

## Higher Education for Development: “Internal” and “External” Aspects with Special Reference to UNESCO Visions

Mohammed TAVAKOL \*

### Abstract

It is said that today more than ever in human history, the wealth -or poverty-of nations depends on the quality of their Higher Education.

It is true that the place and the expectations from Higher Education has changed from those of a few decades ago. To some extent this can be related to the fact that today Higher Education provides both opportunities and challenges, depending on priorities, policies, resources and other factors dominant in different countries.

Viewed from a critical perspective, the most important challenges, especially for the developing countries, lie in the challenge to guarantee quality, to assure equity of access to Higher Education, to prove the relevance of Higher Education programmes regarding the needs of the society (Industry etc), to preserve national culture and identity, and to ensure that governments set national policy objectives for Higher Education.

Putting these in other words, the importance of Higher Education is highly dependent on its “Internal quadrangle”(Quality, Quantity, Equity, and Relevance), and “External triangle” (University, Industry, and Government relations). Special reference is made to Unesco visions and recommendations for action (Unesco; United Nations Educational, Scientific, and Cultural Organization, is the most specialized UN agency regarding higher education, and has the greatest world authority in matters related to different aspects of higher education, and is in close collaboration with other concerned international organizations and events).

**Key Words:** Higher Education; “Internal Quadrangle”.

The joint working committee report of UNESCO and the World Bank quotes Malcom Gillis, Rice University President, as saying:

"Today more than any other time in human history, nations' wealth or poverty is dependent on the quality of higher education"

### Why is this so?

! Generational transfer and dissemination of knowledge has been the university's main objective from the very beginning

! Today, knowledge constitutes the core in processes of contemporary society

And the result of the necessitates a new analysis of the strategic role of higher education and the university in relation to the society, and then leading the university towards fundamental transformations and new orientations while preserving the balance between scientific aspects and social commitments<sup>1</sup>.

Within these conditions:

The University's additional balance depends on the establishment of a balance between surrendering to the capital, trade and economy (whether national or globalized), or the isolation from it.

Higher education is an intricate phenomenon, the analysis of which requires something more than limited or mere economic approaches, and should also be based upon the acceptance of the necessity for establishing a balance between economic and production needs, general societal needs, as well as the important needs of each individual as a member of the human race within a specific cultural, social and historical contexts. The responsibilities of institutions for higher education need

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\* Dr. .,Tehran University &Iranian National Commission for UNESCO. Iran

also be evaluated in this context and relevance. But who is to define "relevance" and "importance"? In other words, who will respond to the following questions?

Why higher education? What for? Which societies? And For which citizens should higher education be provided?

Hence, the concept of "social relevance" gains prominence.

- a) Relevance and importance of higher education need be evaluated according to the extent of balance between societal expectations from various academic institutions and their true functions, which is brought about in the light of ethical criteria, political neutrality, the culture of critique, an ever more strengthened link between societal problems and the job market, as well as the adoption of long-term orientations with respect to societal needs and objectives, which would include respecting cultures, and environmental support. The main source of concern, however, is achieving education for all, as well as goal-oriented, specialized education with special emphasis on merits and skills, since these two forms of education provide for living in variant situations as well as for changing one's job or profession.
- b) Higher education should play a more prominent role in providing services to the society, especially in its function as a means for eradication of poverty, eradicating prejudice, violence, illiteracy, hunger, corruption and diseases, which is primarily brought about by adopting an inter- and transdisciplinary approach to analyzing problems.
- c) Higher education should increase its share in developing all aspects of the educational system through furthering Training of Trainers activities (ToT) and by means of curriculum development and enhancing research.
- d) Finally, the creation of a new society free from violence and oppression should be the target of higher education. The system should therefore be consist of motivated elites who are homogenized, have great compassion for humanity, and adhere to wisdom as their guiding lamp.

In realizing the above-mentioned goals, objectives and programmes, the following basic components should play a leading role: higher education, relevance, quality, quantity, equity

#### **Relationship between University and Government:**

To be brief, the following formula, in our view, should be the framework for action:

- ! University versus government interaction: responding to the needs of the state.
- ! State versus university interaction: setting the grounds for scientific advancement.

#### **Relationship between University and Industry:**

Axiomatically speaking ,the following headings are to be recommended:

- ! Transmitting organizational management and technical knowledge
- ! Consultation services
- ! Joint projects
- ! On-service Training
- ! Introduction of specific courses by universities based on the articulated needs of industry and economy
- ! Apprenticeship and resident training by university students at production sites
- ! Defining industrial, productive and economic needs
- ! Technology parks<sup>2</sup>, incubators and innovation centres
- ! Need-orientedness theses and dissertations
- ! Tax exemptions for trade institutions assisting scientific development

**Issues to be contemplated with respect to the relationship between industry, university and society:**

Specialized international agencies like UNESCO in different conferences, meetings, symposiums, forums (such as CASTASIA) in the fields of science, research, technology and development have identified various organizational issues, some of which are listed below:

**! Issues of Concern at the National Level:**

The most important thing to be considered at the national level is how to integrate national objectives into R&D projects. All other matters as follows are secondary to this, and are to be taken into account in this regard:

- a) How much of the Gross Domestic Product should be allocated to R&D activities?
- b) What would be the method for the sectoral distribution of R&D budget?
- c) How should an appropriate R&D network be established and retained at a national level;
- d) What kinds of information and service facilities need be prepared and at what level?
- e) What sources of encouragement should be applied to promote innovation?

**! Issues of Concern at Sector Level:**

An important point to consider is how to reduce long-term sectoral objectives (such as services, agriculture, industry, education, transportation etc) into relevant R&D projects.

Other key issues and concerns:

- a) Methods of defining the priorities in R&D projects of each sector
- b) How to define the appropriate level of support?
- c) How competition and the market's influence the data and results of research and development?
- d) Creating incentives for the transfer of technology both within and outside of the sector.

**! Issues of Concern at Organizational Level:**

Apart from national and sectoral issues, the concerned organization should also be an effective and reflective organization and manage challenges innovatively.

Other Issues of concern at this level include:

- a) Organizational structure and form (whether it be centralized, decentralized or operational etc)
- b) Formal/official relationships between the government and private customers
- c) Methods of identifying, selecting and training key personnel such as scientists, engineers, project managers etc
- d) Methods of institutionalizing back up services such as publication, design, accounting, workshops etc
- e) Methods of operational transmission from laboratories to the market
- f) Methods of defining and allocating budget to various activities

**! Issues of Concern at Individual Level:**

Here the issue of prominence is how to attract and then to keep meritorious subjects (personnel). Other related issues include:

- a) Methods of evaluating the subjects' (personnel) performance in order to conform rewards with the employees' outputs
- b) How to avoid ageing of technical professionals' specialty or even to delay it by means of education and repeated training/re-education
- c) How to develop methods and to set plans for appropriate job promotions in order to lift the spirits of employees, to ensure rule and order in team work<sup>3</sup>.

**Other organizational aspects of industry-university relationships:**

- ! Strategic management of industry-university relationships
- ! Interface management
- ! Financial management of industry-university relationships
- ! Staff management in the industry-university relationship

## ! Intellectual Property Rights (IPR) management

As far as “external” factors are concerned, It can be concluded that successful management of industry-university relationships should be based upon strategic management approaches, which would help transform the development of such relationships to a definitive and long-term objective of universities. A strategic management of industry-university relationships is therefore deemed necessary as it will help prevent "immediate" profiteering at universities and their unreliability in the long run, especially at times of overall budgetary constraints.

