The Higher Education Crisis in Developing Countries

by

Jamil Salmi

Education and Employment Division
Population and Human Resources Department
The World Bank

May 1991
This paper was originally presented at the May 1991 course on Sociology of Science at the Inter-University Centre in Dubrovnik. I would like to thank A. Verspoor, V. Selvaratnam, T. Eisemon, E. Thulstrup and B. Frederiksen for their helpful comments on an earlier draft.

* The International Bank for Reconstruction and Development/
The World Bank, 1991
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Summary

This paper looks at the current higher education crisis in developing countries and discusses how problems are analyzed and decisions made in the context of higher education reform. It focuses in particular on discrepancies between objectives and achievements in an attempt to highlight the importance of risk analysis in strategic planning for higher education development.

In most developing countries, higher education has experienced radical transformations since independence. After three decades of rapid expansion in a relatively worry-free context, it is becoming increasingly threatened and tested, in terms of missions, resources and outcomes, by an environment full of constraints and challenges. But traditional approaches to higher education planning and decision-making have failed to build into their development and reform strategies appropriate mechanisms to evaluate risks and deal with uncertainties.

Countries are following three main strategies to minimize the adverse effects of the crisis: the passive risk approach, the positive risk approach, and the diffuse risk approach. In the first instance, there is a conscious decision not to tackle any sensitive issues because of the potentially negative political implications. In the second case there is a deliberate effort to introduce meaningful reforms. In the third case, a more timid approach is followed whereby the education authorities introduce reforms in limited segments of the higher education sector.

Experts have recently advocated a contingency approach to planning for education projects sponsored by international donor agencies, taking into consideration the management requirements for a smooth implementation of innovative education projects in an uncertain environment. In the case of higher education reforms, focusing on managerial variables is important but not sufficient. An impact assessment approach is needed to reflect the challenging nature of higher education reforms which, by essence, confront established practices and vested interests.
The Higher Education Crisis in Developing Countries: Issues, Problems, Constraints and Reforms

Introduction

"... the crisis of higher education is not merely one of public confidence vis-a-vis the performance of higher education; it is also, and perhaps more fundamentally, an internal crisis of purpose, that is, one which touches on the very nature of individual institutions, their roles and functions and their place in the total higher education system."

Higher education is in crisis. After being hailed as agents of modernization and economic growth, universities are now coming under heavy criticism. In many developing countries, education planners and decision-makers are confronted with an alarming situation of uncontrolled growth of enrollments and expenditures against a background of diminishing financial resources, a decline in the quality of teaching and research, and a rising problem of mismatch and graduate unemployment. What has gone wrong? How is it possible that the carefully planned development of higher education during the last three decades has led to a crisis situation characterized by a pattern of unmanageable expansion? What kind of reforms are feasible and effective to overcome the present crisis?

This paper focuses on issues of policy analysis, problem construction, and decision-making with respect to the higher education sub-sector. It looks, in particular, at discrepancies between intentions and results, objectives and

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\[2\] The term higher education is used in this paper as a generic expression to designate various types of formal post-secondary education institutions that train middle- and high-level professional personnel in degree, diploma and certificate granting programs. Instead of relying on a narrow notion restricted to traditional universities and colleges, it seems more appropriate to have a wider view reflecting the growing complexity and diversity of modern higher education systems.
achievements, in an attempt to highlight the importance of risk analysis in strategic planning for higher education development.

After outlining the main characteristics of the current crisis, the paper identifies pitfalls and flaws in past approaches to higher education planning. It then analyses the main constraints bearing upon the future of higher education systems. Finally it examines to what extent reform strategies and responses by the various actors involved are likely to succeed.

From Enthusiasm to Disenchantment

"One of the abiding impressions of this consultation is the sense of loss, amounting almost to grief, of some of the most senior professors in the older African universities as they compare the present state of their universities with the vigor, optimism and pride which the same institutions displayed twenty or thirty years ago. It is not just the universal regret of age at the passing of youth, nor the sad awareness that a generation of unique academic pioneers has almost run its course. It is also the grim knowledge that the nature of the university experience today is profoundly different for many teachers and students, so different and so inferior that some wonder whether it can rightly be called a university experience at all."

