

# **WORLD CONFERENCE ON HIGHER EDUCATION**

## **Higher Education in the Twenty-first Century Vision and Action**

UNESCO, Paris, 5-9 October 1998

### **VOLUME IV**

Thematic Debate:

## **The Requirements of the World of Work**

### **Note of the UNESCO Secretariat**

**The present volume is part of the Proceedings of the World Conference on Higher Education (Paris 5-9 October 1998).**

Volume I :	Final Report
Volume II :	Speeches and Lectures
Volume III :	Reports of the Commissions
Volume IV :	Thematic Debates
Volume V :	Plenary Speeches
Volume VI :	Listing of Titles of Individual Documents.

Documents are archived in the original language of delivery or in one of the language versions provided by the author. Copies can be obtained on request from the Division of Higher Education, UNESCO. Some documents are available in printed form only.

### **Note du Secrétariat de l'UNESCO**

Le présent volume fait partie des Actes de la Conférence mondiale sur l'enseignement supérieur (Paris, 5-9 octobre 1998).

Volume I :	Rapport final
Volume II :	Discours et exposés spéciaux
Volume III :	Rapports des commissions
Volume IV :	Débats thématiques
Volume V :	Discours en séances plénières
Volume VI :	Liste des titres des documents individuels.

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### **Nota de la Secretaría de la UNESCO**

**El presente volumen forma parte de las Actas de la Conferencia Mundial sobre la Educación Superior (París 5-9 de octubre de 1998).**

Volumen I :	Informe Final
Volumen II :	Discursos y Ponencias Especiales
Volumen III :	Informes de las Comisiones
Volumen IV :	Debates Temáticos
Volumen V :	Discursos de la Plenaria
Volumen VI :	Lista de Títulos de los Documentos Individuales

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## **Introduction**

In organizing the World Conference on Higher Education, UNESCO's goal was to create favourable conditions for a sweeping debate and to increase awareness of the principal issues in this important field.

The Thematic Debates were organized in parallel with the Commissions and the Plenary sessions and so constituted one of the selected frameworks for reflection and for deepening discussions.

Planning the Thematic Debates included the participation of some fifty representatives of NGOs and IGOs, as well as a number of resource persons and UNESCO staff members.

Each working document was prepared under the coordination of a leader with the contribution of partners chosen by the Secretariat from organizations already cooperating with UNESCO.

Working documents of the Thematic Debates were taken into account in preparing the Conference's principal working documents and in elaborating drafts of the Declaration Framework for Priority Action. This synergy marked the entire preparation phase.

The 12 Thematic Debates were regrouped into three large themes:

### **Higher Education and Development**

- *The Requirements of the World of Work*
- *Higher Education and Sustainable Human Development*
- *Contributing to National and Regional Development*
- *Higher Education Staff Development: A Continuing Mission*

### **New Trends and Innovations in Higher Education**

- *Higher Education for a New Society: A Student Vision*
- *From Traditional to Virtual: The New Information Technologies*
- *Higher Education and Research: Challenges and Opportunities*
- *The Contribution of Higher Education to the Education System as a Whole*

### **Higher Education, Culture and Society**

- *Women and Higher Education: Issues and Perspectives*
- *Promoting a Culture of Peace*
- *Mobilizing the Power of Culture*
- *Autonomy, Social Responsibility and Academic Freedom*

The introduction to each Debate was given by the author of the working document. This was then completed by input from the panel members.

Each Debate produced a synthesis report representing the results of the discussions and the recommendations made.

The general coordination of the preparation and organization of the Debates was undertaken by the Division of Higher Education, UNESCO.

**Volume IV** of the Proceedings of the World Conference on Higher Education regroups for each of the 12 Debates:

- The Working Document;
- The Synthetic Report for each Debate;
- The interventions of the panel members.

With regard to the thematic debates on students and women, contributions which were addressed to the Organizing committee and judged relevant were also taken into account.

# The Requirements of the World of Work

**Leader:** International Labour Organization (ILO)

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- ❖ The International Chamber of Commerce (ICC)
- ❖ World Federation of Teachers' Unions (FISE)
- ❖ Junior Chamber International (JCI)
- ❖ Organization for Economic Cooperation and Development (OECD)
- ❖ International Council of Adult Education (ICAE)
- ❖ International Association of Students in Economics and Management (IAESEC)
- ❖ International Federation of Business and Professional Women (IFBPW)
- ❖ International Union of Architects (IUA)
- ❖ World Federation of Engineering Organizations (WFEO)
- ❖ International Organization of Employers (IOE)
- ❖ International Confederation of Free Trade (ICFTU)

**and**

**the UNESCO SECRETARIAT**

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## Summary

*At the end of the 20th century, the connections 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. The following questions are frequently asked: what is heightening the interest in the connections between higher education and the world of work? How are job requirements and employment conditions for graduates changing? What is higher education expected to "deliver", and how does it and should it respond?*

*At first glance, experts predominantly observe that job prospects for recent graduates have been bleak in most areas of the world during the 1990s and that the continuing enrolment growth in higher education promises little relief. A closer look reveals, however, that assessments of the situation are not consistently negative and that the prevailing perceptions and views regarding the connections between higher education and the world of work are controversial in many respects. Divergent views persist because systematic information on graduate employment and work is scarce and there are no indisputable criteria for assessing graduate employment. Graduate employment is assessed more favourably when compared to that of non-graduates than when compared to the graduate employment and work situation which prevailed a few years ago. All in all, the signals from the employment system are more blurred and ambivalent than ever before.*

*It is remarkable, however, that many experts and key actors agree on the main 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 courses provided,*
- ❖ *devote greater attention to generic competencies, 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 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.*

*The broadest consensus has emerged with regard to the main directions to head in. There is work to be done on specifying ways and means of overcoming existing barriers and finding promising solutions. The conditions in various regions of the world, cultures and societies, economic systems and stages of economic development, specific sectors of higher education systems as well as various fields, disciplinary cultures and professional areas may thereby require specific solutions.*

