University-industry partnerships: the changing context

The issue of university-industry partnerships has become very prominent on the agenda of higher education policy-making, at both the national and institutional levels. Within the context of knowledge-intensive economies, governments are increasingly aware of the importance of higher education institutions as strategic actors in both national and regional economic development, given their potential to upgrade skills and knowledge of the labour force and contribute towards producing and processing innovation through technology transfer.

In many countries, governments tend to allocate funds more selectively, both with more definite purposes and attached to specified outcomes. As part of this trend more and more countries are providing incentive schemes, such as matching funds, seed money or tax exemptions for the development of university-industry linkages, both in teaching and research.

Changing expectations of the economic pay-off of research and development (R&D) results, put to the market, have also considerably modified the attitudes of stakeholders, such as institutional managers and academic staff, towards collaboration with industrial partners, particularly in fields such as biotechnology, medicine and software development.

Given the potential of such linkages to generate new forms of funding, which in some cases can be considerable, higher education institutions themselves are much more open to collaborating with industry and business than in the past.

An indepth debate ...

In order to explore varying institutional responses to the challenges and structural problems involved in university-industry linkages, the IIEP conducted a research project during 1997 and 1999. Managers from 12 higher education institutions in Africa, Asia, Europe and Latin America were selected to participate in the project.

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Mr Darwin – Meet the universities

By Darwinian criteria universities are among the most successful organizations. Few others have survived so long – the first were established more than a thousand years ago. Their offspring are found in all habitats – universities are alive and doing fairly well in all countries around the globe. Never have there been so many – and their number is increasing every year. Moreover, the number of students at university is staggering – in some countries half of each age cohort is now enrolled. Universities are no longer ivory towers for an intellectual elite – more and more they are becoming educational arenas for the masses.

Like species that last and grow, multiply and diversify, universities change their own environment. Their graduates fill key posts. Our universities generate the new knowledge that is the defining mark of modern society. In wartime, universities have been mobilized to translate formulae into weapons, in peacetime to convert scientific findings into vaccines or treatments. Governments increasingly turn to universities for solutions to pressing problems, from pest control to tools for macro-economic management. More than that: firms and industry also turn to universities for the cutting-edge knowledge needed for new patents, products and services. As producers of new knowledge, universities have become the most important agents for social change.

However, new knowledge creates new demands. No-one asked for optical fibre cables, bar codes or CDs before laser was invented. But now the impact universities have on their environment ricochets in the form of not only new opportunities but also new risks. What will this changing environment do to their traditional teaching and research activities? How will it affect management and recruitment? How will power relations within the universities change, whether between academic fields, between faculty and administration, between market winners and losers? How should intellectual property rights be shared between researchers, institutions and investors? What will be the impact on the research agenda or on norms of publication and confidentiality?

Such structural problems challenge universities in all countries. Universities have adapted to the changed environment by adopting different policies. This is valuable, for as in eco-systems: variation provides information.

The purpose of IIEP’s focus on university/industry relationships is to map the problems generated, analyze responses attempted and identify the results attained in order to provide richer input for planning and policy making.

The management of university-industry relations. Five institutional case studies from Africa, Europe, Latin America and the Pacific Region

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Quality and learning
An issue for aid agencies

The International Working Group on Education (IWGE) met in Florence, Italy, from 14 to 16 June 2000. It was attended by 47 participants representing 26 multilateral and bilateral agencies and foundations. The main topic examined during the session concerned the challenge of increasing the ‘Quality and learning’ in basic education and the role of donor agencies in this respect.

Quality of learning depends on five factors: learner characteristics, environment, content, processes and outcomes. There was general agreement that basic models for improving learning are known but the difficulty is to expand successful pilot programmes or to transplant successful experiments from one context to another. Agencies tend to focus on a holistic approach while more attention needs to be paid at the bottom, to the way a school operates. The relationships between teachers and headteachers within schools, between the school and the community, and the support provided to the school and the teachers should all be looked at closely. What it boils down to is: top-down support for bottom-up developments. Public/private partnerships attract a lot of attention, and in particular community schools. But, even if communities are expected to contribute, the state should allocate resources to such schools or programmes.

At the IWGE meeting several papers were presented focusing on primary education, non-formal education, early childhood care and other education programmes. Common to all these programmes is the potential conflict between the concepts of a locally-developed relevant education and the need to provide people with the potential to participate in the globalized economy.

