mobility? In this article results of some recent large scale surveys will be presented which can at least shed some light on these issues. Emphasis will be placed on employment and work of formerly mobile students in order to establish the impact of student mobility and thus possibly the impact of the Bologna Process as envisaged facilitator of student mobility. First we try to summarise what we know about the extent of student mobility from available statistics and surveys.

19.2 FREQUENCY OF INTERNATIONAL STUDENT MOBILITY

Available statistics published by EUROSTAT, OECD and UNESCO are based on educational statistics collected by individual countries. As a rule, they provide information on foreign students. The actual number of mobile students in Europe, however, differs from that of foreign students presented in the official statistics notably in three respects (see Kelo, Teichler and Wächter 2006.):

– Many foreign students already lived and learned in the country of study before they enrolled in tertiary education. They cannot be viewed as mobile students in

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terms of crossing the border for the purpose of study in another country; in Table 1 they are termed “foreign non-mobile students”.

– Students studying abroad temporarily (i.e. ERASMUS and other exchange students), mostly for half a year or one year, are only partially included or not included at all in the statistics of foreign students in many countries.

– Some youth lived and learned abroad prior to study before going to the country of their nationality for the purpose of study. These obviously mobile students, named “home country mobile students” in Table 1, by definition are not included in statistics of foreign students.

The magnitude of these distinctions can be shown only for a few European countries that collect data both on nationality and mobility of students and that are characterized by high proportions of inward mobile students. In all these four countries addressed in Table 1, more than one fifth of the foreign students had lived and learned in the country of study prior to enrolment, and four to 15 per cent of the mobile students went (often returned) to the country of their nationality for the purpose of study.

Table 1. Percentage of Mobile and Foreign Students of All Tertiary Education Students in Select European Countries 2003

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>UK</th>
<th>Austria</th>
<th>Switzerland</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Foreign mobile students</td>
<td>8.5</td>
<td>13.0</td>
<td>10.6</td>
<td>14.1</td>
<td>1.7</td>
</tr>
<tr>
<td>b. Home country mobile students</td>
<td>1.5</td>
<td>0.6</td>
<td>1.3</td>
<td>2.0</td>
<td>0.1</td>
</tr>
<tr>
<td>All mobile students (a, b)</td>
<td>10.0</td>
<td>13.6</td>
<td>11.9</td>
<td>16.1</td>
<td>1.8</td>
</tr>
<tr>
<td>c. Foreign non-mobile students</td>
<td>3.4</td>
<td>4.6</td>
<td>2.7</td>
<td>5.4</td>
<td>1.0</td>
</tr>
<tr>
<td>All foreign students (a, c)</td>
<td>11.9</td>
<td>17.6</td>
<td>13.3</td>
<td>19.5</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Source: based on Kelo, Teichler and Wächter 2006

In 2006, the Academic Cooperation Association (Kelo, Teichler and Wächter 2006, p. 15-16) showed for 32 European countries that

– about 1.1 million of the altogether 19.4 million students in 2003 (the academic year 2002/03) had a foreign nationality, i.e. 5.8 per cent;

– almost exactly half of the foreign students, i.e. 2.9 per cent of all students, were nationals from other European countries;

– similarly, about 575,000 students from these 32 countries studied abroad – a figure corresponding to 3.1 per cent of students from these countries studying at home;

– about 82 per cent of European students studying abroad (i.e. 2.5 % of all European students) did so in other European countries.

Statistical data regularly collected by UNESCO show that the number of students studying in a country different from that of their nationality has increased, but the ratio of foreign students all over the world remained more or less constant at about two per cent. Most student mobility might be called “vertical”, i.e. from poorer to
relatively richer countries and from universities with lower standards to those with assumed higher standards (see Teichler 2004b). UNESCO (1998, p. 10) published an overview on developments in higher education in 1998, the year of the Sorbonne Declaration, on the occasion of the UNESCO World Conference on Higher Education. It showed an uneven rate of increase of foreign students among the major European host countries from the mid-1980s to the mid-1990s at an average annual rate of five per cent. Annual rates of increase above ten per cent were reported from the United Kingdom, Portugal, Hungary, Finland, and Denmark, and between five per cent and ten per cent in most of these countries. In contrast, the number of foreign students declined during that period in Greece, the Czech Republic, Italy and marginally as well in France.

In 2005 the Organisation for Economic Co-operation and Development (OECD 2005, p. 267) provided an overview on the change in the number of foreign students from 1998 and 2003. On average of the 16 European countries providing data for both years, the quota of foreign students increased within five years from 5.2 per cent to 6.7 per cent.

Recent data for Germany are showing a dramatic increase in the number of foreign students during the last fifteen years: the total number of foreign students at institutions of higher education in Germany increased from 92,000 (1990) to 246,000 (2005). The share of the foreign students among the total students doubled from 6.1 % to 12.5 %.

As regards temporary student mobility, we know that the number of ERASMUS students has increased, according to statistics of the European Commission, from 97,571 in 1997/98 to 123,897 in 2002/03 (ibid., p. 164). The growth of 27 per cent within this five-year period actually was somewhat smaller than the growth of the number of all foreign students in European countries during that period. On the basis on scattered pieces of information we estimate that totally about 250,000 to 300,000 students in Europe had been mobile in 2003 for a temporary period.

Surveys can provide a more detailed picture of international mobility. For instance the participation rate in temporary student mobility can be established through asking students graduating in their home country shortly before graduation or after graduation to provide this information.

The REFLEX study – as the best available data source in this respect – addressed international mobility at various stages of the graduates’ life. First, graduates were asked to state whether they and their parents were born abroad and whether they lived in a foreign country
– at the age of 16,
– during their course of study,
– when they became employed for the first time after graduation, and
– at the time the survey was conducted, i.e. about five years after graduation.
Second, they were asked to provide information whether they spent time abroad during their study period for purposes of study and work. Third, similar questions were posed regarding mobility after graduation. Table 2 informs about the different stages of international mobility.
### Table 2. Stages of International Mobility, by Country (per cent)

<table>
<thead>
<tr>
<th>Stage Description</th>
<th>IT</th>
<th>ES</th>
<th>FR</th>
<th>AT</th>
<th>CH</th>
<th>DE</th>
<th>NL</th>
<th>BE</th>
<th>UK</th>
<th>FI</th>
<th>NO</th>
<th>CZ</th>
<th>EE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Migration background prior to study</td>
<td>3</td>
<td>4</td>
<td>16</td>
<td>15</td>
<td>33</td>
<td>8</td>
<td>11</td>
<td>4</td>
<td>23</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>1.2 Born abroad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>1.3 Lived abroad at age 16</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Mobility during study</td>
<td>17</td>
<td>16</td>
<td>36</td>
<td>36</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>28</td>
<td>19</td>
<td>32</td>
<td>19</td>
<td>27</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>3. Mobility after graduation</td>
<td>18</td>
<td>19</td>
<td>21</td>
<td>27</td>
<td>28</td>
<td>16</td>
<td>18</td>
<td>32</td>
<td>21</td>
<td>18</td>
<td>10</td>
<td>24</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>- Study</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>- Work</td>
<td>11</td>
<td>11</td>
<td>17</td>
<td>23</td>
<td>19</td>
<td>13</td>
<td>16</td>
<td>28</td>
<td>18</td>
<td>15</td>
<td>7</td>
<td>18</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>4. Currently employed abroad</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Life course international experience</td>
<td>28</td>
<td>26</td>
<td>50</td>
<td>50</td>
<td>61</td>
<td>40</td>
<td>43</td>
<td>47</td>
<td>46</td>
<td>39</td>
<td>29</td>
<td>42</td>
<td>32</td>
<td>42</td>
</tr>
<tr>
<td>Count</td>
<td>(3,001)</td>
<td>(3,137)</td>
<td>(1,635)</td>
<td>(1,655)</td>
<td>(4,749)</td>
<td>(1,630)</td>
<td>(3,181)</td>
<td>(1,283)</td>
<td>(1,564)</td>
<td>(2,516)</td>
<td>(2,112)</td>
<td>(6,778)</td>
<td>(950)</td>
<td>(34,190)</td>
</tr>
</tbody>
</table>

Source: REFLEX Graduate Survey

IT = Italy, ES = Spain, FR = France, AT = Austria, CH = Switzerland, DE = Germany, NL = Netherlands, BE = Belgium, UK = United Kingdom, FI = Finland, NO = Norway, CZ = Czech Republic, EE = Estonia
About five per cent of the graduates surveyed in the REFLEX study were born in another country than that of their institution of higher education; we can assume that most of them were foreign citizens. This proportion was about ten per cent among those graduating in Switzerland and the United Kingdom, but only two per cent or less in Belgium, the Czech Republic, Estonia, Finland, Italy and Spain. A migration background – born abroad, or mother or father was born abroad – is reported by 11 per cent of the graduates, with substantial differences by country. In Switzerland, one third of graduates have a migration background, and high percentages are also visible among graduates from UK (23 %), France (16 %) and Austria (15 %). About two per cent of the respondents lived in a country different from that of graduation at the age of 16. Actually, the majority of graduates surveyed which had come from other countries moved to the country of study as a young child or during their period of school education.

International mobility during the course of study was reported by 26 per cent of graduates. Actually,

– 21 per cent spent a period of study abroad and
– seven per cent a period of work abroad during their course of study.

Thus, about two per cent spent both periods of study and of work abroad. Other student and graduate surveys suggest that most of the students reporting work abroad actually spend an internship abroad, i.e. working experience linked to their study.

Table 2 shows substantial differences of mobility during the course of study by country of graduation. But even in countries where temporary periods abroad for study and work were a less frequent choice than on average in Europe in the latter half of the 1990s, i.e. Spain, Italy, the United Kingdom, Estonia, and Norway, a period abroad for study or work is by no means an exception. The proportion ranges even in these countries from 16 to 19 per cent. The highest rates of international mobility during study were reported by graduates from France (36 %), Austria (36 %) and Finland (32 %).