*Furthermore, divergent long-term scenarios also play a role, as terms such as "crisis of the work society", "risk society", "professional society" or "knowledge society" suggest. And last but not least, the institutions of higher education interpret their role vis-à-vis the world of work differently. Readiness to respond to changing demands is widespread as well as concern about instrumentalist pressures.*

*Most experts agree that higher education must be well-informed of expectations from the outside world in order to adopt the necessary proactive role and thus respond to the need to prepare students for indeterminate future job tasks, new employment patterns and contributions to innovation in society.*

## **PANEL**

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***Keynote Speaker:*** Dr Ulrich Teichler, University of Kassel, Germany

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## Synthetic Report

In the relationship between higher education and the world of work there is a paradox regarding the need to expand higher education, on the one hand, and the increase of graduate unemployment, on the other. The major past changes in graduate employment and work are complex and protracted: fields of study and employment are difficult to match, the occupational status and educational attainment show a significant amount of underemployment and conditions of work perceived as 'insecure' by some may be regarded as 'flexible' by others.

There is a need for systematic information in relation to the diverse assumptions and fundamental objectives of higher education. In spite of abundant statistics and research literature, there exist information gaps in quantitative data on newly emerging a-typical and informal employment sectors, the links between the substance of knowledge and work tasks. Imprecise employer assessment of job needs and difficulties in relating education to job requirements create additional problems. Current trends of graduate employment and work showed:

- ❖ a decline in agriculture and manufacturing and increase in services;
- ❖ shrinkage of the public sector and growth of the private sector;
- ❖ decline of employment in large companies and increase of 'informal' employment;
- ❖ rapid change of job structure and requirements;
- ❖ decline of job-stability and increase in unemployment;
- ❖ polarization and flattening of hierarchies;
- ❖ need for computer literacy and in-depth information science knowledge;
- ❖ increase of jobs requiring high-level knowledge.

Questions were raised concerning the following competing policy options:

- ❖ increasing risks or new ways of 'employment security';
- ❖ polarization or increase of jobs with less demanding tasks;
- ❖ confrontation of interests or human resource policies;
- ❖ serving current demands or pro-active policies.

With respect to the requirements of the world of work different perceptions arise. These include 'post-industrial', 'information', 'knowledge', 'highly educated', 'professional', 'lifelong learning', 'crisis of work', and 'risk' societies.

The changing tasks of higher education were identified as:

- ❖ the need for fair and equitable access and admission;
- ❖ a diversified educational system;
- ❖ an emphasis on general skills and flexibility in curriculum;
- ❖ lifelong and out-of-school learning;
- ❖ preparation for social change;
- ❖ globalization and internationalization;
- ❖ establishing partnerships between higher education and the world of work.

The changing educational objectives for students are to be:

- ❖ specialists and generalists;
- ❖ socially and communicatively skilled;

- ❖ informed about the labour market and graduate work;
- ❖ confronting the tensions between academic approaches and professional problem-solving;
- ❖ understanding the social conditions of work and career;
- ❖ able to take the initiative vis-à-vis the world of work.

The following major points emerged with regard to practical mechanisms for promoting a strong and effective partnership between higher education and the world of work:

- ❖ tripartite consultative mechanisms to create a forum for dialogue between educational institutions (including students), employers and workers;
- ❖ membership by enterprises and other concerned stake holders in academic boards and other governing bodies in the education sector;
- ❖ collaboration between the private sector and higher education;
- ❖ research and training programmes, identification of research agenda, career guidance, placement services (including information-sharing on job opportunities through internet);
- ❖ organizations such as UNESCO and ILO to collaborate on identifying and analyzing and disseminating good practices and case-studies on effective partnership mechanisms;
- ❖ better recognition and integration of the role of the many emerging training and education institutions such as post-secondary, post-university and enterprise-based training departments and commercial human resource development centres all of which can help bridge the gap between higher education and the world of work.

It was suggested that institutions of higher education should focus on the development of a range of essential generic skills such as problem-solving, team-working, and networking skills including ethical behaviour and civic education. The world of work should also recognize a responsibility for providing placement and career guidance.

## Working Document

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## **Introduction**

### ***Heightened Interest in the Subject***

At the end of the 20th century, the connections 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 in this domain played a substantial role, for example, in UNESCO's "Policy Paper for Change and Development in Higher Education" (UNESCO, 1995) and were more frequently addressed than any other topic in the series of preparatory conferences held in 1997 for the UNESCO World Conference on Higher Education (see UNESCO, 1997a, 1997b; Teichler, 1997). In its 1995 report entitled "Higher Education: Lessons of Experience", the World Bank cited the tensions between higher education and employment 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, 1992, 1993), and continued to point to salient issues of higher education and employment in the OECD Job Study (1994) and its thematic review of "The First Years of Tertiary Education" (OECD, 1997b). Or, to take an example from developing countries: when setting up a training programme for higher education researchers, the Association of African Universities noted that, in addition to the cost and financing of higher education, the connections between higher education and the world of work have elicited very keen interest within African universities. 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 (see for example 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.

### ***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 economy. In others, educational and manpower planning were closely linked in order to serve a planned economy, while in some countries targeted educational planning was expected to serve a market economy (see Hüfner, 1983). In the 1970s, the pessimistic view spread that 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 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 connections 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?

### ***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 connections between higher education and the world of work are by no means consistently negative and that the prevailing perceptions and views regarding the connections between higher education and the world of work 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;
- judgments 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 the 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 on 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 competencies, 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.

The broadest consensus has clearly emerged, however, with regard to the main directions to head in. There is work to be done on specifying ways and means of overcoming existing barriers and finding promising solutions. 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.