On the other hand, a strategic management of industry-university relationships should account for an increase in efficient structural support for the implementation of a strategy as such. Therefore, the strategic management of industry-university relationships should, under the assistance of a central management system that is accountable to the holder of the highest executive post at the university-the rector or the managerial board- homogenize and mainstream existing structures. Without a central management system newly established structures might be marginalized by older sectors of the university. Strategic management can also ensure closeness and natural proximity between the objectives sought by both the old and new sectors of the university.

Any approach leading to a development of industry-university relationships, need be supported by a high-level managerial system in order to ensure support of innovations made in different sectors. On the other hand, establishment of appropriate decision-making structures for transforming political will to operational capacity is also required. Most organizations have defined high level posts- such as, specialized deputy for development services- that functions as a leading institution in their related field. The establishment of traditional structures for management and supervision such as the university council is an example of political will and the creation of cooperation opportunities for representatives of the private sector as well.

Still, it is necessary to create operational management capacities by means of both internal and external supportive structures that are intensively controlled by the university and are flexible enough to enable quick response to the opportunities offered by the employment market. At times of increased confrontations activities, ratification of university rules and regulations and collective work need be homogenized and mainstreamed, which, taking into account the universities nature of decentralization, is not at all a simple task . Yet, the appropriate balance between centralization and decentralization, as well as an independence linked to balance and supervision, are both known to result from the success of factors influential in the development of industry-university relationships<sup>4</sup>.

At a macro level, though, i.e., a level beyond the university- the national level-it is necessary to resolve problems still experienced in the Third World, in general. The number of teachers and scientists active in the field of Research and Development (R&D) in developing countries is much less than that of developed countries. And it is when transfer of knowledge does not take place or is low in the field of science and technology to that of production in a country, that the problem becomes serious and irreparable. Therefore, potential users will be denied new information of production and quality control. Another problem is the low number of engineers and scientists who are able to define problems and to transfer requirements from science and technology to the field of production.

In most developing countries an enigmatic situation occurs:

Though providing the primary budget to the science and technology sector as well as its personnel is a responsibility of the governments, it is in fact the private sector that covers the production field at large. And this problem is most probably linked to the weakness and shortcoming of domestic demands with respect to science and technology.

In conclusion, it is to be noted that a difference has to be considered between *clear demand* (what is requested from science and technology by the production system, and the society as a whole) and *unclear* or *vague demand* (what is expected from science and technology implicitly by various social and economic actors) with respect to demands from science and technology. It is thus necessary to increase both supply and demands (*clear*) from science and technology.

We are not in a world, and in a country, with so many possibilities and that plentitude of supplies and resources (at least no longer) to plan and operationalize higher education, like other domains of socio-economic activity, unconditionally and without deliberated priorities and choices. In the midst of the present socio-economic realities confronting us, both in the developed and the developing countries, there are varying sets of demands, requirements, limitations, and pressures encompassing higher education in each society, and even its (H.E.) internal dimensions. Based on these, a set of criteria takes shape upon which the planning and development of higher education in the country should be conceptualized and come into effect. Among the important components of this set of criteria is the category of “Relevance” or national relevance or social relevance, which is more or less commonly articulated and emphasized theoretically or practically.

Obviously within each society there are particular needs at local, regional, and national levels in terms of trained manpower, as well as scientific (educational & research), technical & technological, and cultural needs. As a result, it seems obvious that higher education in a society cannot and should not be planned and proceed in a vacuum, as far as national needs are concerned.

As for Quality, it also must be a concern of any higher education system, especially in the developing countries. Lack of sufficient resources, lack of motivation on the side of academic staff, undeliberated quantitative expansion of higher education, lack of an effective quality control policy and continuous supervision, have led the universities to a lower level of quality. Securing the quality of higher education and its products (students particularly) is a prerequisite for its contribution to national development in any country. If the content of courses and programmes offered by higher education institutions are not up-to-date and not well-designed to meet the needs and requirements of different “consuming” sectors of society, and if they are not well-instructed, then the graduates, and other “products”, will not be able to perform an effective role, but an expensive, “decorative” one.

There is no way to guarantee quality unless by setting up of both internal-evaluation and external-evaluation systems and then effectively and continuously analyzing the results and feedback of the systems through relevant measures to this end.

The following are remarks to be added to the above:

- Quality is ideal but not always easily accessible in higher education. The obstacles should be recognized and plans made to overcome them.

- In most cases, quality is in indirect relation with quantity. If we admit a large number of students, with limited educational resources and facilities, we decrease the quality that we can offer, and vice versa. There should be a balance between quality and quantity. This implies that there should be considered neither a very high quality for a very limited number of students, nor a very poor quality for a big number of students.

- In order to realize high quality in higher education relevant policy-making bodies should single out important components of quality in higher education, for example indicators like total enrollment rates, student to teacher ratio, facilities like educational space, workshops, laboratories, and books per student, etc should be pinpointed, and efforts need be made to meet relevant standards, or at least guarantee the provision of the minimums.

These are quantifiable entities, considering which a higher education system can move towards achieving/meeting international standards. But there are qualitative parameters like teachers’ quality of teaching and research, adopted teaching methods, academic environment features, including academic competition and motivation that can not be easily quantified and measured, though their consideration and promotion is a must.

Coming to quantity, it could be mentioned that the most important higher education indicator which practically has been the basis of higher education development, especially in most developing countries, is the number of H.E. students per 100,000 population. Obviously this is a quantitative indicator, which if applied, targeted and imposed not deliberately and cautiously it may lead the H.E. development programmes to a lower quality level. It is true that there exists different factors to push for quantitative expansion; political pressure groups, high population growth, high-school-leavers pressure & size, social demand for higher education degrees and diplomas, H.E.

institutions' competition for greater enrollment size and number as well as, the policy-makers and executives' excuse concerning the unrealized minimum ratio of trained manpower in the job market and meeting the requirements of national and development programmes for trained labour force, are among influential factors required for quantitative expansion.

And finally we have, Equity-one of the most important objectives sought in the philosophy of education, and an ideal of educationalists (the realization of equity through education, in society, and obviously with a view to educational opportunities itself is an ideal of educationalists). In this view, H.E. was thought to operate as an influential factor in upward social mobility. It is true that this ideal has not come true everywhere, and as far as higher education is concerned many institutions in different societies have become the scene for the exercise of unequal backgrounds, e.g. class stratification, cultural differences, political orientations etc, yet the last two issues, quantity and equity are channeled to access<sup>5</sup>.

The second half of the 20<sup>th</sup> Century is considered the most spectacular era of higher education expansion, particularly in the most developed countries. From 1960 to 1995 the number of graduates world-wide grew more than six times, from 13 million to 82 million<sup>6</sup>. In the 1960s, expanding access to higher education held great relevance to the policy debate because of its social and political implications; in all regions of the world, enrolment rates spiraled upwards. Europe's 2.2 percent enrolment rate in the 1960s rose to almost 40 percent by the mid-1990s. The United States and Canada, from an enrolment rate of 7.2 percent, reached upwards of 80 percent in the same period. Similarly, in less advanced countries, enrolment rates grew from 1.3 to around 7.8 percent, although a tremendous gap is still to be found between more and less developed countries. In Latin America, the corresponding levels grew from 1.6 percent in the 1960s to 18 percent in the 1990s<sup>7</sup>.