In the early 1960s, the African, Asian and Latin American ministers of education met under the auspices of Unesco in Addis-Ababa, Bangkok and Santiago respectively to adopt very comprehensive educational development programs calling, among other priorities, for a rapid increase in higher education enrollments. The ambitious quantitative objectives adopted at that time reflected a strong commitment to rapidly train the middle and higher level professional, technical and managerial manpower required for economic development.

The results surpassed the initial expectations. Between 1960 and the late 1980s, higher education enrollments were multiplied by 9 in Africa, 4 in

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Asia and 9 in Latin America. This rapid expansion was fueled by a strong social demand for higher education, seen as the main avenue for social mobility and promotion, and facilitated by generous government policies of open admission, free education and, in many countries, grants for all students and guaranteed employment for all graduates.

However, the very success of these expansionary policies has put higher education in jeopardy as enrollments have grown at a faster pace than resources. There is a general feeling that the quality of teaching and learning has declined as a result of overcrowding, inadequate staffing, deteriorating physical facilities, poor library resources and insufficient scientific equipment. In many cases, internal efficiency is very low and a significant proportion of the budget is wasted. In Madagascar and Senegal, for example, the pass rate at the end of the first year of university is only 13% and 20% respectively. Moreover, in many countries, the higher education system has been so effective, at least in quantitative terms, in training growing numbers of medical doctors, teachers, engineers and scientists that the phenomenon of graduate unemployment and underemployment has become a serious problem even in scientific fields. This has been observed for instance in Bangladesh, India, Pakistan, Sri Lanka, the Philippines, Peru and Egypt.

Paradoxically, the rapid expansion of higher education has also had adverse effects from a social equity viewpoint. Despite increased democratization in terms of student enrollment, the present pattern of allocation of resources between levels of education is highly inequitable. In many developing countries, where the majority of students come from high and middle income families, higher education receives a disproportionate share of the government education budget. In Brazil, for instance, 23% of the budget goes to 2% of the student population; in Rwanda 15% goes to 0.2% of the student population. In developing countries as a whole, the average unit cost in higher education represents 370% of per capita income versus only 49% in industrialized countries.

The present crisis has shaken the confidence of university administrators, academics, students and employers alike. Much of the blame is put on the economic recession of the 1980s to explain the lack of resources and the diminishing job prospects. But is the higher education crisis just an outcome of adverse economic circumstances or the logical result of unsustainable structural trends?

Shared Responsibility: the Role of National Leadership and International Expertise?

"If the only tool you have is a hammer, then all problems look like nails".

It is easy and somewhat unfair to blame educational planners and decision-makers for their past mistakes on the basis of what we know today. After all, how could anyons have foreseen the 1973 oil crisis and the resulting economic depression, or the information technology revolution of the 1980s? But it may still be legitimate to examine what assumptions were made when policies for higher education development were initially defined and for what reasons past approaches have failed to properly identify potential risks.

In the aftermath of their newly recovered independence, leaders in developing countries followed international conventional wisdom in the belief that the most important priority was to train as many qualified people as possible in professional fields relevant to the needs of the economy. Whether as part of a genuine effort to democratize higher education in the process of overcoming manpower shortages, or simply for demagogy and complacency reasons, many governments created unlimited expectations among the population by allowing automatic access to higher education for all secondary school graduates, by inscribing in their country's constitution a commitment to provide free education at all levels, and by offering a public sector employment guarantee to all university graduates. This approach reflected a vision of the State as a benevolent institution. It also revealed an optimistic confidence in the future, grounded on the implicit belief that the economic environment would remain eternally favorable and that resources would keep flowing regardless of the size
of the higher education system. It made no allowance for unforeseen constraints and potential deviations, thus ignoring the high risk nature of higher education investments considering their size, long gestation period and political sensitivity.

The type of planning techniques used to orient the development of higher education in the 1960s and 1970s was consistent with this approach. Many developing countries followed the European manpower planning model to estimate, in much detail, future occupations, skill requirements by profession and training needs by field. The results of this exercise were carefully observed to plan the expansion of university programs and the establishment of new specialized institutes. But these techniques were flawed from both the methodological and theoretical standpoints.