Actually, those going abroad during their course of study for the purpose of study or work spent on average (arithmetic mean) a period of seven months for study and six months for work in another country. These data from the REFLEX study by and large confirm results of other available studies which focus on temporary student mobility in Europe.

Among the Western European respondents of the CHEERS survey who had graduated about four years earlier, 18 per cent had spent some time during the course of study abroad in order to study or to work (Jahr and Teichler 2007), i.e. about two-thirds as many as among the respondents of the REFLEX survey. The available data underscore the fact observed in other student surveys as well that temporary student mobility was clearly on the rise in Europe over the 1990s.

Seven per cent of the graduates around 2000 surveyed in the REFLEX study, graduating in the country where they were born, reported that they have spent during the subsequent five years some time after graduation for the purpose of further study in another country than that of their graduation. This proportion was highest among graduates from Estonia (13 %) and Switzerland (12 %). As 40 per cent of the respondents undertook further studies within the first five years after gradua-
tion, we note that about one sixth of the graduates embarking on further study studied at least for some time in another country. The average period of subsequent study abroad was four months. This confirms the findings of other surveys that students are obviously motivated through their study abroad experience to continue study after graduation towards advanced levels of qualification (see Bracht et al. 2006).

Among the respondents of the CHEERS survey who had graduated four years earlier, also about three per cent each were employed abroad when they started their career and were employed abroad and lived abroad at the time the survey was conducted. 18 per cent of them reported that they had worked abroad for some period during the about first four years after graduation, among them the majority commissioned for some period by the home country employer (Jahr and Teichler 2007). Differences of the findings between the CHEERS survey and the REFLEX survey are too small to infer any clear sign of growth over the period of five years.

Available labour market statistics suggest that only about three per cent of the highly qualified labour forces in Europe are nationals of other European countries. The findings of the CHEERS survey and the REFLEX survey seem to be in line with these data; they do not indicate any clear growth trend.

Of all graduates surveyed in the REFLEX study working abroad five years after graduation 17 per cent had chosen Germany, 12 per cent the United Kingdom, 11 per cent Switzerland and nine per cent the U.S. as destination. This pattern is clearly distinct from that of graduates surveyed in the CHEERS study of whom 15-16 per cent each had gone to the United Kingdom, the U.S., and Germany.

As Table 3 shows,
– Germany was the exceptionally frequent destination for graduates from Austria (43 % of graduates from Austrian universities working abroad) and the Netherlands (32 %),
– Similar priorities can be noted for graduates from France going to Switzerland (31 %), from Belgium to the Netherlands (33 %) and from Norway to Sweden (31 %), while
– graduates from other countries opted for a broader range of destinations.

Foreign graduates (graduates born abroad) show clearly distinct patterns of border-crossing mobility after graduation from those born in the country of graduation. Among employed REFLEX graduates born in a country different from that of graduation about five years after graduation,
– 16 per cent were employed in their country of birth, and
– five per cent were employed in a third country.
Obviously, persons graduating abroad are – unlike those graduating in their home country – not solely preoccupied with the career in the country of graduation, but rather opt for subsequent border-crossing mobility in large numbers.
In combining the various modes of international experience (migration background prior to study, temporary study abroad, international mobility during the first five years after graduation) we note, as demonstrated in Figure 1, that overall international experience up to five years after graduation, here named “life course international experience”, is widespread in various European countries, especially in Switzerland (61 %), France and Austria (50 % each), while less frequent in Norway, Italy and Spain (less than 30 %).
Figure 1. Life Course International Experience up to Five Years After Graduation in Europe, by Country (per cent)

The impact of mobility on the early career in general

19.3 THE IMPACT OF MOBILITY ON THE EARLY CAREER IN GENERAL

The impact of mobility during the course of study on the graduates’ career can be analyzed both in the CHEERS survey and the REFLEX study by comparing persons who had been mobile during the course of study with those not mobile during the course of study. Thereby, the data allows us to control for possible selection effects regarding socio-biographic dimensions as well as regarding various dimensions of study behaviour. In addition, the analysis can draw from two evaluation studies on the impact of temporary study supported in the framework of the ERASMUS programme: first, ERASMUS students of the academic year 1988/89 were surveyed shortly after return and again about three years and finally about five years later; the final questionnaire was responded by more than 1,200 former ERASMUS students (Maiworm and Teichler 1996); second, a survey was conducted on the professional value of ERASMUS (VALERA), whereby about 4,600 ERASMUS students of the academic year 2000/01 provided information in 2005 about their study experiences and subsequent life course. In addition, employers, leaders of higher education institutions and formerly mobile ERASMUS teachers were addressed with the help of surveys and seminars (Bracht et al. 2006).
Table 4 provides some findings drawn from the REFLEX study about the differences of socio-biographic profile and of study between persons who had been mobile during the course of study and/or shortly after graduation and those who had not been mobile at these life stages. Those who had been mobile
– came more often from families with parents graduating from higher education programmes,
– had been frequently enrolled in higher education providing access to doctoral studies (master programmes or long initial university programmes),
– were more often active in student organisations or other voluntary organisations, and
– had participated more frequently in internships or other work experience during the course of study.
Additionally, it should be noted that mobile students had been over-proportionally enrolled in Humanities and less than average in Education as well as in Health and Welfare, and that women were under-represented.

Table 4. Socio-Biographic Background and Study by International Mobility During and Shortly After the Course of Study (per cent; only home students)

<table>
<thead>
<tr>
<th>International mobility</th>
<th>No mobility</th>
<th>Only during study</th>
<th>Only after study</th>
<th>During and after study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>61</td>
<td>63</td>
<td>47</td>
<td>53</td>
<td>59</td>
</tr>
<tr>
<td><strong>Highest education of father</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISCED 5+6</td>
<td>38</td>
<td>49</td>
<td>44</td>
<td>51</td>
<td>42</td>
</tr>
<tr>
<td><strong>Type of study programme</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISCED 5A long programme providing direct access to doctorate</td>
<td>49</td>
<td>64</td>
<td>56</td>
<td>68</td>
<td>54</td>
</tr>
<tr>
<td><strong>Work experience during higher education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study-related work experience during higher education</td>
<td>44</td>
<td>53</td>
<td>44</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Non-study related work experience during higher education</td>
<td>47</td>
<td>58</td>
<td>53</td>
<td>57</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>185</td>
<td>206</td>
<td>188</td>
<td>208</td>
<td>191</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>(15,042)</td>
<td>(3,598)</td>
<td>(2,594)</td>
<td>(2,379)</td>
<td>(23,613)</td>
</tr>
</tbody>
</table>

Source: REFLEX Graduate Survey
Results of the REFLEX graduate survey suggest – in accordance with previous findings – that international mobility during the course of study or shortly after graduation do not lead to clearly more successful employment and work about four to five years after graduation. Only small differences can be observed for instance as regards occupational status in general, the utilization of knowledge on the job and job satisfaction.

Table 5, for example, shows that those who had been internationally mobile in most countries have a slightly higher income. Mobile male graduates from Switzerland, United Kingdom and Estonia even earn less than the non-mobile male graduates from these countries. In most of the countries mobile women have a higher income advantage than mobile men. For instance in France, mobile women earn 27 per cent more than non-mobile female graduates.

<table>
<thead>
<tr>
<th>Country</th>
<th>Male Not mobile</th>
<th>Male Mobile</th>
<th>Difference</th>
<th>Difference %</th>
<th>Female Not mobile</th>
<th>Female Mobile</th>
<th>Difference</th>
<th>Difference %</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>1,840</td>
<td>2,205</td>
<td>365</td>
<td>20</td>
<td>1,509</td>
<td>1,662</td>
<td>153</td>
<td>10</td>
</tr>
<tr>
<td>ES</td>
<td>1,733</td>
<td>1,862</td>
<td>128</td>
<td>7</td>
<td>1,429</td>
<td>1,605</td>
<td>176</td>
<td>12</td>
</tr>
<tr>
<td>FR</td>
<td>2,463</td>
<td>3,021</td>
<td>558</td>
<td>23</td>
<td>1,924</td>
<td>2,439</td>
<td>515</td>
<td>27</td>
</tr>
<tr>
<td>AT</td>
<td>3,177</td>
<td>3,283</td>
<td>106</td>
<td>3</td>
<td>2,419</td>
<td>2,690</td>
<td>272</td>
<td>11</td>
</tr>
<tr>
<td>CH</td>
<td>4,636</td>
<td>4,585</td>
<td>-51</td>
<td>-1</td>
<td>3,957</td>
<td>3,901</td>
<td>-55</td>
<td>-1</td>
</tr>
<tr>
<td>DE</td>
<td>4,221</td>
<td>4,939</td>
<td>718</td>
<td>17</td>
<td>3,248</td>
<td>3,778</td>
<td>530</td>
<td>16</td>
</tr>
<tr>
<td>NL</td>
<td>2,718</td>
<td>2,853</td>
<td>136</td>
<td>5</td>
<td>2,307</td>
<td>2,449</td>
<td>142</td>
<td>6</td>
</tr>
<tr>
<td>BE</td>
<td>2,839</td>
<td>2,886</td>
<td>47</td>
<td>2</td>
<td>2,510</td>
<td>2,614</td>
<td>103</td>
<td>4</td>
</tr>
<tr>
<td>UK</td>
<td>3,127</td>
<td>3,036</td>
<td>-92</td>
<td>-3</td>
<td>2,568</td>
<td>2,824</td>
<td>256</td>
<td>10</td>
</tr>
<tr>
<td>FI</td>
<td>2,984</td>
<td>3,092</td>
<td>109</td>
<td>4</td>
<td>2,311</td>
<td>2,481</td>
<td>170</td>
<td>7</td>
</tr>
<tr>
<td>NO</td>
<td>4,171</td>
<td>4,720</td>
<td>549</td>
<td>13</td>
<td>3,280</td>
<td>3,703</td>
<td>423</td>
<td>13</td>
</tr>
<tr>
<td>CZ</td>
<td>922</td>
<td>1,034</td>
<td>113</td>
<td>12</td>
<td>775</td>
<td>885</td>
<td>111</td>
<td>14</td>
</tr>
<tr>
<td>EE</td>
<td>1,195</td>
<td>1,189</td>
<td>-7</td>
<td>-1</td>
<td>855</td>
<td>881</td>
<td>26</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: REFLEX graduate survey