But how to harness the positive side to the globalization of knowledge without undermining acceptable forms of competition? Internationalization by cooperation may prevail over internationalization by money-making, but it requires emphasis to be put on sustainable and harmonious development so that "... the regulations are not subdued to the marketplace, but to society." If the strong drive towards the market, with its highly competitive character, is to be mastered, international cooperation, interactive globalization by mutual exchange and mutual advantage, with regulations focusing on educational agreements, will be required<sup>8</sup>. This scenario will also require closer accord between the public and private sectors. Many of the views and perceptions that once held sway no longer govern. Rigid dichotomies are rarely conducive to an understanding of the complex, unprecedented situation we face. To rise above dichotomies such as "public-private", "trans-national vs. national" etc. calls for new analytical concepts.

To understand the roles played by universities in the process of transformation, it is useful to begin by classifying some of their major functions. Castells has suggested four major functions as generally applicable to most societies<sup>9</sup>. First, universities play a major role as ideological apparatuses by exerting ideological and cultural influence on society, through the socialization of students and the development of a relatively autonomous space to enable critique and reflection. Second, universities act as a mechanism of selection, socialization of elites and social mobility. Third, universities generate knowledge, and fourth, they are responsible for the formation of human capital and a skilled labour force. However commentators<sup>10</sup> have noted that in the contemporary social context, some of the cultural, political and social functions of higher education have been eclipsed by the developments associated with globalization and the knowledge economy. The State's ability to compete successfully in the global marketplace is seen to rely on the production of higher value-added products and services, which are in turn dependent on knowledge, especially scientific and technological knowledge, and on continuous innovation. Intellectual capital has thus been portrayed in government policy as one of the most important determinants of economic success and as a crucial resource in the scramble for global profits<sup>11</sup>. In this context, higher education has been positioned as a major and indispensable contributor to the transition to a high-skills economy and one of the main institutional sites for the production, dissemination and transfer of knowledge, innovation and technology.

Regarding this, considerable claims which are being made for higher education as a motor for social, economic and political change in various parts of the world, local conditions and history impose powerful constraints on universities' capacities to both change themselves and contribute to the delivery of change more widely.

Universities appear to play multiple and contradictory roles. Sometimes roles are distinguished by institutional differences-whether sectoral, regional or private/public. But multiple roles can also be found within individual institutions and departments. The capacity for institutions to change their roles thus seems to be rather limited, at least in the short term. And change, when it comes, seems more likely to be generated by external forces than from within the institution. Change in the long term also may come largely from the arrival in positions of influence of a new generation of academics, socialized into new conceptions of the nature of the university and its social role.

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## **Appendix**

**World Declaration on Higher Education for the Twenty-first  
Century:  
Vision and Action  
and  
Framework for Priority Action for Change and Development  
in Higher Education  
adopted by the  
World Conference on Higher Education  
Higher Education in the Twenty-First Century: Vision and  
Action  
9 October 1998**



## Preamble

On the eve of a new century, there is an unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its vital importance for sociocultural and economic development, and for building the future, for which the younger generations will need to be equipped with new skills, knowledge and ideals. Higher education includes 'all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent State authorities'<sup>1</sup>. Everywhere higher education is faced with great challenges and difficulties related to financing, equity of conditions at access into and during the course of studies, improved staff development, skills-based training, enhancement and preservation of quality in teaching, research and services, relevance of programmes, employability of graduates, establishment of efficient co-operation agreements and equitable access to the benefits of international co-operation. At the same time, higher education is being challenged by new opportunities relating to technologies that are improving the ways in which knowledge can be produced, managed, disseminated, accessed and controlled. Equitable access to these technologies should be ensured at all levels of education systems.

The second half of this century will go down in the history of higher education as the period of its most spectacular expansion: an over sixfold increase in student enrolments worldwide, from 13 million in 1960 to 82 million in 1995. But it is also the period which has seen the gap between industrially developed, the developing countries and in particular the least developed countries with regard to access and resources for higher learning and research, already enormous, becoming even wider. It has also been a period of increased socio-economic stratification and greater difference in educational opportunity within countries, including in some of the most developed and wealthiest nations. Without adequate higher education and research institutions providing a critical mass of skilled and educated people, no country can ensure genuine endogenous and sustainable development and, in particular, developing countries and least developed countries cannot reduce the gap separating them from the industrially developed ones.

Sharing knowledge, international co-operation and new technologies can offer new opportunities to reduce this gap.

Higher education has given ample proof of its viability over the centuries and of its ability to change and to induce change and progress in society. Owing to the scope and pace of change, society has become increasingly knowledge-based so that higher learning and research now act as essential components of cultural, socio-economic and environmentally sustainable development of individuals, communities and nations. Higher education itself is confronted therefore with formidable challenges and must proceed to the most radical change and renewal it has ever been required to undertake, so that our society, which is currently undergoing a profound crisis of values, can transcend mere economic considerations and incorporate deeper dimensions of morality and spirituality.

It is with the aim of providing solutions to these challenges and of setting in motion a process of in-depth reform in higher education worldwide that UNESCO has convened a World Conference on Higher Education in the Twenty-First Century: Vision and Action. In preparation for the Conference, UNESCO issued, in 1995, its *Policy Paper for Change and Development in Higher Education*. Five regional consultations (Havana, November 1996; Dakar, April 1997; Tokyo, July 1997; Palermo, September 1997; and Beirut, March 1998) were subsequently held. The Declarations and Plans of Action adopted by them, each preserving its own specificity, are duly taken into account in the present Declaration - as is the whole process of reflection undertaken by the preparation of the World Conference - and are annexed to it.

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<sup>1</sup> Definition approved by the General Conference of UNESCO at its 27th session (November 1993) in the Recommendation on the Recognition of Studies and Qualifications in Higher Education.

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We, participants in the World Conference on Higher Education, assembled at UNESCO Headquarters in Paris, from 5 to 9 October 1998,

Recalling the principles of the Charter of the United Nations, the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, and the International Covenant on Civil and Political Rights,

Recalling also the Universal Declaration of Human Rights which states in Article 26, paragraph 1, that ‘Everyone has the right to education’ and that ‘higher education shall be equally accessible to all on the basis of merit’, and endorsing the basic principles of the Convention against Discrimination in Education (1960), which, by Article 4, commits the States Parties to it to ‘make higher education equally accessible to all on the basis of individual capacity’,