Apart from the difficulties of finding the necessary data, manpower forecasts have indeed many limitations. Employment projection models rely on extrapolations of production and productivity trends; labor demand is derived as a function of sectoral output levels through fixed labor coefficients. This approach assumes that technology alone determines the relative mix of occupations in each industry and that, as a result, there is a rigid technical relationship between occupations and training programs, ignoring the possibility of horizontal and vertical substitution between different categories of manpower.

In reality, however, it has been observed that, 'except in very specialized fields, several qualifications may lead to the same occupation and also that a given form of training can prepare for a number of different occupations'. Moreover, with the rapid growth of the supply of university graduates, there is a process of down-scaling or vertical substitution whereby occupational positions are being filled by people who are over-qualified in


relation to the skill requirements of the job. In Egypt, for example, an increasing number of engineers are occupying technician-level positions, and technicians are pushed downwards to work as skilled workers. Finally, since manpower forecasts extrapolate on past trends, by definition they fail to take into account potential technical change, its likely impact on the industrial and occupational mix of employment and the corresponding shifts in skill requirements and training needs.

It is important to note the convergence of approach between national leaderships and the international donor community, which reinforced the trends described above. While many nations were proud of their independence with respect to primary and secondary education, the need for higher education systems to maintain multiple links with the outside world was widely accepted, except in extreme cases like China during the Cultural Revolution. As a result, the technical assistance given by foreign experts and the financial support provided by donor agencies reinforced the developing countries' emphasis on unrestricted quantitative expansion. For instance, the lending pattern of the World Bank, which devoted 30% of its investment in education to the higher education sub-sector, was heavily biased, throughout the 1960s and 1970s, towards support for manpower development. Higher education projects were usually designed to establish or strengthen specialized training institutes, notably in agriculture and engineering. It is only in the early 1980s that more systematic attention began to be given to sector-wide issues of management, financing, quality improvement, and internal and external efficiency.

European and North American bilateral donor agencies have been keen to provide support for the development of higher education institutions in developing countries through university linkage programs. While such programs have been very useful in helping teachers and researchers maintain professional

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and intellectual ties with sister institutions in industrialized countries, it
has often happened that the programs were designed to fit primarily the research
interests of the Northern institutions involved, that they promoted the
establishment of academic 'oases' without multiplier effects on the rest of the
university, and that they lacked proper mechanisms to ensure sustainability after
closure of the project. For example, the USAID-supported linkage agriculture
research project between the Bogor University of Agriculture in Indonesia and a
consortium of North-American universities was very successful until the mid-
1970s. But within a few years after the project ended, the positive results
faded owing to the lack of financial resources and political commitment to
sustain previous efforts and the failure to define a long term research policy. In
Egypt, the sub-projects financed under the university linkage program
supported by the Canadian Agency for International Development (CIDA) in the
second half of the 1980s were essentially initiated by Canadian universities
eager to expand their income-generating overseas activities. The program evolved
on an ad-hoc basis and failed to promote innovative approaches to curriculum
design and institutional development.

As the growth of enrollments in primary and secondary education
accelerated in the 1970s, education planners in developing countries failed to
assess the implications in terms of higher education expansion and expenditures.
Because unit costs are typically much higher at the tertiary level than for
primary and secondary schooling, the swell of the university system has generally
meant a rising share of the higher education budget. Even if budgetary resources
had continued to be forthcoming, the pattern of unlimited expansion of higher
education enrollments at no direct cost to the students could not have been
sustained forever.

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Hyderabad University Press, 1982.

10. From interviews with Egyptian and Canadian officials during missions in
Cairo between 1987 and 1990.
A similar line of reasoning applies to the emergence of graduate unemployment. While it is undeniable that the economic crisis has had an adverse impact on the level of job creation, and that the lack of relevance of many university programs also contributes to the mismatch between graduates and occupations, it is obvious that graduate unemployment has become, in many countries, a structural problem reflecting a fundamental arithmetic imbalance between the number of university graduates and the number of new jobs available in the modern sector of the economy.