Several multiple regression analysis were performed separately for countries and types of study programmes (see footnote of Table 6) within countries which included variables of socio-biographic background and study behaviour. As Table 6 suggests, mobility during the course of study and shortly afterwards still turns out to be moderately linked with higher income, if socio-biographic and educational factors are controlled which might be favourable for employment and work. But this is not consistently true for all countries, as the findings on Switzerland, the Netherlands, United Kingdom, and Estonia underscore.
### Table 6. The Impact of International Mobility During and After Study on Income Five Years After Graduation, by Country and Type of Study Programme (regression coefficients; OLS)

<table>
<thead>
<tr>
<th>Country</th>
<th>Type of study programme</th>
<th>Dependent variable international mobility during study</th>
<th>Dependent variable international mobility during or shortly after study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-stand. (B)</td>
<td>Stand. coefficient (beta)</td>
<td>Sig.</td>
</tr>
<tr>
<td>IT</td>
<td>Type 1</td>
<td>-121.848</td>
<td>-.057</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>223.090</td>
<td>.115</td>
</tr>
<tr>
<td>ES</td>
<td>Type 1</td>
<td>-11.037</td>
<td>-.005</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>226.237</td>
<td>.149</td>
</tr>
<tr>
<td>FR</td>
<td>Type 1</td>
<td>89.334</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>349.869</td>
<td>.174</td>
</tr>
<tr>
<td>AT</td>
<td>Type 1</td>
<td>-30.835</td>
<td>-.012</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>152.971</td>
<td>.064</td>
</tr>
<tr>
<td>CH</td>
<td>Type 1</td>
<td>-36.090</td>
<td>-.011</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>121.579</td>
<td>.041</td>
</tr>
<tr>
<td>DE</td>
<td>Type 1</td>
<td>1207.076</td>
<td>.212</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>222.532</td>
<td>.045</td>
</tr>
<tr>
<td>NL</td>
<td>Type 1</td>
<td>39.295</td>
<td>.024</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>-8.520</td>
<td>-.005</td>
</tr>
<tr>
<td>BE</td>
<td>Type 1</td>
<td>225.775</td>
<td>.141</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>-66.601</td>
<td>-.038</td>
</tr>
<tr>
<td>UK</td>
<td>Type 1</td>
<td>136.717</td>
<td>.046</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>-482.927</td>
<td>-.175</td>
</tr>
<tr>
<td>FI</td>
<td>Type 1</td>
<td>84.198</td>
<td>.050</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>54.971</td>
<td>.030</td>
</tr>
<tr>
<td>NO</td>
<td>Type 1</td>
<td>428.929</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>-180.028</td>
<td>-.049</td>
</tr>
<tr>
<td>CZ</td>
<td>Type 1</td>
<td>-2.792</td>
<td>-.003</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>76.411</td>
<td>.093</td>
</tr>
<tr>
<td>EE</td>
<td>Type 1</td>
<td>30.483</td>
<td>.024</td>
</tr>
<tr>
<td></td>
<td>Type 2</td>
<td>-84.042</td>
<td>-.076</td>
</tr>
</tbody>
</table>

Source: REFLEX Graduate Survey

Type 1: study programmes on ISCED 5A level, which do not provide direct access to doctorate study programmes (like Fachhochschule in Germany or HBO in the Netherlands).

Type 2: study programmes on ISCED 5A level, which provide direct access to doctorate study programmes.
Chapter 19

19.4 THE IMPACT OF MOBILITY ON THE CHARACTER OF ASSIGNMENTS

In contrast, international mobility seems to be highly relevant for the kind of work tasks. As Table 7 indicates, mobile graduates are over-proportionally often employed in large organisations and they are more frequently active in organisations with an international scope.

Table 7. International Mobility and the Employing Organization Five Years After Graduation (per cent; only home graduates living in home country five years after graduation)

<table>
<thead>
<tr>
<th>Size of the organisation</th>
<th>No mobility</th>
<th>Only during study</th>
<th>Only after study</th>
<th>During and after study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-49</td>
<td>35</td>
<td>29</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>50-999</td>
<td>38</td>
<td>41</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>1000+</td>
<td>27</td>
<td>30</td>
<td>35</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope of operations of organization</th>
<th>No mobility</th>
<th>Only during study</th>
<th>Only after study</th>
<th>During and after study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>24</td>
<td>15</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Regional</td>
<td>26</td>
<td>25</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>National</td>
<td>24</td>
<td>25</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>International</td>
<td>26</td>
<td>35</td>
<td>53</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: REFLEX Graduate Survey

Former ERASMUS students surveyed in the VALERA study considered various of their international competences as important for doing their current work:
- professional knowledge of other countries (45 %),
- knowledge and understanding of international differences in culture and society (57 %),
- working with people from different cultural backgrounds (66 %),
- communication in foreign languages (69 %).

These proportions are four to ten per cent higher than among former ERASMUS students graduating in 1994/95 who had been surveyed in the framework of the CHEERS study. This suggests a growing relevance of international competences over time for the former ERASMUS students. The survey of 1994/95 graduates had provided evidence, as one might expect, that these international competences were substantially more important for graduates having been mobile during the course of their study than for graduates not having been internationally mobile during the course of study.
19.5 STUDY ABROAD: A DECLINING DISTINCTION

All other information available, however, suggest that recent graduates who had been mobile during the course of study, note a lower professional relevance of their experiences abroad during the course of study than previous cohorts of student who had been temporarily abroad. This holds true, first, for general aspects of employment and work. As Table 8 shows,

- the proportion of former ERASMUS students believing that temporary study has helped obtaining the first job fell from 71 per cent to 54 per cent within 12 years,
- similarly, the proportion of those seeing an impact on the type of their work tasks declined from 49 per cent to 39 per cent, and finally
- the proportion who considered their temporary study abroad as beneficial for their income level declined from 25 per cent to 16 per cent. In the most recent study, the proportion of those was even higher who believed that study abroad had reduced their income opportunities.

Table 8. Perceived Positive Influence of the ERASMUS Study Period on Employment and Work – A Comparison Between Various Surveys of Former ERASMUS Students (per cent of employed graduates)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining first job</td>
<td>71</td>
<td>66</td>
<td>54</td>
</tr>
<tr>
<td>Type of work task involved</td>
<td>49</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>Income level</td>
<td>25</td>
<td>22</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: VALERA Survey

Second, former ERASMUS students also observed a slightly declining professional use of the visible international competences. According to Table 9, this was more pronounced for the use of foreign languages than for the use of the knowledge on the host country.

On the other hand, employers surveyed in 2006 (in the framework of the VALERA study) express a more positive view of the professional value of international mobility. According to more than 40 per cent of them, internationally experienced graduates are likely to take over professional assignments with high professional responsibility. 21 per cent believe that internationally experienced graduates can expect a higher income after some years than those without international experience.
Table 9. Visible International Work Tasks of Former ERASMUS Students – A Comparison Between Various Surveys (per cent of employed graduates)

<table>
<thead>
<tr>
<th></th>
<th>ERASMUS students surveyed 1993</th>
<th>Graduates surveyed 1999</th>
<th>ERASMUS students surveyed 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the language of the host country orally</td>
<td>47</td>
<td>42</td>
<td>38</td>
</tr>
<tr>
<td>Using the language of the host country in reading and writing</td>
<td>47</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Using firsthand professional knowledge of host country</td>
<td>30</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Using first hand knowledge of host country culture/society</td>
<td>30</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>Professional travel to host country</td>
<td>17</td>
<td>18</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: VALERA Survey

19.6 CONCLUDING OBSERVATIONS

Statistics on the proportion of students from European countries studying abroad or specifically in another European country in a given year or on the proportion of highly qualified labour from European countries working abroad or specifically in another European country, again in a given year, could let us conclude that student mobility and professional mobility across borders has remained a marginal phenomenon. In contrast, surveys undertaken a few years after graduation which examine the educational and life paths of the respondents in retrospect, indicate impressive proportions of border-crossing mobility. Of those who have graduated around the year 2000, more than 20 per cent were abroad during the course of study and more than 40 per cent had some kind of international experience, ranging from a migration background of their parents to some period of advanced study or work after graduation.

The information provided by the REFLEX study and other studies suggest that persons internationally experienced prior to graduation or shortly after are clearly more likely to be internationally mobile and are clearly more likely to take over jobs at home which require international competencies. This confirms a strong “horizontal” link between international learning and experience on the one hand and international work on the other hand.

There are “vertical” links as well, i.e. between international experience and general career success, though less close and less consistent. In some respects, work abroad and work requiring visible international competencies are positively rewarded in terms of status and desirable work tasks. Also, temporary study abroad is eventually awarded often by some components of a more attractive career. But these “vertical” advantages are less frequent and smaller. They do not hold true in
all respects: international careers might require longer periods of transition to work and are often connected with higher employment risks. Moreover, some of the advantages visible at first are spurious, because international careers and international job requirements are more frequent in economic sectors and occupational groups which have an above-average status. Finally, among those with international experience prior to study some are migrants experiencing unequal opportunities in their country of study and work. But altogether, the acquisition of international experiences and competencies as well as a job requiring international competencies and possibly international professional mobility are on average slightly more highly rewarded than other study and career options.