How can quality education be provided in contexts marked by a shortage of resources, cultural disintegration, serious inequalities and conflicts? More attention has to be given to planning education provision in such contexts.

Evaluation, monitoring and assessment mechanisms are central to quality, but unfortunately, evaluation outcomes are very often used to make comparisons between schools, regions and countries. Assessment mechanisms should be set up which provide both information at central level and feedback to teachers and schools at the local level.

Another important issue discussed at the meeting was the impact of HIV/AIDS on societies and on education systems and the role of education in protecting those who are not yet infected. It is urgent that governments openly acknowledge the problem and develop action plans that specifically include HIV/AIDS. Such action plans help to: develop new school curricula; strengthen teacher training and support mechanisms; identify appropriate school organizations and environments to reduce risks; reinforce school management; increase the role of non-formal education; and target higher education institutions. In many ways, the pandemic will make it necessary to rethink the way education is delivered, and using mass media will be part of the job.¹

Finally, the Working Group discussed new modalities in the delivery of education aid and the problems faced by donors and governments in implementing a real sector-wide approach (SWAPS). In this respect, the current practices of some North European agencies were reviewed. They were generally not homogeneous and some agencies face real problems in moving towards a sector-wide approach. Many expressed the difficulties encountered in designing and implementing the policy framework, which could involve a reform of the public service. Agency procedures need to be harmonized, and transparency and accountability on the part of governments is crucial.

In some countries, there is a lack of institutional capacity. In others, not enough consultation takes place. Another problem raised is the impact of SWAPS on civil organizations which tend to be excluded from the preparation of the policy framework since most sector-wide discussions take place between experts and consultants.

The training of nationals and also of agency staff needs to be strengthened for this purpose, and new competencies developed. Such skills include: the capacity to relate education to broad objectives, system analysis, understanding of financing and budgetary procedures but also negotiation skills, and capacity to build consensus. A whole new training agenda.

Francoise Caillods

¹ IIEP is organizing a seminar on The impact HIV/AIDS on education in Paris from 27 to 29 September 2000 (cf. IIEP Activities, p.16).
invited to document their experiences and innovative practices in the management of interfaces, finances, personnel and intellectual property rights when implementing co-operative programmes with business and industry. This research helped to identify current issues and options available in the management of university-industry partnerships.

A Policy Forum on the Management of university-industry linkages was organized at the IIEP in Paris on 1 and 2 June 2000 in order to disseminate and validate the findings of the above research to a selected number of policy-makers at both the national and institutional levels in industrialized and developing countries alike. It was also intended to develop recommendations for the design and implementation of national and institutional policies, be it on defining an appropriate framework for financial management of extra-budgetary funds, the management of intellectual property rights, or organizational development.

The Policy Forum highlighted the fact that university–industry partnerships are a relatively new phenomenon, having developed over the past three decades in most industrialized and developing countries. Since then, under the influence of external pressures, such partnerships have strongly developed in scope, number and degree of their institutionalization. University–industry linkages cover a range of diverse realities in both teaching and research, including student placement schemes, staff exchanges, consultancy services, continuing professional development, joint R&D, as well as small enterprise development and the creation of spin-off enterprises\(^1\) for the joint commercialization of R&D products.

... with some interesting results

During the Forum, it was underlined that university-industry relationships take on a variety of very different formats. At the one end of the spectrum, prestigious higher education institutions may be linked to major high-tech corporations for multi-year joint R&D. At the other end, a small regional university may collaborate with a local company by providing technical assistance to upgrade existing low-level technology and management techniques, or by offering further education programmes to upgrade professional competencies. In industrialized countries, research-related university-industry linkages are quite frequent, whereas in many developing countries consultancies, student placements and continuous professional development are more predominant.

The level of development and focus of such linkages depend on a number of conditions. These include in particular: the research and teaching capacity both within the higher education institutions and industry (foremost, but not exclusively, in technological, scientific and managerial areas); an industrial base (e.g. multinationals but also to a lesser extent small- and medium-sized businesses) involved in R&D activities and concerned with staff development; a tradition of interaction between higher education and enterprises; and an entrepreneurial culture within the higher education sector. The existence of outward-looking academic staff, with experience in both industry and academia, is another factor which facilitates or hinders the development of joint activities. Although these conditions will shape the content of interactions between universities and industry, they will not threaten their very existence.

