This paper suggests that higher education will take on increasing importance in the development of economies and societies in the 21st century for three reasons: (1) cognitive resources are supplanting material resources as a development factor; (2) economies, swept along by innovations and technological advances, are becoming increasingly exigent as regards the qualifications of their labor force; and (3) in this cognitive society the function of educating and training is having to become strategic. The paper focuses on three areas: (1) objectives and tasks presently assigned to higher education and the problems of their compatibility; (2) the organization of higher education, distribution between the public and private sectors, the independence of establishments, and national and international consistency; and (3) the rapid increase in financing needs and the impact on the quality of higher education. Of the three tasks generally assigned to higher education, two are traditional, involving, on the one hand, research and cultivation and, on the other, the training of teachers, and are both more crucial than ever for development. The third is more recent but is tending to take on increasing importance, inasmuch as it consists in meeting the new qualification requirements of today's economies through the high level vocational training of scientists and technicians in the latest technologies and of managers and administrators in the control and handling of increasingly complex systems. (DK)
Commission internationale sur l'éducation pour le vingt et unième siècle

International Commission on Education for the Twenty-first Century

THE ROLE, ORGANIZATION AND FINANCING OF HIGHER EDUCATION

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THE ROLE, ORGANIZATION AND FINANCING OF HIGHER EDUCATION

by

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Higher education seems likely to take on increasing importance in the development of economies and societies in the twenty-first century. There are several reasons:

Firstly, cognitive resources are supplanting material resources as a development factor. The expanding role of scientific and technological knowledge is visible not only in the spectacular impetus it is giving to industry and trade but also in the solutions it provides to human development problems (problems associated with nutrition, life expectancy, health, living conditions, communication, access to culture, etc.). Nowhere are the production and dissemination of such resources better accomplished than in the universities. All reports therefore advocate both the stepping up of research training and the use of research to improve training, in order to sustain not only the research institutions themselves but also the economic sectors; they also advocate the encouragement of a university-industry partnership for the production of science.

Secondly, economies, swept along by innovations and technological advances, are becoming increasingly exigent as regards the qualifications of their labour force. Employment structures in every sector are taking on a new shape as societies move forward and machines replace people: there are fewer shop-floor workers, while the functions of supervision, executive management and organization are gaining in importance and making the intellectual training of personnel more and more necessary. Universities and, more widely, higher education systems are therefore required to turn out larger and larger cohorts to shoulder these tasks.
Lastly, in this cognitive society the function of educating and training is having to become strategic; the period of schooling is tending to be prolonged everywhere, while continuing training is seen to be increasingly essential. This calls for more and more teachers, and even though it can be assumed that not all need be trained by universities as strictly professional teachers, since some will doubtless function alternately as teachers and learners, it is clear that the leading resource centre for the initial and recurrent training of educators will continue to be higher education whose institutions will be the venue for knowledge updating.

The strong pressure of social demand being exerted throughout the world for expansion of the higher education sector therefore seems justified, as does the actual tendency towards a steep rise in the number of students in all countries (student numbers worldwide have more than doubled in 20 years - from 28 million in 1970 to more than 60 million today). Reports by all the international bodies, however, speak of a crisis in higher education - not only a financial crisis but also a crisis of identity.

The problems associated with higher education policies for twenty-first century societies, which in some aspects extend far beyond the national setting, must therefore be squarely faced up to by the Commission, since the implementation of other education policy objectives, and development policies generally depends heavily on the solutions applied to those problems.

Perhaps a clearer understanding of the multiplicity of and possibly of conflict between the **objectives and tasks** assigned to higher education would lead to a more precise statement of the **organization** and **financing** problems.

1. **Objectives and tasks presently assigned to higher education: problems of compatibility**

Three tasks are generally assigned to higher education: two are traditional, involving, on the one hand, research and cultivation and, on the other, the training of teachers, and are both more crucial than ever for development; the third is more recent but is tending to take on increasing importance, inasmuch as it consists in meeting the new qualification requirements of today's economies through the high-level vocational training of scientists and technicians in the latest technologies and of managers and administrators in the control and handling of increasingly complex systems.