There are changes over time. The number of internationally experienced students and graduates grow, and in some respect recent generations of mobile persons are more highly competent in areas visibly linked to international experiences. Altogether, however, a lower proportion within the recent cohorts of formerly mobile students observes a strong impact of their international experiences on their career in general and on the international dimensions of their work assignments. The less exclusive international experiences are, the less likely they make a difference. International competences, work abroad and visible international work assignments might be on the rise, but the preparation for these components and work might diversify beyond the “king’s route” of student mobility.
CHAPTER 20


20.1 INTRODUCTION

The “Bologna Process” and the “European Higher Education Area” are “success stories” in the setting of a political agenda. Everything which is considered desirable in higher education these days in Europe is likely to be considered even more desirable, if it went successfully through a process of canonization and eventually became a bullet point in the lists of themes addressed in the memoranda of the Bologna, Prague, Berlin, Bergen et cetera procession. And the production and dissemination of catch words and phrases, such as “employability”, are among the instruments employed to turn the spotlight of the European debates on higher education to the various themes put under the umbrella of the “Bologna Process” and the “European Higher Education Area”.

For persons not involved full-time in preaching the gospel of Bologna, it becomes more and more difficult to find out what the core is of this reform process in Europe, what the major components are for the support of the core, and what all the other reforms are aimed for in higher education which some of us also want to put in the spotlight. We even do not know, for example, whether the term “employability” is named in the Bologna Declaration or not. Actually, it is not named. But, it was directly addressed in Prague two years later, and there are direct and indirect references in the Bologna Declaration that changes in the relationship between higher education and the world of work are among the causes for the Bologna Process and that the Bologna Process will have an impact on these relationships as well.

In this paper, I want to

– point out how the core themes of the Bologna Process are interrelated to changes in the relationships between higher education and the world of work;
– show – starting off from the term “employability” – the various dimensions of knowledge, competence and certification on the one hand and of employment and work on the other which have to be taken into consideration in this framework;
– discuss a few issues more in-depth which might deserve more attention on the way towards a European Higher Education Area.
Three propositions should be made from the outset:

- The relationships between higher education and the world of work are not per definitionem a core theme of the Bologna Process, but they are closely intertwined with the core themes of Bologna.
- The term “employability” might be a short hand easy to remember, but it is misleading in awareness creation about the issues at stake.
- I am afraid that we will consider the “Bologna Process” as a missed opportunity if we do not use this process for changing the relationships between higher education and the world of work in a targeted manner. Or in reverse: I am optimistic that the Bologna Process is a real opportunity to do what was overdue, i.e. to reconsider and reshape the relationships between higher education and the world of work.

20.2 MAJOR EMPLOYMENT AND WORK DIMENSIONS OF THE BOLOGNA PROCESS

The Bologna Declaration, in its core, calls for “greater compatibility and comparability of the systems of higher education”. The establishment of cycles (or levels) of higher education programmes and degrees is the key measure called for, and the diploma supplements and credit systems are also addressed as important means. These measures are also expected to serve an increase of “the international competitiveness of the European system of higher education” and the “promotion of mobility” within higher education. The “European area of higher education” ought to be consolidated while “taking full respect of the diversity of cultures, languages, national education systems and of university autonomy”.

If this is a correct description of the core of the Bologna Declaration and of the Bologna Process, we might identify four or five direct or indirect linkages to the relationships between higher education and the world of work.

Professionally relevant Bachelor at universities: First, the Bologna Declaration refers explicitly only once to our theme: “The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification”. As universities in many European countries were accustomed to longer programmes than those of the first cycle of three years or somewhat more, they have to consider now how shorter programmes could lead to an end meaningful not only as one of successive stages of learning, but also as an entry qualification for the labour market.

Universities often are criticized to believe all to easily that training for academic careers and for the top careers outside academia is more or less compatible and to gear their preparation for the world of work to the “chosen few”, thus neglecting the professional motives and prospects of those who got the opportunity of entering higher education in the process of educational expansion. Now, the challenge for the universities goes one step further: they neither can only focus on the “chosen few” nor can they leave short programmes to other types of higher education institutions: the universities have to address the professional relevance of their programmes explicitly as well for those who were not in the focus of their attention in
“EMPLOYABILITY” OR “PROFESSIONAL RELEVANCE”

the past. Rather universities have to serve two levels of programmes and their objectives more or less equally.

Cycles as the most important formal element of diversity: Second, the Bologna Declaration points at “cycles” and at duration as the single most important dimension of structuring higher education institutions and programmes and determining “compatibility and comparability”. This emphasis on one dimension implicitly makes clear that other dimensions which play a role in the debates of homogeneity versus diversity of higher education are at most of secondary relevance. As a consequence, the Bologna Process calls for a reconsideration of the identities of the different types of higher education institutions and programmes in countries where different types existed. For example, universities and Fachhochschulen in German-speaking countries in Europe are not the same anymore since the Bologna Declaration – irrespective, whether one wants to keep or to give up different types of institutions and programmes.

Length of study as the major “currency”: Third, the Bologna Declaration only makes sense if formal levels of study and degrees and the years of study and notional time spent for study indicate a more or less similar level of competence and of preparation for the world of work. If we believe that credits or years of study at one institution of higher education had a completely different value than the identical number of credits or years of study at another institution of higher education, it would not at all make sense to transform the structures of the higher education systems so substantially in a convergent way in order to increase mobility and compatibility. This is clearly also the philosophy of the 1997 Lisbon Convention on recognition: periods of study are viewed as indicating the value of studies, unless there is not clear evidence of a difference. Of course, all of those involved agree that this is a creative assumption and not a perfect description of the status quo characterized by more or less small or steep hierarchies of reputation; therefore, the cautious phrasing of “greater compatibility and comparability” is employed. This notwithstanding Bologna calls for more trust in the equal values of the identical length of study across Europe.

Facilitating both intra European student mobility and professional mobility: Fourth, although the Bologna Declaration addresses mobility only within the higher education system, it is obviously based on the conviction that a structural convergence within higher education is likely to help graduates who want to be professionally mobile within Europe. The Bologna Declaration in its essence is very similar to the decision of the European Council in December 1988 regarding the professional recognition in Europe.

A close look at the Bologna Declaration and the multitude of subsequent official documents, academic analyses and policy debates – not only with reference to the relationships between higher education and the world of work, but also with reference to other issues – suggests that the “Bologna Process” wrestles with what I like to call a “triangle of conflicting objectives” (see Chart 1).
“Homogeneity” or “similarity”, suggesting that mutual acceptance, mobility and recognition would be most easily served if a high degree of identity or similarity existed across institutions and programmes.

“Diversity” in horizontal and vertical terms, suggesting that the needs of the individual learners and the needs of society would be served well by a heterogeneity of programmes (“profiles”) or by ranks according to “quality”, “reputation” or “labour market value” between institutions and programmes of a similar shape. “Competitiveness” is often fielded in this discussion as a disguise for the contrasting belief to the one addressed above, namely that “heterogeneity and stratification in higher education is beautiful”.

“Variety” or “diversity” of cultures and national education systems, i.e. diversity in horizontal terms by country. This calls for measures to ensure that difference in substance is viewed as “equivalent”, i.e. equal in value (in “level” or “quality”).

Actually, the concept of the “Diploma Supplement”, unlike the concepts underlying the Bologna cycles and the credit systems, was developed with the intention to cope with these conflicting objectives: if higher education is not clearly moving towards “homogeneity” or “similarity”, there is a need to describe the existing diversity of higher education programmes and individual study profiles and achievements on a map of common descriptors in order to help the reader of the document to compare them to other programmes and profiles and thereby establishing the existing degree of similarity or difference.

“Bologna” calls in the framework of this triangle for a somewhat greater similarity in order to save “compatibility” amidst pressures of stratification and heterogeneity. The forces pressing for stratification and heterogeneity would
geneity. The forces pressing for stratification and heterogeneity would reduce mobility and recognition, if no action was undertaken in favor of higher similarity.

20.3 THE TERM “EMPLOYABILITY” AND THE ISSUES AT STAKE

We observe a lively debate about actual trends and proposed changes in the relationship between study in higher education and subsequent employment and work. In the economically advanced societies, the major themes might be characterized by the following phrases and issues:

– expansion and “massification” of higher education,
– growing inter-institutional and inter-individual diversity of job prospects,
– on the way towards a “knowledge society”,
– from “job security” to “uncertainty,” “risk” and “flexibility”,
– growing relevance of “key skills”, “generic skills”, etc.,
– the changing role of pre-career higher education in the trend towards “lifelong learning”, and
– international variety in higher education and the professions and the globalisation forces.

The “Bologna Process” takes place in this context. It is affected by all these issues, and it can make a contribution towards shaping the relationships between study and subsequent employment and work in various respects. The term “employability” used since 2001 in the framework of the Bologna Process since Prague 2001 suggests that the Bologna Process is expected to have an impact, but the term as such does not make clear to what dimensions in the relationships between study and subsequent employment and work. As will be pointed out, the use of the term “employability” is quite misleading.

We should not be surprised to note fuzzy and misleading terms in the context of the Bologna Process. For example, “competitiveness” is associated with “quality”, “stratification”, “attractiveness”, “entrepreneurship”, interaction between higher education institutions based on “mistrust”, etc. The term “ECTS” developed for the European mobility programme ERASMUS is preserved as a “brand name” for 60 credits a year, although credits in the framework of the Bologna Process are not confined to the “T” (transfer), but also to “credit accumulation”, and although students are not awarded “S” (a system), but only “credits”: (“ECHE” would be more appropriate in the same way as “ECVET” is now advocated for credits in the framework of vocational training in Europe). There seems to be an inclination to create and preserve fuzzy and misleading terms in areas which we consider highly important.

What does the term “employability” signal? And what are the issues at stake in the relationships between study and subsequent employment and work?

First, in the framework of EU employment policies, “employability” clearly refers to the issues, how “youth at risk” under unfavorable labour market conditions can have a chance to get a job at all. From this perspective, it is unfortunate and misleading to associate the Bologna Process with “employability”: graduates from higher education programmes in Europe have at most half of the average risk to be unemployed.
Second, “employability” is often used with reference to the processes of job search and of the recruitment of staff. The universities might contribute to the employability of their graduates by informing them about the labour market, coaching them for the job search, for example to act in job interviews, and by playing an active role in placing their graduates.