### **3. The Circumstances and Controversial Views Regarding Graduate Employment and Work**

#### ***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 with 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 efforts and investment put into study 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, i.e. 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, underscoring the specific talents required and opportunities arising at a particular moment in time. 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 could lead to a situation where one has to start from square one after graduating - 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 pejorative 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 (see for example Ranuwihardjo, 1995, p. 89).
- \* And 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 enrolled in higher education. In many countries, 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 it 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 process of reassessment of the connections 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.

### ***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 report (1995, p. 1), enrolment ratios - i.e. the proportions of new entrant students among the corresponding age group - in post-secondary education had, by about 1990, reached an average of "51 percent in the OECD countries compared with 21 percent in the middle income countries and 6 percent in low-income countries". According to the Bank, the relative growth in preceding decades had thereby been highest "in most parts of the developing world: from 1 percent to 9 percent in North Africa, from 8 percent to 16 percent in the Middle East, from 7 percent to 21 percent in Latin America, and from 8 percent to 17 percent in East Asia" (ibid.). UNESCO (1995, pp. 15-16), 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 percent in 1960 to 18.8 percent in 1991, argues in contrast to the World Bank that, "Over the same period, the enrolment ratio in the developed countries showed a steadier increase and at much higher level": from 15.1 percent in 1960 to 40.2 percent in 1991 as compared to a growth from 7.3 percent to 14.1 percent in the developing countries during the same period.

The growth trend has continued in the 1990s. In the relatively rich countries of the world, "participation in some form of education at the tertiary education level is (now) moving towards the norm" (OECD, 1997b, p. 11). The OECD report quotes intentions harboured in the U.S. that two years of college would be more or less universal in the 21st century, a post-secondary enrolment ratio of 63 percent reached in Japan by 1995, as well as trends toward enrolment ratios of 60 percent and beyond in several European countries such as Finland and the U.K. 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 percent to less than 20 percent (OECD/CERI, 1997, p. 333), and in developing countries most probably from more than 20 percent to less than one percent.

**Ample graduate supply:** Most experts agree that in most parts of the world the subsequent growth in the number of graduates tends to surpass 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 providing 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 the substantially rising proportions of graduates. Even if 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. And these complaints are reinforced by the feeling in the academic profession of a loss of exclusiveness as far as the generation and dissemination of systematic knowledge is concerned.

**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 report (1997, pp. 36-37) 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).

### ***Information Gaps and Research Needs***

The connections between higher education and the world of work are among the most frequently discussed issues of higher education, but systematic knowledge of these connections 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 scarcely any information available at all. Overviews provide evidence that a substantial number of studies have been undertaken (see Psacharopoulos, 1987; Carnoy, 1994; Sanyal, 1991; Teichler, 1992, 1996a; Higher Education and Employment, 1995a, 1995b; 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 (see Sanyal, 1987). As regards Africa, Matos (1997, p. 25) 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 connections 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 insufficiently 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. While graduate employment seems to be shrinking in the former and growing in the latter sectors, the available disparate information could reinforce an all too pessimistic view of graduate employment and work.
- \* One of the weaknesses is an imbalance between quantitative-structural and qualitative data (cf. the criticism 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 the 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. As a result, data on income and occupational categories of graduates are often overinterpreted 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. for example the criticism voiced by Teichler, Buttgereit and Holtkamp, 1984). Besides, employers' expectations regarding the education system are often inconsistent with their recruitment and personnel policies. And finally, employers' statements, as a rule, say little about the proactive role higher education could play with regard to the world of work.

- \* 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", i.e. the match between job tasks, "requirements", "competencies" and finally the processes and substance of learning.
- \* Research findings collected in individual countries are often overinterpreted as universal truth. National differences where large proportions of graduates are either valued or deplored or differences regarding emphasis on specific knowledge or general skills are often insufficiently taken into account.

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 connections 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 can usually expect (see Sadlak and Altbach, 1997; Teichler, 1996a). Higher education as a field of research suffers from lack of interest in systematic knowledge on the part of many actors in the field, international organisations thereby forming the most notable exception (see Hufner, Sadlak and Chitoran, 1997). Many actors in higher education tend to claim that progress in their area of expertise can only be achieved if systematic knowledge is enhanced through research. Yet when it comes to issues of higher education itself many of the same experts believe that intelligent amateurism suffices.

### ***Trends and Future Scenarios of Employment and Work***

The assessment of connections between higher education and the world of work tends to differ in the light of future scenarios of employment and work. We hear of "post-industrial society", "globalization", the "crisis of the work society", a trend towards a "risk society" (Beck, 1986), "information society", "highly educated society" (Teichler, 1991), "professional society" (Perkin, 1996) "knowledge society", etc.

Current trends of employment and work: Views do not actually differ greatly in describing current trends of employment and work:

- \* further decline in employment in agriculture and the industrial production sector and growth in the service sector;
- \* shrinkage of employment in the public sector and relative growth in the private sector;
- \* decline in job opportunities in large companies in many countries;
- \* an increase in the "informal" employment sector;
- \* a mounting pace of change in job structure and skill requirements in almost any given occupation;
- \* loss of job stability and security and growing "informalization" of the employer-employee relations and the work force in general, i.e. more part-time, more short-term employment and more sub-contracting arrangements (see ILO, 1997, p. 33);
- \* an increase in structural and long-term unemployment in many countries, a polarization trend regarding 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 the medical profession, 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 (see 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 competencies 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", or, similarly, policies aiming to coordinate recruitment and dismissal, employment and working conditions, incentives, and training in a systematic and consistent manner.

Diverse scenarios: Views differ, however, as regards the long-term changes in 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. As regards the quantitative and structural development of higher education as well as the patterns of employment and work, 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 employees' loyalty, and will "employment security" (ILO, 1997, p. 28) in part offset "job security" losses?
- \* Will the current trend towards polarization in terms of remuneration, status, employment and conditions as well as the nature of work tasks persist, or will balancing effects occur and promise substantially growing 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?
- \* Are the new human resource policies which many firms are opting for turning out to be lofty forms of exploitation, or are we moving towards growing harmony between the firm's 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.