These three tasks are not contradictory in their long-term objectives, for they all contribute to sustainable development. They also coincide, in their implementation, with the concern for equity that aspires to give all citizens the benefit of the intellectual and material resources of higher education, since they lead growing sections of the population towards higher education. Nevertheless, in the dynamics of university systems, these tasks can appear difficult to reconcile and even contradictory. One or two examples may be given to illustrate this difficulty:

- In university curricula, when it comes to choosing between basic, relatively abstract subjects and applied subjects, and subsequently when students are being counselled at the various stages of a degree course, there may be rivalry between the research function and the professional qualification function. Hence a scientific university, for instance, must decide whether to steer exceptional students towards research or towards industry. The commonsense reply would be that the university must present both options under the
same conditions without showing any preference, leaving students the freedom to make their choice in accordance with their own tastes and aptitudes. Yet in reality everyone is aware that cumulative processes that are difficult to prevent will lead students towards what, in the short-term, seems to them the surest and the most status-enhancing option. Sometimes it will be research, but most often it will be the labour market ‘captured’ by the university or school from which they graduate. The problem then is to decide whether the establishment should pursue several goals at the same time or specialize. What would become of a university, however, that devoted itself uniquely to teacher training or the training of professionals and lacked a research structure? Such a situation is familiar to certain developing countries that have set up universities of this kind. Can it even still be called a university - in view of the fact that the distinguishing feature of the university is precisely the synergy of research and teaching?

A second example of contradiction is provided by the zoning of universities. With regard to both the initial and in-service training of teachers and professionals and the democratization of higher education, it seems logical to distribute universities quite widely across a country so as to facilitate access and cut down travel expenses. Conversely, as far as research is concerned, all agree that for international quality, which is the only reference possible today, if waste is to be avoided there are critical minimum thresholds in regard to infrastructure costs and number of researchers. This problem is flagrant in Africa, but it will also exist in twenty-first-century Europe.

The answer suggested by certain organizations, including the World Bank, is to break away partially from the traditional university model in the implementation of the higher education development programme at the world level and create marked differences within the system by various means, following examples that have already produced good results.

The development of non-university institutions (polytechnics; short technological studies institutes; community colleges; etc.). Even though they are generally less costly, these institutions entail serious risks: the segregation stemming from the selective entry to universities may channel off the most disadvantaged towards the non-university institutions and lower the quality of the whole system.

The development of higher education distance teaching making it possible to reach the more disadvantaged (in India women account for 41% of enrolments in the open university, as compared with only 32% of those in traditional universities).

The encouragement of private higher education institutions that can respond in a relatively flexible manner to labour-market changes. A risk to be noted, however, is that such institutions may fall into two distinct classes: some are non-profit making and are generally of good quality and fairly selective; the others, which seek to make a profit, admit all who can pay and may be of bad quality; Eventually, perverse inverted redistribution effects may come into play in a mixed public and private system if the most advantaged students, after having successfully finished their studies in good institutions (often private), then have access to the best public institutions (as in Thailand and Brazil).

This question of diversification of the supply of higher education comes back directly to the question of the organization of the institutions responsible for providing it.
II. The organization of higher education. Distribution between the public and private sectors. The independence of establishments. National and international consistency.

Where higher education is concerned, there is often a clash between two sets of ideas. There is the public service approach on the one hand, which has in mind not just educational purposes but also, perhaps more importantly, cultural purposes, including basic research, which is not profitable in economic terms but is essential to human development. On the other hand is the market approach applied to the supply of training, based on the theory of human capital, with the exchange of knowledge being supposed to lead to the material and spiritual enrichment of all. In practice, the conflict between the two can be overcome in terms of organization if one manages to make a distinction between what, in establishments of higher education, relates to intangible public investment over the very long term and what relates to a supply of training that is seeking to respond to a financially sound demand. It is thus possible to imagine that advanced schools of professional training might be at least partially organized and financed in partnership with those playing an active part in the economy, whereas research at university centres of excellence would be a public responsibility.