Third, “employability” is used in relation to the process of “transition” from higher education to employment as a whole. If graduates have a “smooth transition” in terms of limited activities of search, short search period and hardly any time span between graduation and the begin of regular employment, hopefully in occupational categories matching the level and field of study, one infers that these graduates were employable. This accounts for the popularity of employment indicators shortly after graduation. The findings are often misleading because small transition ratios do not necessarily indicate the presumed weaknesses: they might show that a university produced many ambitious and successful graduates who opt for further study instead of employment; this also might be due to an unfavorable labour market in the region where the university is located rather than to an insufficient “employability” of their graduates.

Fourth, “employability” might refer to all what explains the employment conditions and the “employment success” of graduates. “Employment” means in this context the “exchange value” of study: on the one hand, the remuneration and the social status related to it, on the other hand the “employment conditions”, e.g. working time, full-time versus part-time employment, short term versus indefinite contract, vacations, etc. In this framework, “employability” does not refer to any specific competences of graduates or any specific work tasks, but to the degree and to the occupation as a whole, i.e. to the total bundle of individual characteristics and achievements in the course of study which might contribute to employment success as a whole.

Fifth, “employability” might refer to the overall course of a career and the role the individual plays in managing his or her own career. The lesser individuals can trust that their career will run steadily and upward according to their talents and the more they have to shape their careers in a targeted way in order not to be lost, the more we discuss the kinds of competences which individuals need to understand their careers and the ways they could shape them actively.

These five dimensions of the relationships between study and the subsequent professional life can be associated to the term “employment”. Therefore, the term “employability” might be justified in principle, although it is confusing to employ the term for all the five dimensions. There are additional dimensions, however, which are not in the domain of “employment”, but rather in the domain of “work”, “work tasks”, “professions”, etc.

Sixth, higher education is expected to equip their students, and the students are expected to equip themselves, with certain bundles of knowledge and competences which “match” certain bundles of work assignments. “Fields of study” or “majors”, but also levels of study and degrees are employed to name the former; “degrees”, “diplomas”, etc. testify the successful acquisition of these bundles of knowledge and competences. “Occupations” or “professions” are terms addressing the typical bundles of work assignments.
Seventh, we have become more and more aware over the recent three decades that a clear “match” between field and level of study on the one hand and on the other a certain occupational category is not the norm, but rather an exception. In the development of more complex and more dynamic explanatory concepts we noted that we need more sophisticated views of “match”. Students

– are bound to be under-qualified for the diversity of concrete work assignment and therefore need a period of direct training for their work tasks after graduation,
– are bound to be over-qualified to cope with the diversity of typical work assignments in an occupation, even if not every member of this occupation will have to take over all these assignments,
– have to learn how to learn in order to cope with the obsolescence of knowledge,
– have to prepare for work roles which did not exist at the time when they studied,
– cannot be trained merely to take over the prevailing assignment successfully, but also have to be prepared to take over indeterminate work tasks, to challenge established professional practices and to be agents of innovation.

Eighth, a vast number of different terms had been invented over the decades to make us aware that successful action on the job is not just based on having acquired certain areas of “knowledge”, but also on competences also determined by values, attitudes and other non-cognitive dimensions. We often read terms such as “generic skills”, “key qualifications”, “social competences”, “work attitudes” and (hic!) “employability skills”. The emphasis of the British 1997 report on higher education called Dearing Report is often named as the starting point for the spread of the term of “employability” in this context.

It is impossible to systematize here the wealth of terms and concepts employed in this debate in a comprehensive way. It is justified, however, to claim that the following issues are addressed most frequently:

– graduates have to transfer knowledge to work assignments and to understand what the work tasks require to be taken up successfully (“problem-solving abilities”),
– graduates have to develop typical working styles (e.g. working under pressure, working without clear assignments),
– certain values and affective competences are relevant for work (“loyalty”, “achievement orientation”, etc.),
– graduates have to perform in social settings and therefore have to acquire “social skills” (“leadership”, “team work” etc. abilities),
– graduates have to understand the context in which they act and have to choose appropriate ways of action (“adaptation”, “reflection”, etc.).

Whatever the preferred terms of the list are to describe the competences needed – three claims are typical for this debate.

– Higher education can foster these competences less directly than the acquisition of “knowledge”.
– We do not know well which substances and processes of teaching and learning foster these competences most successfully.
– This notwithstanding, higher education has to be more active than ever before to foster these competences.
The reference made to “lasting employability” in the Prague Communiqué of 2001 suggests that the seventh and the eighth dimension of the above stated relationships between study and subsequent employment and work were certainly in the minds of those who started to talk about “employability” in the framework of the Bologna Process.

20.4 RECONSIDERING THE LINKS BETWEEN STUDY AND SUBSEQUENT EMPLOYMENT AND WORK

The Bologna Process calls most directly upon those universities in Europe which were accustomed to long study programmes to consider a first, relatively short programme as a meaningful preparation for the world of work. They are expected to design curricula in a way that they are a sound basis both for those transferring to the world of work and for those continuing studies in advanced cycles.

The Bologna Process also takes for granted that the length of study and the level of degree should be a powerful measure of a certain level of competences. This implies that most bachelors and also most bachelors in Europe are somewhat similar as far as the “level” and the “quality” are concerned. The “Bologna” philosophy, thus, does not seem to be based on the belief that the future of higher education and of the employment is best served by a steep hierarchy of talents and professional responsibility. Implicitly, “Bologna” seems to favour a view of a knowledge society, in which many persons are on a fairly high level of knowledge and many can take over complex tasks in a reflective and responsible way.

A comprehensive reconsideration and revision of curricula is on the agenda when course programmes and degrees are restructured to the extent the Bologna Declaration calls for. This is an opportunity to consider knowledge and its utilization on the job as well as the modes of teaching and learning in every respect. Some areas deserve special attention in this context even though they are hardly referred to in the official documents of the Bologna Process. For example, a much wider range of creative options for masters can be established now than it was considered appropriate within the old, long university programmes.

In this new wave of curricula reforms in higher education triggered off by the “Bologna Process”, the term “employability” might have served successfully to point out that:

– a bachelor at a university has to have an employment value, as already pointed out,

– quality hierarchies between higher education institutions in Europe should not be too steep in order to promote mobility and to prepare for a knowledge society of many highly qualified persons,

– the links between higher education and the world of work have to be reconsidered at any time of major reform,

– higher education cannot just trust in the “transmission” of “academic” “knowledge” but has to address the links between study and subsequent work in a much more complex manner.

These are times when we become more aware how limited our systematic knowledge is about graduate employment and work, about the impact of knowledge,
teaching and knowledge on the development of competences and about the utilization of knowledge on the jobs. We need substantially more research in this area. But it would also help if those involved in shaping study programmes and curricula in higher education institutions would not just rely on their actors’ views and impressions, but rather would make use of existing systematic knowledge.

The term “employability” currently serves more strongly to create confusion in the current debates accompanying the Bologna Process than to stimulate creative considerations.

– First, “employability” is used for addressing so many different dimensions of the relationships that it creates confusion.
– Second, “employability” might wrongly suggest that higher education is primarily concerned that their students get a job at all.
– Third, the term “employability” in this context suggests misleadingly that higher education is primarily interested in the “exchange value” of study and not in the substance of study and work.

There are two issues of the relationships between higher education and the world of work, which, from my point of view, deserve more attention in the Bologna Process.

First, I notice a very biased use of the term “employability”. It is often used in a way that the universities should subordinate themselves to the presumed “demands” of the employment system. Such a one-sided use of the term “employability”, as we often note in statements by politicians, suggests that higher education has to care primarily to avoid the danger of “ivory tower knowledge delivery”. It does not express warnings against the opposite possible disaster of higher education, i.e. to subordinate itself simply to the presumed demands of the employment system. We often note that colleges facing problems in reaching an acceptable academic quality become advocates of such a self-defeating philosophy. The call for fostering a more sound relationship between study and subsequent work should not be misunderstood as a call to give up the raison d’être of higher education, i.e. its potential to prepare both for complex task performance and concurrent reflection of the appropriateness of the established work tasks. I believe that the higher education institutions have to produce certified sceptics in order to be innovative.

Second, up to the present, the debate about “employability” in the context of the “Bologna Process” has paid surprisingly little attention to the issue of European convergence versus European variety in the curricular concepts, in the notions of required and desirable competence, in the views on professions, professionalism and professional identity (the “TUNING” project might be named as an exception). We undertook a major survey of graduate employment and work in 11 European countries. This so-called CHEERS Survey showed, on the one hand, that perceived job requirements and the competences acquired in the course of study vary substantially between European countries. On the other hand, when we compared Japan with the 11 European countries, we suddenly began to consider many differences within Europe as “very small” as compared to the differences between Japan and the European countries.

We should invest more thoughts into the question where common challenges of the knowledge society, the globalization trend and universal components of knowl-
edge call for “compatibility and comparability” of curricula and where a diversity of national characteristics of curricula and profiles of individual study programmes are an asset. What degree of similarity or variety of “professional relevance” (not “employability”) of curricula do we want to strive for in a European Higher Education Area? I believe that the combination of structural convergence and the growing trend of imitation of presumed “best practice” will press for substantive convergence. If we want to keep and strengthen diversity between countries, we have to do more in this direction proactively.
21.1 INTRODUCTION

The following observations have been initially presented to an audience of German higher education experts and actors. But certainly many observations are not just applicable only for the German scene. Without disregarding different traditions of higher education, different characteristics of the links between higher education and the world of work and different thrusts of current policies, we might claim that many issues addressed are highly relevant for the debates in most economically advanced countries.

During the first years of the twenty-first century a mood in favour of change spread in German higher education with similar intensity as only once before in recent decades, i.e. around 1970. The current mood can be viewed as a good opportunity to review the state of affairs, to get rid of useless traditions and to be courageous enough to strive for substantial change. This is a time of opportunities, but also problems. Under these conditions, we observe both ideologically advocacy of extreme changes as well as over-cautious enumeration of risks implied in any change. Or some call for such thorough preparation of reforms that the opportunity is missed before any step is taken.