### **3. Changing Educational Tasks for Higher Education**

#### ***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 (see for example 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, i.e. 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 (see Kearney, 1997). All in all, the available information indicates that inequality of educational opportunity is on average more pronounced in developing countries than in developed countries (see for example Tan, 1994).

There is even more widespread disappointment at the fact that success in education has not been translated into career success as visibly as has often been expected. This disappointment is obviously based on the realization that not everybody has become a "chief" in the process of higher education and possibly that links between educational attainment and career have become less visible, partly as a consequence of rapid change in the employment system (cf. Novotny, 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 widespread disenchantment regarding the role higher education is expected to play for social equality. But the contrary seems to be the case. For example, the reports published by the various international organizations on higher education and its role in society referred to in the introduction strongly emphasize this point. In particular, 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 for higher education even more specific public action to redress inequalities of opportunity 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.

### ***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 (see Birnbaum, 1983; Huisman, 1995). For example, the 1995 UNESCO 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 (see Sayegh, 1990), the most elaborate studies have been undertaken in the developed countries (see in particular OECD, 1974; Teichler, 1988; 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 U.S. and Japan, a steep hierarchy of quality differences between higher education institutions of the same type is acceptable, whereas higher education policies in the majority of European countries aim to keep such quality differences within bounds. Again, we note differences within Europe: whereas considerable differences in ranks of quality and prestige 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 horizontal diversity, i.e. 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 (see Scott, 1996). In the United Kingdom, 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 the 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 which could play a role in the choice of individual national solutions for diversifying higher education.

### ***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 (see Teichler, 1985; De Weert, 1994), the increasing diversity of graduate work as a consequence of the 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 should acquire general competencies, should cultivate social and communicative skills, should be prepared for entrepreneurship and, last but not least, should be flexible. If we look in detail at the wealth of proposals made in various countries by employers, committees considering the future of higher education and the majority of researchers analyzing the connections between higher education and work, 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 life-long 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 the internationalization of the labour market through an understanding of various 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 many reasons why higher education was also expected in the past to go beyond specialized knowledge and expertise. Squires (1987, pp. 137-138) named four major 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. This is one of the major reasons why life-long learning and life-long 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, employment problems in general as well as the dynamic changes in the economy are likely to elicit mismatches between the skills of 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 more easily to job tasks which are 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 (see 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, there are many indications that the need for general knowledge is endemically overestimated. For example, employers' statements or analyses of employers' expectations underscoring the role of general competencies (see for example 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 the staff of personnel departments are more likely to be asked than the specialists in the various other departments, who have constant 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. In-depth studies are therefore needed in order to establish the kinds of competencies required.

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 is 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 competencies 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 in job tasks in the course of their career (cf. Nihon Keieisha Dantai Renmei, 1995).

### ***Other Curricular Thrusts***

It would be misleading, however, to argue that most of the debates on the connections between the acquisition of knowledge and subsequent work tasks 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 and general competencies are not necessarily applicable *per se* to the world of work. Rather, graduates have to find ways of transferring these competencies from the world of learning to the world of work (see for example 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 or relatively general "key" competencies. It is often suggested that curricula, 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 high-level knowledge and 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 routinised" (Squires, 1987, p. 160). 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 of 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 to such a general approach in teaching and learning, 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" and without dismissing the criticism that interdisciplinary courses often remain superficial, it might be justified 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, i.e. in a way which does not correspond to the real phenomena to be analyzed and the problems to be understood and possibly solved with the help of systematic knowledge (see Squires, 1987, pp. 149-157). 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 gaining 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, *inter alia*, issues of peace, sustainable ecological development, and international cooperation based on mutual respect, democracy, and cultural enhancement (see UNESCO, 1997b). In search of suitable terms, the 1995 UNESCO policy paper (1995, p. 13) calls for education and research serving "sustainable human development"; other publications prefer to use "international education" (Calleja, 1995) or "global learning" (Ploman, 1994) to depict a similar set of goals. 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 studies 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 comprises diverse elements (see Van der Wende, 1996), for example

- \* "area studies";
- \* foreign language proficiency;
- \* comparative methods;
- \* international subdisciplines, such as international law or international trade;
- \* sensitivity to different cultures, customs and modes of thinking, coping with the unexpected, etc.

For example, 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 specially designed for foreign students, programmes requiring temporary study periods abroad, programmes leading to combined or double degrees, or programmes leading to internationally recognized professional qualifications (ibid., 1996, p. 45).

#### **4. The Changing Role of Higher Education Institutions**

##### ***Changing Self-Perception***

The changing conditions to which higher education is being exposed and the efforts to reorganise the connections between higher education and the world of work are best illustrated by contrasting them with 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 élite 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 higher education expansion. Yet, reflections of ways in which higher education could serve the

world of work tend to be met within higher education institutions 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" (see Altbach, 1996). It can no longer be claimed that the key profession in the institutions of higher education is clearly resisting reflecting on its contribution to the world of work and its social relevance in general. But according to the survey, the majority of academics also believe that higher education these days is being exposed to excessive instrumentalist pressures.

As has already been mentioned, curricular changes have been discussed and implemented in recent decades in order to change the connections between higher education and the world of work. More recently, the debate has been focusing on a shift in the role of higher education institutions and the courses of study they offer. Firstly, many higher education institutions engage in communication and cooperation with the world of work on a regular basis. Secondly, many institutions perceive the need to reconsider the role of the courses they offer in a larger context of learning and socialization.

### ***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 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 membership on boards or advisory councils;
- \* mobility between academic and professional careers as well as part-time teaching by practitioners;
- \* internships for students prior to or during the course of study;
- \* involvement of students in research projects sponsored by industry;
- \* provision 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 (see for example Blackman and Segal, 1992; Lindner et al., 1992; Sadlak, 1992; Gould Bei, 1997; Mitra and Formica, 1997), we note not only 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 sectoral 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.