The problem nevertheless becomes more complicated when the debate between the public and private sectors turns into a debate about centralization versus decentralization. The impingement of private interests on university organization is necessarily a factor making for the decentralization of decisions relating to curricula, management and so on, whereas public responsibility frequently manifests itself through centralized control. It has nevertheless been found that the more the university system extends and diversifies the more centralization can lead to bureaucracy and lack of accountability, to say nothing of waste, and everyone agrees that in order to be flexible and innovative the establishments in question must enjoy a measure of autonomy.

From another point of view, an uncontrolled burgeoning of establishments of higher education in a particular area, engaged in short-term market competition to obtain enrolments or funds, does not offer any solution in line with the tasks set out above. What must be done, therefore, is to devise a system of guidance and co-ordination between responsible and largely autonomous establishments that can guarantee consistency in the long term, nationally and internationally. There are grounds for thinking it a good principle of organization to arrange for their relations with the government to be regulated by contract over a period of several years, within the framework of a long-term programme decided on jointly. Even then, the objectives must be clear, the incentives for carrying out the contracts and the methods of evaluating their implementation must be relevant (which raises the problem of indicators) and the government must provide guarantees for its undertakings. International reports speak of political and organizational shortcomings prejudicial to the creation of these conditions. In addition, long-term financial commitments are looking less and less credible in the light of the financial crisis most higher education systems are at present experiencing.

III. The rapid increase in financing needs and the impact on the quality of higher education

Although the figures still vary to a large degree between different categories of countries, the percentage of young people crossing the threshold of higher education has been increasing worldwide at a rapid rate (between 1965 and 1990 the figure rose from
1% to 9% in northern Africa, from 7% to 21% in Latin America and from 8% to 17% in eastern Asia; the figure currently stands at more than 50% in the OECD countries, more than 21% in the middle-income countries and 6% in the developing countries). As a consequence, even the developed countries, hampered by the economic crisis and budgetary restrictions, are having difficulty providing the necessary level of public funding. The problem is, of course, even more critical in the developing countries, where it is impossible to manage the expansion because of the leeway to be made up in the higher education sector.

This pressure has resulted in a marked deterioration in the quality of higher education, the most obvious signs of which are a decline in the status and salaries of teachers (salaries in Nigeria are now, in real terms, at 10% of their 1978 level), the dilapidated state of installations and teaching materials (premises, laboratories, libraries: in sub-Saharan Africa the number of books per student decreased from 49 in 1980 to 7 in 1990) and the decline or actual disappearance in many countries of scientific production (only the newly industrializing countries in southeast Asia show any signs of progress in this field).

The growing number of unemployed graduates, which is, it must be acknowledged, also an outgrowth of the economic crisis, is a more indirect indicator of this lack of efficacy.

In these circumstances, any programme to revitalize and improve the quality of higher education must of necessity include organizational changes directed at reapportioning the financial burden. Experts are unanimous in condemning the inverted redistribution that has sprung from public financing and free higher education. Even today, throughout the world and particularly in the developing countries, the rich benefit more from higher education than the poor, a phenomenon due in part to the lower level of secondary-school enrolment in the latter group and other social constraints. It might therefore be appropriate to attempt to halt this cumulative process in which the rich get richer by asking students to pay university tuition fees and, if necessary, providing scholarships for the poorer students.

Consideration of the funding issue brings us back to the idea of partnerships with those players in the economy for whom an increase in the number of qualified and competent graduates is likely to be advantageous.

Thus, swept by major forces as the twentieth century draws to a close, systems of higher education are contributing in large part to the acute political and social crises worldwide and, at the same time, offer ample opportunities for experimenting with various forms of coordination and partnership.
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