We like to discuss the role of higher education to prepare graduates for their subsequent employment and work. What role does the “Bologna Process” play in this context? What is new in the current debates? To what extent are the current debates attributable to the Bologna Process or only concurrently topical without any systematic link? What does the term “employability” mean and how important are issues linked to this term?

21.2 DEBATES PRIOR TO THE BOLOGNA PROCESS

The extent to which teaching and learning in higher education is academically and professionally-oriented is a hotly debated issue since a long time. The following issues have been addressed frequently in Germany:

- The Humboldtian university concept is often interpreted as a claim that the reflection of academic matters as such should not be constrained by concern about the relevance of higher education, for example its professional relevance.

- German governments, though often underscoring their respect for the Humboldtian concepts, take care of a strong professional orientation of fields of study closely linked to public sector employment or to public supervision. Upon successful completion of study programmes in the areas of medicine, law and
teacher training, students are not awarded university degrees, but rather the passing of the first state examination is the equivalence of a degree.

– At German universities and among many university-trained persons, we note a widespread cautious and sceptical attitude toward private enterprises. In contrast, the “visible hand” of government is more highly respected. While people are accustomed to a strong role of governments as regards the above named fields of study, often concern is expressed about a too strong influence of the private enterprises on higher education.

– Debates in Germany on the employment situation of graduates from institutions of higher education show that most actors and experts consider a close quantitative matching between the number of graduates and the number of positions for graduates a matter of procedure. Although is widely accepted that qualified secondary leaver have the constitutionally guaranteed right to study, institutions of higher education tend to be blamed for “producing” too many graduates.

– Scepticism in Germany as regards expansion of higher education has not really vanished. Certainly, the complaints about “Akademisches Proletariat” und “Überqualifikation” have disappeared; also the annual OECD statistics indicating comparatively low entry rates to tertiary education and low graduation rates in Germany are interpreted in the public debates since about the mid-1990s as a reason for concern, but obviously they do not stir up debates similarly to comparative findings on test score results of secondary school students.

In spite of the strong emphasis on the Humboldtian concept in Germany which challenges any instrumental view of higher education, the underlying concept of a “professional society” is so strong in Germany that a relatively close match between higher education and the world of work is highly desired – both vertically, i.e. as regards the number of graduates and the number of typical graduate jobs, and horizontally, i.e. regarding the fields of study and the occupational areas. All the arguments, according to which such a close link is unlikely to work and is not necessarily desirable, have no lasting impact on the public debate; they tend to be “forgotten” quickly. Just a few examples of those arguments: there are inevitable limits in predicting the demand. Employers are often uncertain in determining their demands and identifying the graduates’ competences. Graduates have to be both over-qualified to be prepared for unexpected tasks and under-qualified because higher education cannot mirror the existing diversity of job tasks. Graduates’ motives never match altogether the employers’ expectations. Higher education does not have to teach the rules and tools needed in a certain moment in time, but also prepare students to challenge constantly conventional wisdom. Finally, in the wake of dynamics, uncertainties and vagueness of the labour market, graduates have to be competent to respond flexibly.

Turning away from nuances, we certainly find a far-reaching consensus in economically advanced countries about the key educational functions of higher education. Higher education is expected to

– teach students to understand and master the academic theories, methods and knowledge domains,
– contribute to cultural enhancement and personality development,
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– prepare students for subsequent work and other life spheres through laying the foundation of relevant knowledge and helping them to understand and acquire the typical “rules and tools” needed in their professional life,
– foster the ability to challenge the prevailing practices. Graduates have to be sceptical and critical, able to cope with indeterminate work tasks and able to contribute to innovation.

Often, we note that actors and experts like to describe the educational functions of higher education in terms of a dichotomy between an academic emphasis (Wissenschaftsorientierung) and a professional emphasis (Berufsorientierung) of higher education. A close glance, however, shows that a variety of dimensions has to be taken into consideration. We have to distinguish
– a professionally geared composition of knowledge within a study programme (e.g. mechanical engineering) versus an academically determined composition of knowledge of a study programme (e.g. philosophy);
– an academic versus applied emphasis of teaching and learning, i.e. an emphasis on understanding the logic of the knowledge system versus an emphasis on the transfer of knowledge to practical problem-solving;
– academic orientation versus orientation towards practice, i.e. pursuit of knowledge for its own sake versus learning to understand the tensions between theory and practice during the course of study;
– preparing students to be able to become scholars versus preparing students to understand and utilize the results of academic work in their subsequent professional work outside academia;
– prime emphasis on the understanding and the ability to handle conventional wisdom versus prime emphasis on sceptical and critical views as well as on coping with indeterminate work tasks and innovation,
– emphasis on conveying foundation of knowledge relevant for professional practice versus preparing students directly to master all the relevant knowledge,
– emphasis on general knowledge and competences versus emphasis on specific academic or professional knowledge and competences,
– disciplinary versus interdisciplinary emphasis, and
– emphasis on mastering the “substance” as such versus emphasis on the awareness of the impact of professional action.

Obviously, fields of study vary in all societies in the ways these dimensions of academic and professional emphasis are handled. Moreover, we possibly find a diversity of the system, i.e. distinctions according to type of higher education institutions or according to “profiles” of individual higher education institutions. In Germany, the higher education system was transformed in the 1970s into a two-type structure. Universities, altogether, emphasize more strongly the former aspects of the dimensions named above, while Fachhochschulen, often called in the English language “universities of applied sciences”, emphasize the latter aspects. But, there is not a consistent dichotomy between the two types according to the above named dimensions. Both, universities and Fachhochschulen are widely expected to teach students to understand the links and tensions between academic knowledge and professional practice. Both institutions accommodate disciplinary and interdisciplinary approaches. And both institutions are expected to prepare students not
only to master the substance but also to be aware of and feel responsible for the impact of professional action.

In 1976, a Framework Act for Higher Education (HRG) was enacted aiming to guarantee some similarity of higher education laws within the German Länder which are in charge of the supervision and funding of higher education institutions. This Framework Act formulated for the first time the duty of the higher education institutions to reflect the professional relevance of study programmes. Two paragraphs of the HRG might be quoted (see Peisert and Framhein 1994, p. 11):

– Functions of institutions of higher education (section 2.1.): “According to their specific functions, the institutions of higher education 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 of artistic fields.”

– The purpose of study (Section 7): “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 to enable them to perform scientific and artistic work and to act responsibly in a free, democratic, and social state governed by the rule of law.”

The enactment of the HRG elicited heated and controversial debates initially about the meaning and the appropriateness of such a call for professional relevance. Some official specifications were provided in the legislation of the individual Länder as well as in national framework guidelines for curricula within individual fields of study. But the heat of the debate vanished after some period, because after a while it was tacitly accepted that the framework legislation calls only for a reflection of the professional relevance and the option for some measures, but not for any specific mandate of linkage between study and work.

21.3 CHANGES WITH THE BOLOUGNA PROCESS

The Bologna Declaration of 1999 does not comprise any recommendation to strengthen the employment and work orientation of higher education. The Declaration only calls for the following: “The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification”.

The ministers in charge of higher education emphasized that the bachelor should be professionally relevant as well, because they were afraid that universities in European countries, which in the past only had offered a long study programme leading to a degree equivalent to a master, might shape bachelor programmes merely as preparatory to master programmes. The Bologna Declaration, thus, does not call for a stronger professional emphasis of study programmes, but rather for more or less the same degree of professional emphasis across all levels of study programmes.

The Bologna Declaration recommends changes of the pattern of higher education: the European countries should strive for a convergent model of stages of study programmes and degrees. This should be realized primarily in order to en-
hance student mobility: to increase the attractiveness of higher education in Europe for students from other continents and to facilitate intra-European mobility. Obviously, the two-stage model is a step towards intra-institutional diversity, whereby it remains open whether this reduces the relevance of inter-institutional diversity (e.g. types of higher education institutions or reputational hierarchies). Little is said about possible curricular convergence, because the European diversity should not be endangered. The initially emphasized supplementary measures, i.e. the introduction of credit systems and the provision of a “Diploma Supplement” do not aim to change curricula, but rather to document the existing curricula as well as the study achievements.

The debate on “Bologna” and its implications, however, does not focus solely on the recommendations formulated in the 1999 Declaration. We note at least five references.

– The Bologna Declaration 1999 and possibly the predecessor declaration by ministers from four countries, i.e. the Sorbonne Declaration of 1998.


– The communiqués of the theme-specific conferences of actors and experts arranged by the Bologna Follow-up Group (BFUG). For example a BFUG conference on employability was held in Swansea in 2006.

– One cannot be certain whether all these documents really mirror the mainstream of thoughts. Many actors in higher education strive for a “beatification” of their political hobby horses through being formulated as a bullet point in one of the official or semi-official documents. Sometimes, lobbying has an impact on the actual formulations.

– There is a Zeitgeist of the context of higher education as well as of higher education issues which can be interpreted as linked to the Bologna Process even though respective issues cannot be interpreted as an outgrowth of the Bologna Process.

While a structural approach dominated at the beginning, the Bologna Process gradually moved towards curricular matters. The terms “quality assurance”, “employability” and “qualifications frameworks” signal this shift of emphasis.

It is not fully clear why this shift emerged. Do we observe that the initial intentions become manifest in the implementation process? Or are the key actors disappointed that convergent structures as such have a lesser impact than expected and therefore add curricular measures to the Bologna agenda? Or is curricular convergence the next step of European policy?