However, from the point of view of political accountability, education policy makers can conveniently hide behind the approach followed initially, with its focus on technical issues of manpower training, to exonerate their responsibility. It allows them to blame the higher education crisis on external and uncontrollable economic forces. Having involuntarily or deliberately avoided to take potential risks into consideration, the authorities can always feature today's problems of diminishing resources, poor training and research quality and graduate unemployment as unfortunate, unforeseen, irrational and accidental side-effects of the strategy followed, even though they might reflect contradictions which are built into the logic and structure of the system. But how much longer will it be possible to continue ignoring the internal and external constraints bearing upon the higher education system?

The Higher Education Environment in Perspective: Constraints and Uncertainties

If the words certitude and confidence adequately describe the mood which prevailed in most developing countries just after independence, doubt and apprehension would be the right terms to characterize the present disposition. The environment in which higher education systems operate has indeed become increasingly unstable and unpredictable.

At the economic level, the performance of higher education is directly influenced by the availability of financial resources. Higher education is sensitive to changes in the overall size of the public budget and in priorities within the budget. The budget, in turn, is affected by the national and international economic and financial situation. Many countries have accumulated
a large foreign debt financed by a growing fiscal deficit and are faced with the need to implement structural adjustment programs including measures to reduce public expenditures. The renewed interest of the international community in basic education, symbolized by the 1990 World Conference on Education for All, is also likely to cause shifts in resource allocation from higher to primary education. Therefore, the prospects for increased budgetary resources to finance higher education are anything but promising.

The external efficiency of the university system is determined by the labor market outlook. Both structural adjustment and technical change have an impact on the level, type and spatial location of occupations available to higher education graduates. Adjustment programs bring about shifts in the sectoral allocation of jobs. In Cote d'Ivoire, Malaysia and Bolivia for example, there has been a shift from manufacturing and government employment back to agriculture. In Egypt, the recession led to a large drop in the number of jobs in the manufacturing sector. Technological innovations influence the evolution of employment structures and job contents, with related changes in skill requirements and training needs. A series of ILO case studies of automation in the banking, engineering, electrical appliance, and printing industries in Asian countries have shown a great variety of outcomes, including the creation of new jobs, upward changes in skill requirements, and examples of de-skilling in some activities. A recent study of the staffing needs of the chemical industry in Denmark anticipates significant changes in the distribution of employment of engineers and scientists among the three main technical functions of R & D, production, and quality control. While the staffing patterns of the production and quality control departments are expected to remain relatively stable, the R & D departments will be growing very rapidly and will


be recruiting a greater proportion of Ph.Ds. Anticipating new and emerging skill requirements is difficult as they do not appear in past employment trends and are not identified by traditional manpower forecasting techniques.

The political environment of higher education has become highly explosive. Issues of principles such as open admission, free education, or guarantee of employment are very sensitive subjects which governments need to treat with much caution. While, in industrialized countries, the radical student movements of the late 1960s did not go beyond shaking the established order, in developing countries, student revolts have been known to topple governments, as happened in South Korea and Thailand for example. During the last decade, students created serious political upheavals in Argentina, Bolivia, Peru, Uruguay, Bangladesh, Burma, Indonesia, India, Turkey, Nigeria, Liberia, Ghana, Niger and Senegal. In 1989, student unrest prompted the closure of universities in Kenya, Uganda and Zimbabwe. In March 1991, the Malian Minister of Education was lynched by an angry mob. Students rebel for a variety of reasons: in Guinea, they recently demonstrated to obtain better learning conditions; in Cameroon, students burned all university records for fear that the rules about multiple repeaters would be strictly enforced. In any event, failure to weigh the political risks of any university reform proposal could be suicidal for education policy makers.

The presence of many autonomous actors in higher education is also a complicating factor when it comes to implementing planned change. Unlike many other public institutions which have a relatively simple organizational and power structure, universities have a multiplicity of vertical and horizontal levels of authority and professional competence which complicate any reform attempt. It is also important to recognize that, besides the students, university administrators and professors are two major sub-groups with their own agendas.