### ***Learning and Socialization Beyond Classroom Instruction and Initial Course Programmes***

Work and other forms of 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 during the course of study often become an integral part of the programmes or are promoted as additional activities. It is also obvious that temporary study abroad is highly appreciated for the same reason, *inter alia*: 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 advice:** Communication outside class and services for students have often been advocated in recent years 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 (see Teichler, 1994).

**Extended use of the 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" (see 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 student 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 of higher education have been heavily involved in educational activities beyond initial education and training for young students (see the overview in Teichler, 1990): 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 suiting 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 the courses offered, however, have been provided in the past on the periphery of the system, *i.e.* in specific administrative and educational settings far removed from the core of education provided for young full-time students and without any major impact on these programmes.

Most overviews and recommendations in the 1990s (see Hunt, 1992; OECD, 1995, 1997a; 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.

### ***Connections 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 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 the economy and society. Governments often stress "accountability" and mean instrumentalism. All this is reflected in the 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 (see for example Taylor, 1997) 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 too 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 (see for example 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 (see 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 be 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.

## **Implications for Future Action**

Institutions of higher education and responsible governments, in reflecting the future challenges from the world of work, are clearly in need of improved information on employment and the work of graduates; on the impact of study provisions and conditions of future employment and work; and on indications for long-term technological, economic and social changes. International organizations might play a crucial role in stimulating research and suitable systematic information gathering which could be most valuable in understanding the changing role higher education will play in the world of work.

Observations of labour market trends and graduate employment, however, are often too narrowly interpreted in the search for recipes. One has to be aware that signals from the world of work are often biased and incomplete, short-term oriented and prone to underestimating the active and innovative role the graduates have to play in shaping the work tasks of tomorrow.

Improved regular communication among all those involved in shaping the future of links between higher education and the world is generally viewed as needed. The modes of successful communication vary substantially - some advocate the formal involvement of representatives of the world of work in the decision-making processes of institutions of higher education (e.g., through membership in boards), others favour regular consultations, others hope that practical elements in the processes of teaching and learning (e.g., internships or practitioners as part-time teachers)- and are most eye-opening. But all agree that regular communication is most suitable in avoiding the problems of uninformed, inward-looking teaching and learning on the one hand, and of naive subordination of presumed demands on the other hand.

In the process of expansion of higher education and of increased relevance of knowledge, higher education has to accommodate the fact that students become more diverse not only in their motivations and capabilities, but also in their assignments and roles after graduation. This requires higher education to take into consideration the role higher education can play for sectors of employment which were not taken into consideration in the past, among others, middle-level occupations, which become more demanding in the process towards what is often called the "knowledge society", informal sectors of employment, new ways of self-employment, etc. Higher education is also challenged to diversify in order to respond to the broadening spectrum of graduate employment and work.

Though experts views differ as regards the composition of knowledge most desirable for coping with future challenges from the world of work (some note a continuous need for specialized knowledge), some advocate a shift towards general education, some point out the growing role of interdisciplinary knowledge), views converge that higher education cannot confine its educational role to the transmission of knowledge, but rather should opt for a more holistic approach. Higher education is expected to help students improve their social and communicative skills, inform about the labour market and graduate work, address the tensions between academic approaches and professional problem-solving and reinforce students' understanding of the social conditions of work and career and thus strengthen their potential for taking initiative vis-à-vis the world of work.

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*Intervention de* M. Hédi Djilani  
Président  
Organisation Internationale des Employeurs (OIE)  
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Monsieur le Président,  
Mesdames, Messieurs,

Je voudrais tout d'abord remercier l'UNESCO pour cette invitation et le choix du thème qui est un sujet à la fois d'actualité et sensible. Je voudrais également féliciter le Professeur Ulrich Teichler pour l'excellent document de travail qu'il a élaboré et dans lequel il a décrit l'état des lieux sans aucun parti pris.

Permettez-moi d'apporter ma contribution à vos assises, surtout en tant qu'homme d'affaires d'un pays en développement, en l'occurrence la Tunisie.

En fait, cette problématique, qui est l'objet de notre réunion comporte deux volets :

1. Faut-il continuer à encourager le développement de l'Université, de la conclusion de M. Teichler qui a affirmé que dans certains, il y a trop d'étudiants ?
2. Comment réussir l'adéquation entre les besoins de l'entreprise et la formation universitaire ?

En effet, il s'agit là d'un problème d'une brûlante actualité, surtout dans les pays en développement, où l'université a du mal à se rapprocher de l'entreprise. S'il est juste d'accorder les meilleures chances de réussite à tout le monde, il n'est plus, toutefois, acceptable aujourd'hui que certaines sphères décident de l'avenir des jeunes, sans tenir compte de l'avis des entreprises appelées à embaucher ensuite ces jeunes. Il est encore moins acceptable qu dans un monde où l'Economie de marché est adoptée par tous. Les universités continuent à fabriquer un produit sans tenir compte de la loi du marché qui veut que le client soit roi. Par conséquent, il est impératif de tenir compte de ce client consommateur du produit de l'université.

S'il est du devoir de l'entreprise de continuer à se rapprocher davantage de l'Université, il faut que l'entreprise poursuive sa contribution en acceptant de former des jeunes pendant et après leurs études dans le cadre du recyclage.

Nous constatons dans les pays en développement beaucoup de cas d'échecs d'insertion. L'analyse du pourquoi de cet échec nous conduit à cette conclusion qu'il est fondé sur un quiproquo qu'on peut résumer comme suit : dans les pays en développement, la première génération de Chefs d'entreprise était souvent formée de gens qui n'ont pas fait l'université si bien qu'ils ont du mal à comprendre un universitaire à qui on a fait comprendre, au cours de ses études, qu'il sait tout et qu'il est capable, grâce à ses diplômes, de faire face à toutes les situations, ce qui est évidemment faux.