Certainly, the core of the Bologna Process, i.e. structural convergence through a stage system of study programmes and degree primarily for the enhancement of mobility, necessarily calls for some curricular reflections and measures:

– the above named issue of curricular relevance of a university bachelor,

– the issue of distinct levels of competences typical for a bachelor on the one hand and the master on the other hand,

– issues of “international education” and the “European dimension” of higher education, which become more relevant, if mobility increases,
issues of reputation levels in higher education: do higher education systems in 
European countries move towards steeper vertical stratification, as many experts 
and actors claim with reference to the debates on “world-class universities” and 
“global competition”, or is vertical diversity kept in bound, thus ensuring broad 
“zones of trust” among many European institutions of higher education and thus 
offer ample opportunities for mobility?
In addition, we note curricular debates in the course of the Bologna Process which 
are not necessitated by the core issues of the Bologna Declaration. These might be 
called, first, “output awareness” and “outcome awareness” (the terms “quality 
assurance” and “learning outcome” figure more frequently in this context in the 
official and semi-official documents), and, second, “employability”.

21.4 REFLECTION OF IMPACT AND PROFESSIONAL RELEVANCE

Since about two decades, we note a fundamental change in higher education which 
is highly relevant for notions of the relationships between higher education and the 
world of work. It is not accepted anymore that scholars and students focus only on 
academic subject matters as such and that a pursuit of knowledge for its own sake 
dominates. Also achievement measurement in higher education is expected not 
only to look whether theories, methods and disciplinary knowledge is acquired 
successfully. Rather, we expect that all actors are aware of both the academic sub-
ject matter and its impact, and that they handle such a dual attention strategically.
This implies
– permanent reflection of the impact of academic activities (reinforced by evalua-
tion, accreditation, achievement-oriented remuneration of academics, competi-
tive research funding, output indicator-based institutional funding, etc.),
– explicit training beyond acquisition of knowledge: emphasis on competences 
and learning outcomes, training abilities to act successfully and to solve prob-
lems,
– fostering of professionally relevant areas of competences supplementary to the 
academic domains, e.g. social interaction or normative implications of profes-
sional work.
There is a vast academic literature in the respective fields, e.g. education, psychol-
ogy as well as in higher education research and science research, on concepts such 
as “knowledge”, “abilities”, “competences”, “qualifications”, “skills”, “learning 
outcomes”, etc. In addition, we find a popular debate, in policy papers or in the 
mind of actors, which is not shaped by efforts of systematic and stringent classifi-
cations.
Whatever terms we prefer, we have to bear in mind that the results of teaching 
and learning often are defined on three different dimensions
– the dimension of knowledge, i.e. knowing and understanding theories, methods 
and subject-matter knowledge of academic disciplines (e.g. mathematics),
– the dimension of personal ability, i.e. “wise” or “smart”, and
– the functional dimension, i.e. the ability to achieve something on the job or other 
life spheres, e.g. “problem-solving ability”.

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The debates on the relationships between study and work are often confusing because most specialized, academically related issues tend to be defined in terms of the knowledge dimensions, whereas most general competences are defined in terms of personal ability or functionally. This shows how uncertain we are to determine how learning and knowledge affects personality and professional outcomes; these linkages tend to remain a “black box” in the respective debates.

In trying to measure outcomes of teaching and learning in higher education, we do not primarily look at individual acts of work and performance in other life spheres. Rather, we are interested in the overall impact of study. As a consequence of our “outcome awareness”, we are interested to know the “professional success” of graduates. This can be described in terms of:

- smooth transition from higher education to employment,
- high income and high socio-economic status,
- a position appropriate to the level of educational attainment,
- desirable employment conditions (e.g. employment stability, opportunities for promotion),
- a high utilization of knowledge,
- desirable working conditions (independent, demanding, responsible work),
- a high degree of job satisfaction.

It should be noted, though, that professional success is not identical with “outcome” of higher education. Rather, other “intervening variables” might explain the success to a considerable extent, notably:

- different socio-biographic preconditions on the part of the students and graduates,
- differences according to learning prior to and outside higher education,
- differences in the study behaviour during the course of study in higher education,
- a relative autonomy of the transition from higher education and employment (e.g. smart search strategies, “credentialism”, difficulties to identify competences on the part of the employers),
- independent effects of training and learning at the initial career stage,
- regional labour markets (the average income of graduates from one university as compared to another one might be determined more strongly by the economic conditions of their region than by the quality of the educational provisions),
- disciplinary labour markets (a higher income of an engineer than that of a philosopher does not necessarily indicate a higher level of competence or of academic knowledge).

Many outcome-based university rankings or outcome-based indicators for funding neglect the power of these intervenient variables. As a consequence, some universities are “rewarded” and others are penalized for something which is out of their reach.

As a consequence of the growing outcome awareness, institutions of higher education got increasingly interested in graduate surveys. Graduate surveys are the most successful instrument in possibly combining a broad range of variables. Graduates can be asked to describe their career according to a broad range of aspects, and they can be asked to provide information about their biography, their
learning prior to study, the ways they perceived and “handled” their higher educational environment and their values and motives. Therefore, graduate surveys are an instrument allowing us to take into consideration many dimensions of professional success and many of its possible determinants. If they provide data on graduates from individual institutions of higher education or individual study programmes, they can be viewed as highly important feedback.

However, one should be aware of major limitations of graduate surveys. First, they provide only the students’ and graduates’ view, and this view might be biased. Second, there are many methodological and procedural limitations. For example, those responding (often the minority) might be systematically different from those not responding (often the majority). Often, questionnaires are kept short and neglect key explanatory variables. Or the models of analysis might be too simple and thus contribute to misunderstandings as far as the causes of employment and work success are concerned. Finally, the information provided by graduate surveys is a valuable feedback for curriculum development, but does not provide as such clear answers how higher education should act.

21.5 THE EMPLOYABILITY DEBATE

As already pointed out, the Bologna Declaration does not call for an “employability” debate. However, the “outcome awareness”, growing since about two decades in Europe, is likely to affect debates on the changing educational function of higher education taking place in the Bologna Process.

The “employability” debate is so influential and controversial not just because its calls for a reflection and for taking into consideration the professional relevance of study. Rather, the debate dominates the scene, because it seems to suggest that certain interpretations of the relationships between higher education and subsequent employment and work are the most desirable ones whereas others are “out”. For example, in undertaking a study on debates and measures regarding “employability” at universities in Austria, we came to the conclusion that the majority of actors consider “employability” as call of the Bologna Process to gear study programmes more instrumentally to preparation for professional tasks than could be accepted on the basis of the principle understanding of Austrian universities, i.e. to lay the foundation for professional action but not train the professional application of academic knowledge.

Obviously, the term “employability” is totally misleading in two respects:

– “Employability” is a well established term of labour market research and labour market policy addressing problems of “youth at risk”, etc. to get employed at all. In contrast, “employability” in the context of the Bologna Process addresses the question how a very privileged group on the labour market might enhance their career prospects even further.

– The term “employment” refers to the exchange dimension of the world of work, i.e. to salaries, positions, envisaged duration of employment in the employment contract, holidays and social benefits linked to employment. In contrast, the debates in the Bologna Process on the relationships between higher education and
the world of work focus on the quality and relevance of curricula for subsequent work assignments.

Moreover, we note that various meanings are visible when actors and experts call for increased “employability” of graduates:

– the institutions of higher education should do whatever they can do in order to enhance the career success of their graduates,
– students should strive for enhancing the exchange value of their study, i.e. choosing the university which promises the highest credentialist value, choosing a subject leading to well-paid occupations, etc.,
– a close link between the substance of study programme and the substance of work tasks,
– an emphasis on learning to transfer academic knowledge to action in the world of work (e.g. an applied emphasis, fostering problem-solving abilities),
– enhancing competences not closely linked to academic subject matter, but highly appreciated in the employment system (e.g. socio-communicative skills),
– assistance in the job search process (information and advice as regards occupational choice, help to get in touch with employers, coaching for employment interviews, etc.).

Altogether, “employability” seems to emphasize the value of competences immediately useful on the job and the subordination of the objectives of higher education to the employers’ expectations.

Looking at the current debates on the changed links between study programmes and subsequent employment in a less biased way we suggest to employ the term “professional relevance”. Institutions of higher education are challenged to take into consideration in shaping their curricula what learning and enhancement of competences eventually will mean for their subsequent work. This holds true, irrespective whether fields of study are traditionally closely linked to certain occupational areas or not, whether a more theoretical or a more applied curricular emphasis is preferred and whether one wants to adapt students to the prevailing job requirements or wants to strengthen their potentials of being change agents.

In fact, we note in the Bologna Process all over Europe a broad range of proposals for curricular thrusts. Without being able to provide a comprehensive analysis, it is certainly justified to claim that 11 curricular thrusts are on the agenda as possible options:

– further academic specialisation: for example a higher selectivity among areas of knowledge, more emphasis on theories and methods, new interdisciplinary specialisation, etc.;
– general cognitive competences, i.e. emphasis on generic skills and broad knowledge, emphasis on theories and methods instead of knowledge areas, learning to learn, etc.;
– working styles, e.g. working under time constraints and perseverance;
– general occupationally-linked values, e.g. loyalty, curiosity and achievement orientation;
– specific professionally related values, e.g. entrepreneurial spirit, service orientation;
– transfer competences, e.g. problem-solving ability;
socio-communicative skills, e.g. leadership, team work, rhetoric;

supplementary knowledge areas, e.g. foreign languages, ICT;

ability to organise one's own life;

ability to handle the labour market, e.g. job search relevant knowledge, promising self-presentation to employers;

international competences; e.g. knowledge and understanding of foreign cultures, comparative analysis, coping with unknown persons.

21.6 THE DISCOURSE IN GERMANY

The current debates in Europe on “employability” have strongly been influenced by debates originated in the United Kingdom. The important role of English as a lingua franca often leads to biased perceptions: debates originating within English-speaking countries tend to be misunderstood as being “international”. It is obvious, though, that issues of “employability” challenge different higher education traditions in a country such as the United Kingdom, where universities emphasis the value of generic skills and personality development more than those in Germany, where study is expected to lay the foundation for professional work. For example, available comparative graduate surveys suggest that the percentage of students in Germany participating in internships or work during the course of study to earn their living thereby taking over tasks related to their future professional assignment is more than twice as high than in the United Kingdom.