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Because of the built-in training lag, higher education systems respond slowly to rapid change in the environment. By definition, it takes several years to develop and implement reforms of higher education structures or programs and several more years to evaluate the performance of the new graduates. Thus, there is a substantial risk of wrong orientation or obsolescence even before the reform or innovation introduced can bear fruit. The higher education system is caught between changing demands difficult to foresee and a rigid structure which requires years to transform itself.

Thus, the increasingly complex and, in many ways, volatile nature of the environment in which higher education functions makes it impossible to ignore risk as a key variable.

Reform and Survival Strategies

In response to the higher education crisis, the various actors involved tend to adopt a variety of strategies to minimize the adverse effects of the crisis or even to suppress some of its causes. This section looks at some of these strategies, focusing on two groups of actors: the education authorities and the students. A distinction is made between reforms, which are deliberate attempt to address problems, and responses, which are just reactions to difficulties.

For the education authorities, risks are already involved at the level of problem identification. In some cases, when the issues at hand are too sensitive to be even raised publicly, decision makers find it more convenient to deliberately ignore them.

"A phenomenon is not in itself a problem. What is thrown before us may be perceived either as an inescapable act of unassailable forces, to be accepted with a minimum of fuss, or as an intolerable disruption to our convenience and designs, to be eliminated with all necessary speed. If the latter perception
The language issue is an interesting example in that respect. After independence, governments were faced with a dilemma: should they keep the metropolitan language or should the national language be used as vehicle of instruction? In the former French colonies of the Maghreb, for example, Arabic was used as the main medium, while French was kept as language of instruction for scientific subjects. In the process, an elitist bias was introduced since mastery of the French language is closely linked to the socio-economic background of students. To eliminate this anti-democratic factor, scientific subjects have been gradually Arabized at the primary and secondary level in recent years. Due to the lack of qualified teachers and appropriate textbooks in Arabic, academic standards have been falling and the education policy makers are now inclined to reconsider this move. However, the authorities can hardly reverse their decision to generalize the use of Arabic because it would be perceived as an attack against the language of the Koran, an attack against religion itself. Under the prevailing political and social circumstances, it is easier to let this matter lie quiet even if the pedagogical implications are disastrous. A similar situation is presently occurring in the Philippines with a move away from English as medium of instruction in science subjects.

With respect to those phenomena which are officially labeled as problems, decision-makers are faced with a very delicate situation as they find themselves caught between conflicting objectives. On the one hand, from a social and political point of view, most governments in developing countries are committed to allowing any secondary school graduate to enter higher education. As a consequence, higher education has become supply-driven without reference to available resources, quality standards, and labor market needs. The quality of education has suffered due to diminishing budgetary resources in the context of free education policies. If this trend were to continue, it is very likely that the unchecked expansion of higher education in response to demographic and social

\[\text{prevails, the status of problem is conferred on the phenomenon}^1\text{.}\]

pressures would exacerbate the problems of limited financial resources, poor quality and difficult access to employment.

From an efficiency and equity standpoint, however, the allocation of resources to higher education and the determination of enrollment levels and priority fields of study should reflect closely the future work force requirements of the economy and the need to ensure a more equal distribution of education expenditures. Any plan allowing for further unlimited expansion of higher education would be hard to justify in the present context of economic slowdown, declining job creation rates and increasing employment difficulties for graduates. The most logical option would be to adopt a demand-driven strategy with cost-recovery measures.

Obviously, neither option is politically or socially feasible. Appealing as the demand option may be from a purely economic viewpoint, it would not respond realistically to the demographic and social pressures confronting most developing countries. Similarly, a status quo approach would present the risk of further deterioration of the quality of education due to insufficient financial resources, and of rising resentment among students dissatisfied with inadequate learning conditions and poor job prospects.