Taking into account the recommendations concerning higher education of major commissions and conferences, *inter alia*, the International Commission on Education for the Twenty-First Century, the World Commission on Culture and Development, the 44th and 45th sessions of the International Conference on Education (Geneva, 1994 and 1996), the decisions taken at the 27th and 29<sup>th</sup> sessions of UNESCO’s General Conference, in particular regarding the Recommendation concerning the Status of Higher-Education Teaching Personnel, the World Conference on Education for All (Jomtien, Thailand, 1990), the United Nations Conference on Environment and Development (Rio de Janeiro, 1992), the Conference on Academic Freedom and University Autonomy (Sinaia, 1992), the World Conference on Human Rights (Vienna, 1993), the World Summit for Social Development (Copenhagen, 1995), the fourth World Conference on Women (Beijing, 1995), the International Congress on Education and Informatics (Moscow, 1996), the World Congress on Higher Education and Human Resources Development for the Twenty-First Century (Manila, 1997), the fifth International Conference on Adult Education (Hamburg, 1997) and especially the Agenda for the Future under Theme 2 (Improving the conditions and quality of learning) stating: ‘We commit ourselves to ... opening schools, colleges and universities to adult learners ... by calling upon the World Conference on Higher Education (Paris, 1998) to promote the transformation of post-secondary institutions into lifelong learning institutions and to define the role of universities accordingly’,

Convinced that education is a fundamental pillar of human rights, democracy, sustainable development and peace, and shall therefore become accessible to all throughout life and that measures are required to ensure co-ordination and co-operation across and between the various sectors, particularly between general, technical and professional secondary and post-secondary education as well as between universities, colleges and technical institutions,

Believing that, in this context, the solution of the problems faced on the eve of the twenty-first century will be determined by the vision of the future society and by the role that is assigned to education in general and to higher education in particular,

Aware that on the threshold of a new millennium it is the duty of higher education to ensure that the values and ideals of a culture of peace prevail and that the intellectual community should be mobilized to that end,

Considering that a substantial change and development of higher education, the enhancement of its quality and relevance, and the solution to the major challenges it faces, require the strong involvement not only of governments and of higher education institutions, but also of all stakeholders, including students and their families, teachers, business and industry, the public and private sectors of the economy, parliaments, the media, the community, professional associations and society as well as a greater responsibility of higher education institutions towards society and accountability in the use of public and private, national or international resources,

Emphasizing that higher education systems should enhance their capacity to live with uncertainty, to change and bring about change, and to address social needs and to promote solidarity and equity; should preserve and exercise scientific rigour and originality, in a spirit of impartiality, as a basic prerequisite for attaining and sustaining an indispensable level of quality; and should place students

at the centre of their concerns, within a lifelong perspective, so as to allow their full integration into the global knowledge society of the coming century,

Also believing that international co-operation and exchange are major avenues for advancing higher education throughout the world, Proclaim the following:

#### *MISSIONS AND FUNCTIONS OF HIGHER EDUCATION*

##### Article 1. Mission to educate, to train and to undertake research

We affirm that the core missions and values of higher education, in particular the mission to contribute to the sustainable development and improvement of society as a whole, should be preserved, reinforced and further expanded, namely, to:

(a) educate highly qualified graduates and responsible citizens able to meet the needs of all sectors of human activity, by offering relevant qualifications, including professional training, which combine high-level knowledge and skills, using courses and content continually tailored to the present and future needs of society;

(b) provide opportunities (*espace ouvert*) for higher learning and for learning throughout life, giving to learners an optimal range of choice and a flexibility of entry and exit points within the system, as well as an opportunity for individual development and social mobility in order to educate for citizenship and for active participation in society, with a worldwide vision, for endogenous capacity-building, and for the consolidation of human rights, sustainable development, democracy and peace, in a context of justice;

(c) advance, create and disseminate knowledge through research and provide, as part of its service to the community, relevant expertise to assist societies in cultural, social and economic development, promoting and developing scientific and technological research as well as research in the social sciences, the humanities and the creative arts;

(d) help understand, interpret, preserve, enhance, promote and disseminate national and regional, international and historic cultures, in a context of cultural pluralism and diversity;

(e) help protect and enhance societal values by training young people in the values which form the basis of democratic citizenship and by providing critical and detached perspectives to assist in the discussion of strategic options and the reinforcement of humanistic perspectives;

(f) contribute to the development and improvement of education at all levels, including through the training of teachers.

##### Article 2. Ethical role, autonomy, responsibility and anticipatory function

In accordance with the Recommendation concerning the Status of Higher-Education Teaching Personnel approved by the General Conference of UNESCO in November 1997, higher education institutions and their personnel and students should:

(a) preserve and develop their crucial functions, through the exercise of ethics and scientific and intellectual rigour in their various activities;

(b) be able to speak out on ethical, cultural and social problems completely independently and in full awareness of their responsibilities, exercising a kind of intellectual authority that society needs to help it to reflect, understand and act;

(c) enhance their critical and forward-looking functions, through continuing analysis of emerging social, economic, cultural and political trends, providing a focus for forecasting, warning and prevention;

(d) exercise their intellectual capacity and their moral prestige to defend and actively disseminate universally accepted values, including peace, justice, freedom, equality and solidarity, as enshrined in UNESCO's Constitution;

(e) enjoy full academic autonomy and freedom, conceived as a set of rights and duties, while being fully responsible and accountable to society;

(f) play a role in helping identify and address issues that affect the well-being of communities, nations and global society.

#### *SHAPING A NEW VISION OF HIGHER EDUCATION*

##### Article 3. Equity of access

(a) In keeping with Article 26.1 of the Universal Declaration of Human Rights, admission to

higher education should be based on the merit, capacity, efforts, perseverance and devotion, showed by those seeking access to it, and can take place in a lifelong scheme, at any time, with due recognition of previously acquired skills. As a consequence, no discrimination can be accepted in granting access to higher education on grounds of race, gender, language or religion, or economic, cultural or social distinctions, or physical disabilities.

(b) Equity of access to higher education should begin with the reinforcement and, if need be, the reordering of its links with all other levels of education, particularly with secondary education. Higher education institutions must be viewed as, and must also work within themselves to be a part of and encourage, a seamless system starting with early childhood and primary education and continuing through life. Higher education institutions must work in active partnership with parents, schools, students, socio-economic groups and communities. Secondary education should not only prepare qualified candidates for access to higher education by developing the capacity to learn on a broad basis but also open the way to active life by providing training on a wide range of jobs. However, access to higher education should remain open to those successfully completing secondary school, or its equivalent, or presenting entry qualifications, as far as possible, at any age and without any discrimination.

(c) As a consequence, the rapid and wide-reaching demand for higher education requires, where appropriate, all policies concerning access to higher education to give priority in the future to the approach based on the merit of the individual, as defined in Article 3(a) above.

(d) Access to higher education for members of some special target groups, such as indigenous peoples, cultural and linguistic minorities, disadvantaged groups, peoples living under occupation and those who suffer from disabilities, must be actively facilitated, since these groups as collectivities and as individuals may have both experience and talent that can be of great value for the development of societies and nations. Special material help and educational solutions can help overcome the obstacles that these groups face, both in accessing and in continuing higher education.

#### Article 4. Enhancing participation and promoting the role of women

(a) Although significant progress has been achieved to enhance the access of women to higher education, various socio-economic, cultural and political obstacles continue in many places in the world to impede their full access and effective integration. To overcome them remains an urgent priority in the renewal process for ensuring an equitable and nondiscriminatory system of higher education based on the principle of merit.

(b) Further efforts are required to eliminate all gender stereotyping in higher education, to consider gender aspects in different disciplines and to consolidate women's participation at all levels and in all disciplines, in which they are under-represented and, in particular, to enhance their active involvement in decision-making.