Certainly, copying perceptions and policy options from other European countries is not a wise choice. It would be more appropriate for all European countries to find specific national answers to the following questions:

- What have been the major deficiencies in the past as far as the competences of graduates from our country are concerned?
- What new cultural, societal, economic and technological future challenges are expected which should be taken up by higher education?
- How should the new bachelor and master degrees differ both as regards level and profile?
- How will the profiles of university study programmes and Fachhochschule study programmes change because the types of higher education institution, since the Bologna Process, are not anymore the single most important dimension of formal diversity?

Deficient competences: CHEERS, the comparative study of 1994/95 university graduates some years after graduation, showed in fact that German graduates often noted a gap between the job requirements and their competences upon graduation with regard to selected social skills (e.g. teamwork, negotiating, leadership and adaptability, but not as regards the ability to communicate); they also noted an above-average gap as regards time-management. On the other hand their self-rating of problem-solving ability, knowledge in specific areas, interdisciplinary understanding as well as supplementary knowledge areas such as ICT or foreign languages were around or above average. One certainly can draw the conclusion that increased emphasis of study programmes in Germany on “key skills” is a reasonable response. However, the study does neither suggest that there is a gap in all
areas of key skills nor that key skills can be trained best through specific courses centred on key skills.

*Future challenges:* In addressing possible futures relevant for higher education, we are accustomed to talk about “knowledge society,” “globalisation,” etc., but these terms do not turn out to be helpful, when strategic choices have to be taken in higher education. For example, some actors or experts call for increasing support of the elite sector of higher education in the name of “knowledge society”, whereas others see the need of knowledge society to enhance the level of “mass higher education”.

*Expansion of tertiary education:* One cannot discuss the question what kind of profiles of competences the reforms in the framework of the Bologna Process should serve without taking into consideration the rate of new entrant students and the rate of graduates among the respective age group. In the late 1990s, when the ministers in charge of higher education of many European countries signed the Bologna Declaration, about ten per cent of the respective age group in Germany were awarded a university degree and about six per cent a *Fachhochschule* degree. Several ministers of education of the German Länders called for setting a limit of at most 50 per cent transition from a bachelor degree to enrolment in master programmes, because that would match the logic of a stage system of study programmes and degrees which one could observe in countries such as the U.S., the United Kingdom or Australia. What they overlooked, however, was the fact that about 30 per cent of the respective age group in those countries were awarded a bachelor degree and about 12 per cent a master degree.

It might have been more convincing to come up with a scenario that more than 40 per cent of the respective age group in Germany will start some kind of tertiary education by the year 2010. Possibly, those who in the past participated in advanced programmes of vocational training (as technicians, laboratory assistants, medical assistants, etc.) might go on to be in those programmes and will be eventually awarded a bachelor degree (about 12 %), whereby almost all transfer to employment. Possibly enrolment at *Fachhochschulen* will increase by about half (9 % graduation rate) whereby one third of the graduates will continue study up to a master degree (3 %). Possibly, enrolment at universities will increase by more than half of the preceding numbers, and possibly 75 per cent of those awarded a bachelor degree (15 %) will continue to study up to a master degree (12 %). Thus, we would count in the middle of the second decade of the twenty first century a bachelor rate of 37 per cent and a master rate of 15 per cent.

This is only one scenario how Germany could catch up gradually to the average enrolment and graduation rates of the OECD member countries. But this is meaningful in various respects. First, we would assume that the distance between the advanced professional training sector, already considered part of “tertiary education” in the statistics provided by UNESCO, OECD and the European Commission, and “education” would be smaller in terms of quality as well as symbolically, and the opportunity to transfer from this sector to higher education would grow. Second, the universities would “produce” even more masters than they had “produced” graduates from long university programmes in the past. Third, almost one tenth of the new entrant labour force would be bachelors from *Fachhochschulen*
and universities – certainly a group big enough to be taken seriously by the employers and by the institutions of higher education.

Curricular challenges of the Bachelor-Master model. Obviously, the newly emerging bachelor has to be paid attention. In Germany, we have three different arenas of debate about the bachelor.

– In the area of advanced professional training, some actors advocate to award “bachelor (professional)” at the end, but hardly change the curricula at all. This met with frequent criticism. Certainly, the character of the vocational training has to change and its level of cognitive ambition has to grow.

– For some Fachhochschulen, it was tempting to keep the courses and abolish the internships, and thus transfer from the old to the new bachelor programmes with marginal change. One could argue, however, that Fachhochschulen could move towards a somewhat lesser degree of specialized and applied emphasis.

– The universities have to become aware that the bachelor is not just a kind of drop-out who gets a nice certification or a student who en passant leaves the higher education institutional prior to the real goal of study. And they have to create curricula genuinely relevant for two levels of degrees and respective career levels. They would not be expected to adapt their bachelor programmes to those of Fachhochschulen in order to ensure a certain degree of professional relevant of their bachelor, but they have to make sure that academic competence at the moment of the bachelor degree is not just a transitory configuration, but rather a professionally relevant first level of degree.

The master programmes obviously are an arena of experimentation. New specialisations within disciplines, new interdisciplinary programmes, new research-oriented programmes expect many masters to go on to doctor degree, etc.

21.7 DIVERSIFICATION

Most actors and experts believe that expansion of higher education is more or less automatically linked to its diversification. On the one hand, it is assumed that the students become more diverse as far as their motive, abilities and job prospects are concerned and that a diverse higher education system would serve this growing diversity of students in the best possible manner. On the other hand, we note a widespread conviction that research does not need to be expanded as much as teaching and learning and that also quality differences within research are likely to grow.

However, there is not any consensus as regards the extent to which higher education should be diversified vertically and horizontally. For example, German higher education was characterized by a relatively flat hierarchy of quality among universities and by emphasising primarily a horizontal diversification between the theoretical approach of universities and the applied approach of Fachhochschulen (translated as universities of applied sciences). Now, a programme, called “excellence initiative”, was established to provide a small number of universities more resources in order to catch up in the race of “world-class universities”; on the other hand, many politicians in Germany advocate the relatively high level of a large
number of universities as a special feature of the German system of higher education.

We also note a tension in those respects in Europe. The so-called “Lisbon Process” of the EU member countries striving for a European Research Area seemed to be shaped by sympathy for steep quality differences among universities. In contrast, the aim of the Bologna-Process to facilitate intra-European mobility can be reached more easily and comprehensively, if the vertical differences between universities remain small.

We note these controversies, but, surprisingly, the key questions as regards diversification are seldom asked:
- What extent of vertical stratification is most suitable for the graduates’ future tasks in the world of work and in other life spheres?
- Does the overall competences at the time of graduation increase or decline, if we move towards a steeper vertical diversity than in the past?
- How do efforts to change the extent of vertical diversity change the extent of horizontal diversity? Do, for example, efforts to create more steeply stratified systems undermine horizontal diversity?

21.8 CONCLUDING CONSIDERATIONS

The Bologna-Process is primarily, operationally viewed, an issue of the patterns of study programmes and degrees. But functionally viewed, two other themes are closely related:
- increase of student mobility, and
- new links between study and subsequent employment and work.

The longer the Bologna-Process goes on and the closer it moves to the end of the first period of change – the realisation of the so-called “European Higher Education Area” by 2010, the more the questions is raised what the structural change actually has meant for student mobility and for the links between study and subsequent employment and work.

As regards the latter, the term “employability” became popular, and we note many actors trying to sell their hobby notion of the desired links between study and subsequent work as the “real meaning” of the Bologna Process. We even note so ardent calls for making study programmes highly instrumental and very closely geared to presumed prevailing job requirements. Some critics even jokingly state that the “Marxism-Leninism” course of Central and Eastern European universities are now substituted by courses on the “Capitalistic Manifest”.

Certainly, it is more appropriate to state that the Bologna Process calls in a similar way as the German Framework Act for Higher Education since 1976 has called for professional relevance of study programmes, whereby each field of study and each institution of higher education have to reflect their respective conditions and have to choose their specific options. The call for professional relevance is not new and not substantially different, except for taking seriously that higher education cannot be anymore strategically relevant only for about ten to 15 per cent of the cognitively most demanding jobs in the labour force and consider the others as a residual group of “almost drop-outs” or as only a real target group of “other institu-
tions of higher educations”, i.e. institutions with no or at most a very limited re-
search role. Rather, the universities themselves have to take higher education ex-
pansion seriously through intra-institutional diversification, i.e. serving two distinct
levels of graduates genuinely. They have to reflect how academically oriented
teaching and learning can be professionally relevant for professional positions
academically less demanding than traditional university graduate careers, but suffi-
ciently demanding that universities serve them in a targeted manner.
REFERENCES


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European Round Table of Industrialists (1989). *Education and the European Competence*. Brussels: ERT.


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REFERENCES

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Chapter 16: Revised version of an unpublished paper presented in 2003 with the same title at the Fourth China International Forum on Education organized by the China Association for International Exchange (CEAIE) in Beijing (China).

Chapter 17: Newly written for this book.


Chapter 20: Revised version of an unpublished paper presented in 2004 as a keynote speech with the title “Employability: Changes in the Relationships Between Higher Education and the World of Work”, at the EUA Conference and General Assembly “Universites and Society: Engaging Stakeholders” organized by the European University Association (EUA) and the Université de la Méditerranée in Marseille (France).

Chapter 21: Revised version of a paper written for a Festschrift in honour of Tamas Kozma (Debrecem, Hungary); based on a paper presented in 2008 in the German language with the title “Wissenschaftlich kompetent für den Beruf qualifizieren – Altes und Neues im Bologna-Prozess aus der Sicht der Hochschulforschung” as a keynote speech at the conference “Neue Anforderungen an die Lehre. Kompetenzvermittlung, Qualifikationsrahmen und Employability in Bachelor- und Master-Studiengängen” organized by the German Rectors’ Conference in Bonn (Germany).