Countries typically follow one of three main strategies which can be characterized as the passive risk approach, the positive risk approach, and the diffuse risk approach. In the first instance, there is a deliberate decision not to tackle any sensitive issue head on because of the potentially negative political implications. This reflects a choice for protection from short term risks (student activism) rather than prevention of long term negative effects (unmanageable financial situation and declining standards). Education authorities are content with minimal changes to keep the crisis at a manageable level in the short term. In Egypt, for example, which has one of the largest higher education systems in the developing world, the Government has addressed the issue of open access by creating a large network of second-rate, two-year technical institutes which are no more than academic parking lots for surplus
students\textsuperscript{15}. Hidden fees have also been introduced in the form of token examination, laboratory and computer fees. But, officially, access to the university remains unrestricted and higher education continues to be free. This very cautious approach to higher education reform might appear as a form of political apathy and lack of forward planning to outside experts. But it reflects a careful risk analysis about the danger of attacking established rights directly.

In the second case, there is a deliberate attempt to introduce important reforms. In Thailand, for instance, the Government officially announced in the late 1960s that excess social demand could not be accommodated any more and that admission to the traditional universities would be selective based on merit. To cope with the unmet demand, two large open universities were established: Sukothai and Ramkhamhaeng\textsuperscript{17}. In Singapore, a differentiated cost-recovery system including merit scholarships and loans for poor students was introduced in the early 1980s in fields like engineering and basic sciences which are the most expensive and in highest demand by the economy.

In the third case, the education authorities follow a more timid approach involving reforms in limited segments of the higher education sector. In India, for example, the government has adopted a mixed admission policy leaving access to general liberal education entirely open but making access to the professional fields selective and demand-driven. Tunisia is considering the establishment of institutes of technology after the French model, where access would also be selective and demand-driven.

The degree of perception of economic, social and political risks directly affects how problems are defined and reforms implemented. Education authorities and experts are influenced, in particular, by the paradigm implicitly

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used for risk evaluation. In the structural-functionalist tradition, there is an intrinsic belief in a smooth evolutionary process with marginal disruptions, which leads to a focus on managerial and technical risks. If one accepts, however, the notion that a conflict approach provides a better grasp of real life, it becomes necessary to consider not only potential unexpected events, but also the likely reactions of all groups and individuals whose interests are threatened by the reforms envisaged.

Very often, the main problem faced by education authorities is one of transition, not of absolute feasibility. In systems where students take it for granted that access is unrestricted and education has no direct cost, the main constraint is to make the first step to move away from open access to selective admission and from free education to some degree of cost-recovery. There are precedents indicating that different options can work, even in developing countries. A number of former British colonies, for example Ghana and Zimbabwe in Africa or Malaysia, Singapore and Sri Lanka in Asia, have successfully implemented measures to limit access to higher education. There are also a few countries with a sizeable private higher education sector, notably Brazil, the Philippines, Indonesia. In the Arab world, where almost all university systems have deteriorated as a result of the uncontrolled growth of enrollments, Jordan is an example of country which has been able to maintain a tradition of restricted access and partial cost-recovery, and which can boast to have one of the best performing university networks in the region.

It is important to observe that attempting to resolve higher education problems in isolation can backfire. For instance, in countries with open admission policies, there is frequently a process of hidden selection at the end of the first year of university, resulting in high levels of repetition. The introduction of measures to improve internal efficiency, while desirable from the viewpoint of reducing wastage, would increase the risks of labor market saturation and rising graduate unemployment.

One of the recurrent questions confronting educational planners intent on reforms is whether to concentrate on improving existing institutions or creating new institutions. In principle, it would make more sense to mend what exists before attempting to establish something new. But there is always a risk that the innovation would fail to spread to the rest of the system and that a sort of oasis would be created in the midst of an otherwise malfunctioning university, as has often happened in the North American context. With the establishment of new institutions, however, there is a high risk of academic drift. This phenomenon has been observed for example in Egypt, when a Technology Institute modeled after the German Fachhochshule was set up in Helwan in the 1970s. After a few years, the faculty and the students successfully demanded that the Institute be upgraded to the status of a full engineering college. Some of the British Polytechnics are currently being pulled in the same direction, repeating the history of the earlier Colleges of Advanced Technology (Salford, Aston) which operated as special colleges only one or two years before becoming universities.