D'un autre côté, l'entreprise attend trop de cet universitaire et surtout dans l'immédiat. Ceci se traduit généralement par un échec et le chef d'entreprise finit par considérer le cadre recruté comme une charge inutile. Ainsi, il est impératif de lever cette équivoque.

Permettez-moi maintenant de parler à titre d'illustration, de l'expérience de mon pays dans ce domaine.

Nous sommes dans un pays en développement qui, malgré les limites de ses ressources naturelles, a fait le choix qui consiste à éduquer tout le monde et à démocratiser l'éducation, si bien que pas moins de 35% du budget de l'état est consacré à l'éducation. Parallèlement, et à titre de comparaison, le budget

alloué à la défense n'a jamais excédé les 4%. Il faut dire qu'il s'agit là d'un choix fort judicieux, si bien que toutes les disciplines existent dans les meilleures universités du monde.

La conséquence de cet effort, est que nous avons moins de difficultés que d'autres à drainer les investisseurs étrangers, à nous adapter aux nouvelles technologies.

Autre résultant de choix : l'importance de la classe moyenne qui représente 70% de la société, du fait de la mobilité sociale. En effet, grâce à la démocratisation de l'enseignement, un enfant issu d'un milieu modeste, peut facilement devenir médecin, ingénieur, enseignant et même dirigeant politique s'il le désire. Sans doute, il s'agit là du vrai secret de la stabilité de notre pays. D'ailleurs, la stratégie de développement du Président Zine El Abidine Ben Ali a fait de l'éducation et de l'enseignement, un choix fondamental.

Permettez-moi d'attirer votre attention sur anomalie à laquelle peu de gens pensent dans les pays en développement. On omet souvent de créer de nouvelles entreprises, alors qu'il est impératif pour un pays qui aspire à la croissance d'accroître le nombre des entreprises et de résorber, à bon escient, la main-d'œuvre qualifiée formée dans les universités, et ceci en encourageant les diplômés du supérieur à créer leurs propres entreprises.

De plus, il y a un sous-encadrement dans les entreprises du Tiers monde, la simple comparaison entre les taux d'encadrement dans les pays développés et en développement, fait apparaître une différence énorme. Ceci nous amène à dire que normalement, il ne peut pas y avoir de problèmes à employer les cadres bien formés.

La Tunisie a trouvé la solution à cela, en mettant sur internet toutes les demandes et offres d'emploi et actuellement nous sommes en pleine campagne nationale pour résorber un stock de jeunes universitaires. Nous avons constaté qu'internet a joué un rôle primordial dans ce domaine.

Comment les pays en développement peuvent-ils se développer, présenteront, et à l'avenir dans un milieu de compétition internationale s'ils ne disposent pas d'atouts qui sont un très haut niveau d'éducation, des entreprises capables de relever les défis dans un marché compétitif et en mutation. La capacité d'adaptation aux nouvelles exigences ne peut être réalisée que grâce à des cadres bien formés et compétents.

Permettez-moi de faire maintenant ce constat : dans ce monde sans lequel nous vivons et où la globalisation est d'actualité, la pérennité du travail sera de moins en moins garantie dans l'avenir par la législation. D'ailleurs, que ce soit au B.I.T., ou dans les autres qui réussissent gouvernants, employeurs et employés, il est question de plus en plus de lier les rapports qui permettent la cohabitation entre employeurs et employés. C'est d'ailleurs ce qui a assuré une certaine pérennité de l'entreprise et son développement.

Aujourd'hui, avec la globalisation, la véritable pérennité de l'entreprise et de l'emploi n'est garantie, au-delà de la législation, que par la capacité de conjuguer les efforts des uns et des autres, entendez employeurs et employés.

**En conclusion**, je livre à notre médaillon les réflexions suivantes :

- L'UNESCO gagnerait à renforcer ses liens avec le secteur privé dans la mesure où cette dernière joue un rôle croissant.
- L'éducation est un droit aussi bien pour l'homme que pour la femme.

L'emploi est également un droit pour l'homme et la femme.

En Tunisie, le problème est résolu puisqu'il n'y a aucune différence entre l'homme et la femme. Dans le monde d'aujourd'hui, caractérisé par les dangers qui guettent l'entreprise, les chances d'un pays éduqué sont beaucoup plus importantes pour pouvoir résister aux risques de crise. Mais, dans le même temps, il est nécessaire de rappeler qu'un chômeur éduqué est beaucoup plus dangereux pour la société qu'un chômeur ignorant.

L'Organisation Internationale des Employeurs que j'ai l'honneur de présider et qui représente vingt cinq organisations patronales dans les cinq continents, est à la disposition de toutes les bonnes volontés pour enrichir les débats sur cette question.

Je vous remercie de votre attention.

*Intervention de :* Melle Sike Nelle Sombe  
Présidente, AIESEC  
Cameroun

## **Introduction**

Aujourd'hui, à l'aube du XXIème siècle le chômage fait partie intégrante de l'ensemble de l'économie mondiale ; la question de savoir comment "répondre aux exigences du monde du travail" est plus que jamais d'actualité. Que doivent faire les institutions universitaires afin que les étudiants et étudiantes puissent s'intégrer dans la vie professionnelle? Ce sera là l'objet de cet exposé qui s'attardera particulièrement sur le cas des pays sous-développés.

### ***La réponse des institutions universitaires***

#### ***Les étudiants et étudiantes face aux exigences du monde du travail***

L'Université et les institutions universitaires doivent fournir un cadre adéquat à l'épanouissement et au développement des individus de tout âge et à tout moment. Elles doivent être des institutions dont le rôle n'est pas seulement de fournir aux futurs diplômés des connaissances théoriques, mais surtout les préparer réellement à l'intégration du monde professionnel, d'une manière générale à la vie dans la société. Cet épanouissement doit s'inscrire dans un processus à long terme permettant au fur et à mesure des évolutions et des adaptations.