(c) Gender studies (women's studies) should be promoted as a field of knowledge, strategic for the transformation of higher education and society.

(d) Efforts should be made to eliminate political and social barriers whereby women are underrepresented and in particular to enhance their active involvement at policy and decisionmaking levels within higher education and society.

#### Article 5. Advancing knowledge through research in science, the arts and humanities and the dissemination of its results

(a) The advancement of knowledge through research is an essential function of all systems of higher education, which should promote postgraduate studies. Innovation, interdisciplinarity and transdisciplinarity should be promoted and reinforced in programmes with long-term orientations on social and cultural aims and needs. An appropriate balance should be established between basic and target-oriented research.

(b) Institutions should ensure that all members of the academic community engaged in research are provided with appropriate training, resources and support. The intellectual and cultural rights on the results of research should be used to the benefit of humanity and should be protected so that they cannot be abused.

(c) Research must be enhanced in all disciplines, including the social and human sciences, education (including higher education), engineering, natural sciences, mathematics, informatics and the arts within the framework of national, regional and international research and development policies. Of special importance is the enhancement of research capacities in higher education research institutions, as mutual enhancement of quality takes place when higher education and research are conducted at a high level within the same institution. These institutions should find the material and financial support required, from both public and private sources.

#### Article 6. Long-term orientation based on relevance

(a) Relevance in higher education should be assessed in terms of the fit between what society expects of institutions and what they do. This requires ethical standards, political impartiality, critical capacities and, at the same time, a better articulation with the problems of society and the world of work, basing long-term orientations on societal aims and needs, including respect for cultures and environmental protection. The concern is to provide access to both broad general education and targeted, career-specific education, often interdisciplinary, focusing on skills and aptitudes, both of which equip individuals to live in a variety of changing settings, and to be able to change occupations.

(b) Higher education should reinforce its role of service to society, especially its activities aimed at eliminating poverty, intolerance, violence, illiteracy, hunger, environmental degradation and disease, mainly through an interdisciplinary and transdisciplinary approach in the analysis of problems and issues.

(c) Higher education should enhance its contribution to the development of the whole education system, notably through improved teacher education, curriculum development and educational research.

(d) Ultimately, higher education should aim at the creation of a new society - non-violent and non-exploitative - consisting of highly cultivated, motivated and integrated individuals, inspired by love for humanity and guided by wisdom.

#### Article 7. Strengthening co-operation with the world of work and analysing and anticipating societal needs

(a) In economies characterized by changes and the emergence of new production paradigms based on knowledge and its application, and on the handling of information, the links between higher education, the world of work and other parts of society should be strengthened and renewed.

(b) Links with the world of work can be strengthened, through the participation of its representatives in the governance of institutions, the increased use of domestic and international apprenticeship/work-study opportunities for students and teachers, the exchange of personnel between the world of work and higher education institutions and revised curricula more closely aligned with working practices.

(c) As a lifelong source of professional training, updating and recycling, institutions of higher education should systematically take into account trends in the world of work and in the scientific, technological and economic sectors. In order to respond to the work requirements, higher education systems and the world of work should jointly develop and assess learning processes, bridging programmes and prior learning assessment and recognition programmes, which integrate theory and training on the job. Within the framework of their anticipatory function, higher education institutions could contribute to the creation of new jobs, although that is not their only function.

(d) Developing entrepreneurial skills and initiative should become major concerns of higher education, in order to facilitate employability of graduates who will increasingly be called upon to be not only job seekers but also and above all to become job creators. Higher education institutions should give the opportunity to students to fully develop their own abilities with a sense of social responsibility, educating them to become full participants in democratic society and promoters of changes that will foster equity and justice.

#### Article 8. Diversification for enhanced equity of opportunity

(a) Diversifying higher education models and recruitment methods and criteria is essential both to meet increasing international demand and to provide access to various delivery modes and to extend access to an ever-wider public, in a lifelong perspective, based on flexible entry and exit points to and from the system of higher education.

(b) More diversified systems of higher education are characterized by new types of tertiary institutions: public, private and non-profit institutions, amongst others. Institutions should be able to offer a wide variety of education and training opportunities: traditional degrees, short courses, part-time study, flexible schedules, modularized courses, supported learning at a distance, etc.

#### Article 9. Innovative educational approaches: critical thinking and creativity

(a) In a world undergoing rapid changes, there is a perceived need for a new vision and paradigm of higher education, which should be student-oriented, calling in most countries for in-depth reforms and an open access policy so as to cater for ever more diversified categories of people, and of its contents, methods, practices and means of delivery, based on new types of links and partnerships with the community and with the broadest sectors of society.

(b) Higher education institutions should educate students to become well informed and deeply motivated citizens, who can think critically, analyse problems of society, look for solutions to the problems of society, apply them and accept social responsibilities.

(c) To achieve these goals, it may be necessary to recast curricula, using new and appropriate methods, so as to go beyond cognitive mastery of disciplines. New pedagogical and didactical approaches should be accessible and promoted in order to facilitate the acquisition of skills, competences and abilities for communication, creative and critical analysis, independent thinking and team work in multicultural contexts, where creativity also involves combining traditional or local knowledge and know-how with advanced science and technology. These recast curricula should take into account the gender dimension and the specific cultural, historic and economic context of each country. The teaching of human rights standards and education on the needs of communities in all parts of the world should be reflected in the curricula of all disciplines, particularly those preparing for entrepreneurship. Academic personnel should play a significant role in determining the curriculum.

(d) New methods of education will also imply new types of teaching-learning materials. These have to be coupled with new methods of testing that will promote not only powers of memory but also powers of comprehension, skills for practical work and creativity.

#### Article 10. Higher education personnel and students as major actors

(a) A vigorous policy of staff development is an essential element for higher education institutions. Clear policies should be established concerning higher education teachers, who nowadays need to focus on teaching students how to learn and how to take initiatives rather

than being exclusively founts of knowledge. Adequate provision should be made for research and for updating and improving pedagogical skills, through appropriate staff development programmes, encouraging constant innovation in curriculum, teaching and learning methods, and ensuring appropriate professional and financial status, and for excellence in research and teaching, reflecting the corresponding provisions of the Recommendation concerning the Status of Higher-Education Teaching Personnel approved by the General Conference of UNESCO in November 1997. To this end, more importance should be attached to international experience. Furthermore, in view of the role of higher education for lifelong learning, experience outside the institutions ought to be considered as a relevant qualification for higher educational staff.

(b) Clear policies should be established by all higher education institutions preparing teachers of early childhood education and for primary and secondary schools, providing stimulus for constant innovation in curriculum, best practices in teaching methods and familiarity with diverse learning styles. It is vital to have appropriately trained administrative and technical personnel.

(c) National and institutional decision-makers should place students and their needs at the centre of their concerns, and should consider them as major partners and responsible stakeholders in the renewal of higher education. This should include student involvement in issues that affect that level of education, in evaluation, the renovation of teaching methods and curricula and, in the

institutional framework in force, in policy-formulation and institutional management. As students have the right to organize and represent themselves, students' involvement in these issues should be guaranteed.