The recent establishment of a second university in Senegal is an interesting example of an attempt to revitalize higher education from the outside rather than from the inside. Over the years, the University of Dakar has grown from a prestigious institution which was well-respected at the regional level into an overcrowded university accommodating 17,000 students on a campus originally designed for 4,000. Unable to face the political risk of student revolt in Dakar if measures to restrict access were taken or if stricter academic standards were enforced in a university where 20 student-years are spent, on the average, to graduate one student, the authorities have opted for the opening, in October 1990, of a new university in Saint-Louis. Access to that institution has been very selective (600 new entrants out of 3,000 applicants) and innovative pedagogical practices have been introduced based on a flexible credit system.

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instead of the traditional French course structure sanctioned by a single win-or-fail examination at the end of the academic year. It will be very instructive to watch whether Saint-Louis will be able to maintain its innovative features and possibly stimulate reforms at the University of Dakar.

At the **individual** level, integrating the risk factor can take many forms. Students may try to find information about job and career prospects to orient their choice of field of study. In countries where private institutions of higher education exist, growing numbers of students are willing to take a financial risk to obtain what they perceive as a more professionally relevant form of training rather than attending traditional courses in humanities or social sciences in the public universities.

When graduate unemployment is a serious problem, students adopt what could be called a stakeout strategy whereby they accept the risk of settling down for temporary work solutions while waiting for the "right" job opportunity. In Egypt, for example, where there is a de facto five year waiting period to obtain a government job under the employment guarantee scheme, students take part time jobs in the private sector or underqualified occupations in the informal sector before the so-much-coveted life employment job in the public sector. In Morocco, where a compulsory two-year civil service requirement for all new graduates had been introduced fifteen years ago, the government has been trying to phase out this scheme because of the growing number of graduates and the heavy budgetary implications. But the new graduates are eager to continue to participate in the program because they see it as a temporary protection against unemployment. Until five years ago, when graduate unemployment was still unknown in Morocco, everybody tried to escape from the civil service obligation.

Sometimes, individual strategies to minimize risks have a negative effect at the global level, thereby increasing collective risk. In situations of graduate unemployment, for instance, a student may decide to get a higher degree than initially planned in order to increase his or her chances of finding a job. One can indeed expect that, all other things being equal, employers will recruit, for a given position, the person with the highest credentials. But if
every student starts to follow the same strategy, the individual advantage in
terms of increased chances in the labor market is canceled out. This is how the
phenomenon known as "diploma disease" has developed\footnote{Dore, R., \textit{The Diploma Disease: Education, Qualification and Development}, Allen and Unwin, 1976.}.

**Conclusion**

"If you are not part of the solution, then you are part of the problem".

(anonymous radical student in the 1960s)

In most developing countries, higher education has experienced radical transformations since independence. After three decades of rapid expansion in a relatively worry-free context, it is becoming increasingly threatened and tested, in terms of missions, resources, and outcomes, by an environment full of constraints and challenges. But traditional approaches to higher education planning and decision-making have failed to build into their development and reform strategies appropriate mechanisms to evaluate uncertainty and risk. Education planners are therefore confronted with the need to move away from a crisis management attitude to a risk analysis approach.

Including risk as an important variable in the identification of issues, the construction of problems and the design of reforms should not proceed from the idea that the future can be controlled and that any unexpected or undesirable event can be avoided. But it should help think in terms of alternative scenarios and contingency plans, thus contributing to improving the flexibility and adaptability of higher education institutions to enable them to respond rapidly to changing conditions and demands. Incorporating risk as a dimension of policy analysis does not guarantee success, but ignoring it is a recipe for failure.
Experts have recently advocated a contingency approach to planning for education projects sponsored by international development organizations and bilateral aid agencies\(^{22}\). Contingency planning would go beyond traditional analyses of the financial, economic and technical dimensions of projects by taking into consideration the management requirements for a smooth implementation of innovative education projects in an uncertain environment. In the case of higher education reforms, focusing on the appropriateness of the managerial arrangements is important but not sufficient. What is really needed is an impact assessment approach reflecting the nature of higher education reforms and innovations which, by essence, challenge established practices and vested interests.

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