Il est très important que les programmes universitaires soient conçus pour ce qu'ils apportent aux individus dans la société en terme de développement. Il serait intéressant que l'intégration dans le monde du travail des futurs employés commence par une connaissance professionnelle ou semi- professionnelle de ce dernier. L'enseignement supérieur doit le permettre parallèlement aux enseignements dispensés :

- ❖ par la responsabilisation des étudiants en les faisant participer à la gestion des campus universitaires dans le cadre de certaines charges administratives ou autres ;
- ❖ par la participation des étudiants à des stages dans les domaines où ils reçoivent des enseignements, ce qui nécessite alors une adaptation des institutions universitaire, afin que les étudiants concernés puissent suivre en même temps leurs cours et leurs occupations professionnelles. Ces stages sont un cadre adéquat à la préparation des étudiants aux exigences du travail en entreprise ;
- ❖ par l'intégration au sein des campus universitaires d'associations et organisations professionnelles d'étudiants gérées par des étudiants telles l'AIESEC (Association des Etudiants en Sciences Economiques et Commerciales) qui ont la particularité de permettre aux étudiants de mettre en pratique les enseignements théoriques reçus.

#### ***Les étudiants face aux exigences du monde du travail***

Le cas particulier des étudiantes au foyer dans un environnement où l'on prône l'enseignement pour tous est aussi à prendre en considération. Il faut dire qu'il existe pas mal de pays dans le monde où les femmes du fait de leur statut souvent jugé inférieur ou simplement des horaires particuliers dus au fait qu'elles ont très souvent des enfants dont elles doivent s'occuper, n'ont pas la possibilité de s'intégrer de façon traditionnelle dans l'enseignement supérieur. Des enseignements à distance et /ou par correspondance doivent être développés par les institutions universitaires afin de combler cette lacune.

### ***L'action globale des institutions universitaires***

Il est aussi capital pour l'évolution et l'épanouissement des étudiants et étudiantes, l'acquisition de nouvelles connaissances, techniques et technologies que les universités s'ouvrent au monde, collaborent entre elles, donnant ainsi la possibilité aux étudiants de former un réel réseau d'échange d'idée et même d'expertise. Les institutions universitaires devraient alors s'intégrer dans le réseau de communication réel qu'offrent les nouvelles technologies de l'information et de la communication (NTIC) qui sont un cadre adéquat pour des formations à distances et qui s'adapte assez bien à la situation de ces femmes qui ont généralement très peu de temps à passer à l'extérieur, et de tous ceux qui ne peuvent pas s'intégrer pour une raison ou une autre dans le système traditionnel.

Ces changements au sein des institutions universitaires impliquent dans la conception de leurs programmes pédagogiques l'intégration des étudiants, des entreprises qui connaissent bien les besoins pratiques en matière d'emploi et ont souvent des programmes de formation interne pour l'adaptation de leurs employés aux mutations technologiques et autres, des organisations non gouvernementales et associations nationales ou internationales gérées par des étudiants.

Les politiques aussi ont un rôle certain à jouer si l'on veut vraiment " répondre aux exigences du monde du travail ". Ce sont eux qui doivent mettre sur pied des politiques de gestion adaptées qui tiennent compte de la demande sociale et favoriseraient le travail des institutions universitaires.

### **Conclusion**

Une coopération est très importante entre les institutions universitaires, les étudiants, les organisations et associations non-gouvernementales et les politiques pour la mise en œuvre d'action qui pourraient nous permettre de "répondre aux exigences du monde du travail ".

*Address by:* Professor Gerd Köhler  
International Confederation of Free Trade Unions  
Germany

Thanks to UNESCO for the invitation to this debate on “The Requirements of the World of Work” This type of “participation of trade union speakers is not wanted everywhere in the world. In many countries changes are necessary! Even here, when you look at the governmental delegations you'll see that only a small number of delegations include students, representatives of higher education institutions or speakers from the employers or the trade union side. To speak about stakeholders is one thing, but to speak: with them is evidently another thing.

I am invited to represent the trade union movement worldwide. I'm doing this in a triple way - as the Vice-President of the German Trade Union for Education and Science, as a representative of Education International, and of the International Confederation of Free Trade Unions (ICFTU).

What are the requirements of our part of the world of work?

First of all, we expect clear, understandable analytical, and conceptual answers to the big challenges of the political, economic, social, ecological and cultural agenda; How to overcome mass unemployment, famine, the destruction of nature, gender discrimination or exploitation? How to develop society and economy in a peaceful, socially coherent, democratic way? How to give the developing countries a fair chance of a self-determined sustainable future?

We don't like ivory towers, we are disappointed about economists always presenting ex post analysis saying that this and that was not possible and not engaged in making something possible. Having these expectations means for the trade unions to respect academic freedom, and the institutional autonomy of higher education and research. These are essentials, when they should inspire their critical and constructive work in social responsibility.

What does this mean for higher education and research?  
(We are using this term because we are thinking that one does not work without the other)

Due to the given time of 8 minutes for my contribution I'll focus our requirements on 5 points:

(1) We are supporting UNESCO's position on open access to higher education. But looking at reality, we are asking for more means and clearer political action to reduce social gender based income related, religious or regional inequality. There are too many seeds without any chance to grow. Access must also be provided for gainfully employed people, mature students who don't hold traditional entrance qualifications permeability between labour market and higher education institutions.

(2) For us studying means vocational qualification on the level of academic education, but should not be reduced to that aspect alone. It must not be geared solely towards the undiscussed requirements of the employment system, but should facilitate a critical insight into a professional world in which, graduates from higher education want to find meaningful, humanly conceived and well paid work. We are calling on the higher education institutions to discuss the relations between studying and occupation, between higher education and labour market. The demand for higher education qualified employees should become an issue in a transparent dialogue with both, the private and public employers on the one hand, and the trade union on the other.