(d) Guidance and counselling services should be developed, in co-operation with student organizations, in order to assist students in the transition to higher education at whatever age and to take account of the needs of ever more diversified categories of learners. Apart from those entering higher education from schools or further education colleges, they should also take account of the needs of those leaving and returning in a lifelong process. Such support is important in ensuring a good match between student and course, reducing dropout. Students who do drop out should have suitable opportunities to return to higher education if and when appropriate.

#### *FROM VISION TO ACTION*

##### Article 11. Qualitative evaluation

(a) Quality in higher education is a multidimensional concept, which should embrace all its functions, and activities: teaching and academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality. Independent national bodies should be established and comparative standards of quality, recognized at international level, should be defined. Due attention should be paid to specific institutional, national and regional contexts in order to take into account diversity and to avoid uniformity. Stakeholders should be an integral part of the institutional evaluation process.

(b) Quality also requires that higher education should be characterized by its international dimension: exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects, while taking into account the national cultural values and circumstances.

(c) To attain and sustain national, regional or international quality, certain components are particularly relevant, notably careful selection of staff and continuous staff development, in particular through the promotion of appropriate programmes for academic staff development, including teaching/learning methodology and mobility between countries, between higher education institutions, and between higher education institutions and the world of work, as well as student mobility within and between countries. The new information technologies are an important tool in this process, owing to their impact on the acquisition of knowledge and know-how.

##### Article 12. The potential and the challenge of technology

The rapid breakthroughs in new information and communication technologies will further change the way knowledge is developed, acquired and delivered. It is also important to note that the new technologies offer opportunities to innovate on course content and teaching methods and to widen access to higher learning. However, it should be borne in mind that new information technology does not reduce the need for teachers but changes their role in relation to the learning process and that the continuous dialogue that converts information into knowledge and understanding becomes fundamental. Higher education institutions should lead in drawing on the advantages and potential of new information and communication technologies, ensuring quality and maintaining high standards for education practices and outcomes in a spirit of openness, equity and international cooperation by:

(a) engaging in networks, technology transfer, capacity-building, developing teaching materials and sharing experience of their application in teaching, training and research, making knowledge accessible to all;

(b) creating new learning environments, ranging from distance education facilities to complete virtual higher education institutions and systems, capable of bridging distances and developing high-quality systems of education, thus serving social and economic advancement and democratization as well as other relevant priorities of society, while ensuring that these virtual education facilities, based on regional, continental or global

networks, function in a way that respects cultural and social identities;

(c) noting that, in making full use of information and communication technology (ICT) for educational purposes, particular attention should be paid to removing the grave inequalities which exist among and also within the countries of the world with regard to access to new information and communication technologies and to the production of the corresponding resources;

(d) adapting ICT to national, regional and local needs and securing technical, educational, management and institutional systems to sustain it;

(e) facilitating, through international co-operation, the identification of the objectives and interests of all countries, particularly the developing countries, equitable access and the strengthening of infrastructures in this field and the dissemination of such technology throughout society;

(f) closely following the evolution of the 'knowledge society' in order to ensure high quality and equitable regulations for access to prevail;

(g) taking the new possibilities created by the use of ICTs into account, while realizing that it is, above all, institutions of higher education that are using ICTs in order to modernize their work, and not ICTs transforming institutions of higher education from real to virtual institutions.

#### Article 13. Strengthening higher education management and financing

(a) The management and financing of higher education require the development of appropriate planning and policy-analysis capacities and strategies, based on partnerships established between higher education institutions and state and national planning and co-ordination bodies, so as to secure appropriately streamlined management and the cost-effective use of resources. Higher education institutions should adopt forwardlooking management practices that respond to the needs of their environments. Managers in higher education must be responsive, competent and able to evaluate regularly, by internal and external mechanisms, the effectiveness of procedures and administrative rules.

(b) Higher education institutions must be given autonomy to manage their internal affairs, but with this autonomy must come clear and transparent accountability to the government, parliament, students and the wider society.

(c) The ultimate goal of management should be to enhance the institutional mission by ensuring high-quality teaching, training and research, and services to the community. This objective requires governance that combines social vision, including understanding of global issues, with efficient managerial skills. Leadership in higher education is thus a major social responsibility and can be significantly strengthened through dialogue with all stakeholders, especially teachers and students, in higher education. The participation of teaching faculty in the governing bodies of higher education institutions should be taken into account, within the framework of current institutional arrangements, bearing in mind the need to keep the size of these bodies within reasonable bounds.

(d) The promotion of North-South co-operation to ensure the necessary financing for strengthening higher education in the developing countries is essential.

#### Article 14. Financing of higher education as a public service

The funding of higher education requires both public and private resources. The role of the state remains essential in this regard.

(a) The diversification of funding sources reflects the support that society provides to higher education and must be further strengthened to ensure the development of higher education, increase its efficiency and maintain its quality and relevance. Public support for higher education and research remains essential to ensure a balanced achievement of educational and social missions.

(b) Society as a whole must support education at all levels, including higher education, given its role in promoting sustainable economic, social and cultural development. Mobilization for this purpose depends on public awareness and involvement of the public and private sectors of the economy, parliaments, the media, governmental and non-governmental organizations, students as well as institutions, families and all the social actors involved with higher education.

#### Article 15. Sharing knowledge and know-how across borders and continents

(a) The principle of solidarity and true partnership amongst higher education institutions worldwide is crucial for education and training in all fields that encourage an understanding of global issues,



the role of democratic governance and skilled human resources in their resolution, and the need for living together with different cultures and values. The practice of multilingualism, faculty and student exchange programmes and institutional linkage to promote intellectual and scientific co-operation should be an integral part of all higher education systems.

(b) The principles of international co-operation based on solidarity, recognition and mutual support, true partnership that equitably serves the interests of the partners and the value of sharing knowledge and know-how across borders should govern relationships among higher education institutions in both developed and developing countries and should benefit the least developed countries in particular. Consideration should be given to the need for safeguarding higher education institutional capacities in regions suffering from conflict or natural disasters. Consequently, an international dimension should permeate the curriculum, and the teaching and learning processes.

(c) Regional and international normative instruments for the recognition of studies should be ratified and implemented, including certification of the skills, competences and abilities of graduates, making it easier for students to change courses, in order to facilitate mobility within and between national systems.

Article 16 - From 'brain drain' to 'brain gain'

The 'brain drain' has yet to be stemmed, since it continues to deprive the developing countries and those in transition, of the high-level expertise necessary to accelerate their socio-economic progress. International co-operation schemes should be based on long-term partnerships between institutions in the South and the North, and also promote South-South co-operation. Priority should be given to training programmes in the developing countries, in centres of excellence forming regional and international networks, with short periods of specialized and intensive study abroad.

Consideration should be given to creating an environment conducive to attracting and retaining skilled human capital, either through national policies or international arrangements to facilitate the return - permanent or temporary - of highly trained scholars and researchers to their countries of origin. At the same time, efforts must be directed towards a process of 'brain gain' through collaboration programmes that, by virtue of their international dimension, enhance the building and strengthening of institutions and facilitate full use of endogenous capacities. Experience gained through the UNITWIN/UNESCO Chairs Programme and the principles enshrined in the regional conventions on the recognition of degrees and diplomas in higher education are of particular importance in this respect.

Article 17. Partnership and alliances

Partnership and alliances amongst stakeholders - national and institutional policy-makers, teaching and related staff, researchers and students, and administrative and technical personnel in institutions of higher education, the world of work, community groups - is a powerful force in managing change. Also, non-governmental organizations are key actors in this process. Henceforth, partnership, based on common interest, mutual respect and credibility, should be a prime matrix for renewal in higher education.

*We, the participants in the World Conference on Higher Education, adopt this Declaration and reaffirm the right of all people to education and the right of access to higher education based on individual merit and capacity;*

*We pledge to act together within the frame of our individual and collective responsibilities, by taking all necessary measures in order to realize the principles concerning higher education contained in the Universal Declaration of Human Rights and in the Convention against Discrimination in Education;*

*We solemnly reaffirm our commitment to peace. To that end, we are determined to accord high priority to education for peace and to participate in the celebration of the International Year for the Culture of Peace in the year 2000;*

*We adopt, therefore, this World Declaration on Higher Education for the Twenty-First Century: Vision and Action. To achieve the goals set forth in this Declaration and, in particular, for*

*immediate action, we agree on the following Framework for Priority Action for Change and Development of Higher Education.*

Framework for Priority Action for Change and Development of Higher Education

## I. PRIORITY ACTIONS AT NATIONAL LEVEL

1. States, including their governments, parliaments and other decision-makers, should:

(a) establish, where appropriate, the legislative, political and financial framework for the reform and further development of higher education, in keeping with the terms of the Universal Declaration of Human Rights, which establishes that higher education shall be ‘accessible to all on the basis of merit’. No discrimination can be accepted, no one can be excluded from higher education or its study fields, degree levels and types of institutions on grounds of race, gender, language, religion, or age or because of any economic or social distinctions or physical disabilities;

(b) reinforce the links between higher education and research;

(c) consider and use higher education as a catalyst for the entire education system;

(d) develop higher education institutions to include lifelong learning approaches, giving learners an optimal range of choice and a flexibility of entry and exit points within the system, and redefine their role accordingly, which implies the development of open and continuous access to higher learning and the need for bridging programmes and prior learning assessment and recognition;

(e) make efforts, when necessary, to establish close links between higher education and research institutions, taking into account the fact that education and research are two closely related elements in the establishment of knowledge;

(f) develop innovative schemes of collaboration between institutions of higher education and different sectors of society to ensure that higher education and research programmes effectively contribute to local, regional and national development;

(g) fulfil their commitments to higher education and be accountable for the pledges adopted with their concurrence, at several forums, particularly over the past decade, with regard to human, material and financial resources, human development and education in general, and to higher education in particular;

(h) have a policy framework to ensure new partnerships and the involvement of all relevant stakeholders in all aspects of higher education: the evaluation process, including curriculum and pedagogical renewal, and guidance and counselling services; and, in the framework of existing institutional arrangements, policy-making and institutional governance;

(i) define and implement policies to eliminate all gender stereotyping in higher education and to consolidate women’s participation at all levels and in all disciplines in which they are under-represented at present and, in particular, to enhance their active involvement in decision-making;

(j) establish clear policies concerning higher education teachers, as set out in the Recommendation concerning the Status of Higher-Education Teaching Personnel approved by the General Conference of UNESCO in November 1997;

(k) recognize students as the centre of attention of higher education, and one of its stakeholders. They should be involved, by means of adequate institutional structures, in the renewal of their level of education (including curriculum and pedagogical reform), and policy decision, in the framework of existing institutional arrangements;

(l) recognize that students have the right to organize themselves autonomously;

(m) promote and facilitate national and international mobility of teaching staff and students as an essential part of the quality and relevance of higher education;

(n) provide and ensure those conditions necessary for the exercise of academic freedom and institutional autonomy so as to allow institutions of higher education, as well as those individuals engaged in higher education and research, to fulfil their obligations to society.

2. States in which enrolment in higher education is low by internationally accepted comparative standards should strive to ensure a level of higher education adequate for relevant needs in the public and private sectors of society and to establish plans for diversifying and expanding access, particularly benefiting all minorities and disadvantaged groups.

3. The interface with general, technical and professional secondary education should be reviewed in depth, in the context of lifelong learning. Access to higher education in whatever form must remain open to those successfully completing secondary education or its equivalent or meeting entry qualifications at any age, while creating gateways to higher education, especially for older students without any formal secondary education certificates, by attaching more importance to their professional experience.

However, preparation for higher education should not be the sole or primary purpose of secondary education, which should also prepare for the world of work, with complementary training whenever required, in order to provide knowledge, capacities and skills for a wide range of jobs. The concept of bridging programmes should be promoted to allow those entering the job market to return to studies at a later date.

4. Concrete steps should be taken to reduce the widening gap between industrially developed and developing countries, in particular the least developed countries, with regard to higher education and research. Concrete steps are also needed to encourage increased co-operation between countries at all levels of economic development with regard to higher education and research. Consideration should be given to making budgetary provisions for that purpose, and developing mutually beneficial agreements involving industry, national as well as international, in order to sustain co-operative activities and projects through appropriate incentives and funding in education, research and the development of high-level experts in these countries.

## II. PRIORITY ACTIONS AT THE LEVEL OF SYSTEMS AND INSTITUTIONS

5. Each higher education institution should define its mission according to the present and future needs of society and base it on an awareness of the fact that higher education is essential for any country or region to reach the necessary level of sustainable and environmentally sound economic and social development, cultural creativity nourished by better knowledge and understanding of the cultural heritage, higher living standards, and internal and international harmony and peace, based on human rights, democracy, tolerance and mutual respect. These missions should incorporate the concept of academic freedom set out in the Recommendation concerning the Status of Higher-Education Teaching Personnel approved by the General Conference of UNESCO in November 1997.

6. In establishing priorities in their programmes and structures, higher education institutions should:

- (a) take into account the need to abide by the rules of ethics and scientific and intellectual rigour, and the multidisciplinary and transdisciplinary approach;

- (b) be primarily concerned to establish systems of access for the benefit of all persons who have the necessary abilities and motivations;

- (c) use their autonomy and high academic standards to contribute to the sustainable development of society and to the resolution of the issues facing the society of the future. They should develop their capacity to give forewarning through the analysis of emerging social, cultural, economic and political trends, approached in a multidisciplinary and transdisciplinary manner, giving particular attention to:

- high quality, a clear sense of the social pertinence of studies and their anticipatory function, based on scientific grounds;

- knowledge of fundamental social questions, in particular related to the elimination of poverty, to sustainable development, to intercultural dialogue and to the shaping of a culture of peace;

- the need for close connection with effective research organizations or institutions that perform well in the sphere of research;

- the development of the whole education system in the perspective of the recommendations and the new goals for education as set out in the 1996 report to UNESCO of the International Commission on Education for the Twenty-first Century;

- fundamentals of human ethics, applied to each profession and to all areas of human endeavour;

- (d) ensure, especially in universities and as far as possible, that faculty members participate in teaching, research, tutoring students and steering institutional affairs;

(e) take all necessary measures to reinforce their service to the community, especially their activities aimed at eliminating poverty, intolerance, violence, illiteracy, hunger and disease, through an interdisciplinary and transdisciplinary approach in the analysis of challenges, problems and different subjects;