(3) Further or adult education is becoming increasingly important for economic and social development. The higher education institutions are asked to take their role in the process of life-long learning. UNESCO's CONFINTEA conference has shown the types of activities required and the dimension of

this task. The Mumbai Statement on Lifelong Learning, active Citizenship and the Reform of Higher Education" should be reflected in the "World Declaration", as well as in the "Framework for Action".

(4) Research forms the foundations for qualified teaching. Therefore the unity of research, scholarship and teaching must be guaranteed like in UNESCO's Recommendation concerning the status of teaching personnel in higher education. The governments must also guarantee sufficient basic funding to ensure that in choosing its topics, higher education research does not have to orientate itself primarily on the criterion of direct or indirect practical application. Research must reflect its responsibility to society in a "code of conduct". A market and fashion driven research will lose its function of critical enlightenment, it will only reproduce mainstreamism, the opposite of innovation. Shareholder value politics would destroy long term basic research.

(5) The trade unions demand that working conditions at higher education institutions should be appropriate to research activities. Organisational structures should be created to enable a reversal of the trend towards increasing fragmentation, casualisation and the exodus of research from higher education. Continuity of research work and team work are principal conditions for its quality. And, there can be no innovation without new ways of participation.

I have not spoken about self-governance and management, new patterns of funding, personal development, new information and communication technologies or the internationalization of higher education and research. When you are allowed to speak only 9 minutes, you have to set priorities and that means at the same time to set posteriorities. In answering your question I will probably be able to come back to these aspects.

One final remark: in all the papers written by the World Bank, by OECD, by the International Monetary Fund, by ILO, the European Commission, or even in UNESCO, you'll find the demand for "closer links" between higher education and the "World of Work".  
But...

What are these "closer links"?

The trade unions want to raise questions before they are willing to support these closer links:

- Who should be integrated in the process to reform the curricula? We don't want short term oriented adaptation to the too often short-sighted interests of single companies. But we are willing to join open dialogues on social demands, we are prepared to sit in boards;
- Who should be invited to think about and decide on priorities in research funding? We don't want to have a primarily market and fashion driven research. The "market" has shown that alone it is not able to solve the problems. Neoliberalism is not able to build the infrastructure for all, especially not in societies in transition (CEES, Africa). But we are willing to support an open discourse on the development of research and technology geared towards the needs of society as a whole.

The European "Social Dialogue", invented by Jacques Delors, is an example for a framework for common talks on the future of higher education and research. The trade unions are willing to play their role, an active role in the process of redefining higher education and research.

*Address by:* Dr Donald R. Gerth  
President, International Association of University Presidents  
President, California State University  
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Mr. Chairman, Ladies and Gentlemen:

This topic, higher education and the world of work, and the excellent paper by Ulrich Teichler drive to the heart of what the World Conference on Higher Education is all about.

The World Conference on Higher Education is the occasion for the education, economic, and government leaders of the world to assess where higher education is now, in 1998, and where we need to go in the years ahead. The fact that we need to address the world of work is a product of complex economic and social forces. In the language of educators and others, it is a result directly of a massive shift in the twentieth century to what Professor Teichler calls "the substantially rising proportions of graduates" of universities and other higher education institutions. Higher education is no longer for an elite. Higher education is broadly understood, in most places in the world, to be a principal path to employment with economic well-being and a good life. Thus it is only natural that the general population in most parts of the world and their governmental leaders would understand a very basic relationship of higher education to the world of work. Indeed, that relationship is coming to be one of the defining characteristics of a healthy higher education system and even of most, if not all, universities.

The Teichler paper is a good and comprehensive analysis of the current state of understanding of that relationship. I believe it will be useful to educators and public policy makers over the world. In the body of the paper Teichler makes the point that "the consequences of mass 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. And these complaints are reinforced by the feeling in the academic profession of a loss of exclusiveness as far as the generation and dissemination of systematic knowledge is concerned." Indeed, as a member of the transitional generation of academics from elite to accessible higher education in my country, I am often surprised at the intensity of academics on the matter of the abstract nature of knowledge and an argued need to separate knowledge and its dissemination from the practical worlds of politics, economics, and science in particular.

We can usefully examine the evolution of the relationship of the world of work to universities and higher education in this century now closing. The generalizations I make, like most generalizations, are not universals, but they are useful. The century began with much of higher education in a traditional mode. The work of universities for the most part was to address and transmit knowledge in the traditional disciplines. The advent of applied fields and the interdisciplinarity of knowledge were only beginnings. In my country the so-called land grant colleges were in their early years. Many if not most members of the professorate and many if not most of the universities educated individuals understood universities and higher education in what were then and, in some places, still are traditional terms.

In the early and mid and, in some places, later years of this century, the world of work began to intervene in the functioning of universities. A common and early reaction to this phenomenon, an over-reaction in my understanding, was that of forcing a choice. Higher education was to be in the arts and sciences, the disciplines as we have understood them, or to be in vocational areas, applied fields, and both conventional and emerging professions. In some countries, this clear separation was, and in some instances still is, reinforced by the organization of higher education.

As universities and other higher education institutions have matured in terms of the newly emerging economic and social orders of the last half of the twentieth century, gradually there is in fact a coming together of the traditions of higher education and the world of work. But this coming together is

often uneasy and hardly accepted. In part this uneasiness is a direct result of the "massification" of universities and higher education, in part the result of a loss of direction for the disciplines in an interdisciplinary world, in knowledge based societies.

The next step is an obvious one, or so it would seem. That next step is for universities to embrace the world of work within institutions that remain as committed as ever to the integrity of knowledge and its dissemination, to research and the arts, and seek interdisciplinarity, the professions and applied fields. These come together, and a university that understands this will create a strength that will maintain it into the future.

The alternative is equally obvious. To insist upon a division is to create in a changing world institutions which are not likely to survive in good health because they are not useful. An educated person in a knowledge based society is one grounded in the skills and knowledge of civilizations past and present, as well as prepared to function in a knowledge based society.

And that is what universities and other higher education institutions are all about.