(f) set their relations with the world of work on a new basis involving effective partnerships with all social actors concerned, starting from a reciprocal harmonization of action and the search for solutions to pressing problems of humanity, all this within a framework of responsible autonomy and academic freedoms;

(g) ensure high quality of international standing, consider accountability and both internal and external evaluation, with due respect for autonomy and academic freedom, as being normal and inherent in their functioning, and institutionalize transparent systems, structures or mechanisms specific thereto;

(h) as lifelong education requires academic staff to update and improve their teaching skills and learning methods, even more than in the present systems mainly based on short periods of higher teaching, establish appropriate academic staff development structures and/or mechanisms and programmes;

(i) promote and develop research, which is a necessary feature of all higher education systems, in all disciplines, including the human and social sciences and arts, given their relevance for development. Also, research on higher education itself should be strengthened through mechanisms such as the UNESCO/UNU Forum on Higher Education and the UNESCO Chairs in Higher Education. Objective, timely studies are needed to ensure continued progress towards such key national objectives as access, equity, quality, relevance and diversification;

(j) remove gender inequalities and biases in curricula and research, and take all appropriate measures to ensure balanced representation of both men and women among students and teachers, at all levels of management;

(k) provide, where appropriate, guidance and counselling, remedial courses, training in how to study and other forms of student support, including measures to improve student living conditions.

7. While the need for closer links between higher education and the world of work is important worldwide, it is particularly vital for the developing countries and especially the least developed countries, given their low level of economic development. Governments of these countries should take appropriate measures to reach this objective through appropriate measures such as strengthening institutions for higher/professional/vocational education. At the same time, international action is needed in order to help establish joint undertakings between higher education and industry in these countries. It will be necessary to give consideration to ways in which higher education graduates could be supported, through various schemes, following the positive experience of the micro-credit system and other incentives, in order to start small- and medium-size enterprises. At the institutional level, developing entrepreneurial skills and initiative should become a major concern of higher education, in order to facilitate employability of graduates who will increasingly be required not only to be job-seekers but to become job-creators.

8. The use of new technologies should be generalized to the greatest extent possible to help higher education institutions, to reinforce academic development, to widen access, to attain universal scope and to extend knowledge, as well as to facilitate education throughout life. Governments, educational institutions and the private sector should ensure that informatics and communication network infrastructures, computer facilities and human resources training are adequately provided.

9. Institutions of higher education should be open to adult learners:

(a) by developing coherent mechanisms to recognize the outcomes of learning undertaken in different contexts, and to ensure that credit is transferable within and between institutions, sectors and states;

(b) by establishing joint higher education/community research and training partnerships, and by bringing the services of higher education institutions to outside groups;

(c) by carrying out interdisciplinary research in all aspects of adult education and learning with the participation of adult learners themselves;

(d) by creating opportunities for adult learning in flexible, open and creative ways.

### III. ACTIONS TO BE TAKEN AT INTERNATIONAL LEVEL AND, IN PARTICULAR, TO BE INITIATED BY UNESCO

10. Co-operation should be conceived of as an integral part of the institutional missions of higher education institutions and systems. Intergovernmental organizations, donor agencies and nongovernmental organizations should extend their action in order to develop inter-university co-operation projects in particular through twinning institutions, based on solidarity and partnership, as a means of bridging the gap between rich and poor countries in the vital areas of knowledge production and application. Each institution of higher education should envisage the creation of an appropriate structure and/or mechanism for promoting and managing international co-operation.

11. UNESCO, and other intergovernmental organizations and non-governmental organizations active in higher education, the states through their bilateral and multilateral co-operation programmes, the academic community and all concerned partners in society should further promote international academic mobility as a means to advance knowledge and knowledge-sharing in order to bring about and promote solidarity as a main element of the global knowledge society of tomorrow, including through strong support for the joint work plan (1999-2005) of the six intergovernmental committees in charge of the application of the regional conventions on the recognition of studies, degrees and diplomas in higher education and through large-scale co-operative action involving, *inter alia*, the establishment of an educational credit transfer scheme, with particular emphasis on South-South co-operation, the needs of the least developed countries and of the small states with few higher education institutions or none at all.

12. Institutions of higher education in industrialized countries should strive to make arrangements for international co-operation with sister institutions in developing countries and in particular with those of poor countries. In their co-operation, the institutions should make efforts to ensure fair and just recognition of studies abroad. UNESCO should take initiatives to develop higher education throughout the world, setting itself clear-cut goals that could lead to tangible results. One method might be to implement projects in different regions renewing efforts towards creating and/or strengthening centres of excellence in developing countries, in particular through the UNITWIN/UNESCO Chairs Programme, relying on networks of national, regional and international higher education institutions.

13. UNESCO, together with all concerned parts of society, should also undertake action in order to alleviate the negative effects of 'brain drain' and to shift to a dynamic process of 'brain gain'. An overall analysis is required in all regions of the world of the causes and effects of brain drain. A vigorous campaign should be launched through the concerted effort of the international community and on the basis of academic solidarity and should encourage the return to their home country of expatriate academics, as well as the involvement of university volunteers - newly retired academics or young

academics at the beginning of their career - who wish to teach and undertake research at higher education institutions in developing countries. At the same time it is essential to support the developing countries in their efforts to build and strengthen their own educational capacities.

14. Within this framework, UNESCO should:

(a) promote better co-ordination among intergovernmental, supranational and nongovernmental organizations, agencies and foundations that sponsor existing programmes and projects for international co-operation in higher education. Furthermore, co-ordination efforts should take place in the context of national priorities. This could be conducive to the pooling and sharing of resources, avoid overlapping and promote better identification of projects, greater impact of action and increased assurance of their validity through collective agreement and review. Programmes aiming at the rapid transfer of knowledge, supporting institutional development and establishing centres of excellence in all areas of knowledge, in particular for peace education, conflict resolution, human rights and democracy, should be supported by institutions and by public and private donors;

- (b) jointly with the United Nations University and with National Commissions and various intergovernmental and non-governmental organizations, become a forum of reflection on higher education issues aiming at: (i) preparing update reports on the state of knowledge on higher education issues in all parts of the world; (ii) promoting innovative projects of training and research, intended to enhance the specific role of higher education in lifelong education; (iii) reinforcing international co-operation and emphasizing the role of higher education for citizenship education, sustainable development and peace; and (iv) facilitating exchange of information and establishing, when appropriate, a database on successful experiences and innovations that can be consulted by institutions confronted with problems in their reforms of higher education;
- (c) take specific action to support institutions of higher education in the least developed parts of the world and in regions suffering the effects of conflict or natural disasters;
- (d) make renewed efforts towards creating or/and strengthening centres of excellence in developing countries;
- (e) take the initiative to draw up an international instrument on academic freedom, autonomy and social responsibility in connection with the Recommendation concerning the Status of Higher-Education Teaching Personnel;
- (f) ensure follow-up to the World Declaration on Higher Education and the Framework for Priority Action, jointly with other intergovernmental and non-governmental organizations and with all higher education stakeholders, including the United Nations University, the NGO Collective Consultation on Higher Education and the UNESCO Student Forum. It should have a crucial role in promoting international co-operation in the field of higher education in implementing this follow-up. Consideration should be given to according priority to this in the development of UNESCO's next draft Programme and Budget.