The Policy Forum discussions also emphasized that, whatever their former level of development and degree of institutionalization, university–industry linkages are changing in scope and nature within the context of present globalization, economic interdependence and the major reliance on market-based approaches. Within this context, university–industry linkages have a great potential to improve the relevance of teaching and research in universities, but their inherent dangers are also becoming more prominent.

Within the context of current economic imperatives and impressive opportunities for individual and collective scientific entrepreneurship, university-industry linkages may provoke, in addition to the expected benefits, a number of unintended effects both in the creation and dissemination of knowledge and the generation of income. These include: a possible distortion of research and training agendas, a potential diversion of energy and commitment of teaching staff interacting with industry away from traditional activities, particularly as regards undergraduate teaching, limited open communication and publication, growing internal segmentation and conflicts of interest among the different groups within institutions or with public interest in general. Ways of compensating these side effects have to be found both at the institutional and national levels.

In order to avoid them, university-industry linkages need to be integrated into the strategic management of a university. By developing a policy framework which provides transparency and specifies limitations to the intervention of outside consultancies and involvement in spin-off companies, universities should be able to prevent conflicting interests between partners. They also need to outline rules and regulations regarding the confidentiality of research results in order to maintain an atmosphere of open communication with the university.

Finally, governments have both a supportive and catalyzing role to play in the future of such linkages. It is up to them to set up a legislative framework for the development of links between universities and industry, for instance with regard to intellectual property rights. They should also provide financial incentives to encourage joint ventures.

Michaela Martin

1 Spin-off companies are created by university staff or post-graduate students to commercialize R&D products.
Tackling social exclusion in Pakistan and India

Healthy economic development in today’s global world implies solving the problems engendered by growing deprivation and social exclusion. Within the framework of its research on ‘Education and training strategies for disadvantaged groups’, the IIEP has taken a close look at a number of programmes set up in different countries to provide marginalized populations with the education they need to escape poverty and become fully integrated and active citizens. The evaluations of two such programmes, one targeting girls in rural Pakistan and the other slum children in India, show very different approaches to the problem. However, both illustrate that the success of such programmes largely depends on the active involvement of the communities concerned in the change process.

Despite increased government emphasis on education over the past two decades, Pakistan’s literacy rate and gross primary participation rate are among the lowest for one of the most populated countries – 26 per cent and 52 per cent respectively in 1992/1993. The Social Action Programme developed by the Pakistan Government, with the support of various multilateral and bilateral agencies, was first introduced in Pakistan in 1992-1993. One of its main aims was to improve access to basic education for girls living in rural areas. The study undertaken by Ms. Kazi recently published by the IIEP concentrates on evaluating the impact of four measures applied within this programme. First, the provision of incentives (free meals and textbooks, bursaries, etc.) for promoting the participation of girls from rural areas in primary education to increase enrolments, school attendance, average length of schooling and reduce academic failure. Second, the creation of Parent-Teacher Associations (PTAs) in primary schools. Third, the encouragement of public/private partnerships using funding provided by certain NGOs. And fourth, the expansion of alternative non-formal educational projects.

According to Ms. Kazi, the provision of incentive measures did not have a real impact on improving primary school enrolments, attendance or learning. Only the distribution of free textbooks to girls in rural areas appeared to have a positive effect on enrolments and on the outlook of parents regarding their girls’ education. Unfortunately, this was a costly measure and difficult to sustain over a long period.

The creation of Parent-Teacher Associations, on the other hand, made it possible not only to significantly enhance community participation in the education process, but also to improve enrolments and the general condition of schools. However, a lack of sufficient training within the communities concerned meant that the associations did not provide effective management at the local level. Similarly, the promotion of public/private partnerships did not achieve the expected results, due to lax financial controls by the public authorities. This part of the programme was directly implemented by the Federal government without any linkages at the provincial level and resulted in the NGOs being given a

Pratham Project, Mumbai India: children from balwadis and bridge courses in Umarkhadi, M-East Ward, waiting for their health check-up.
The role of journalism in education

Educational reform is often handicapped by disinformation, misunderstanding, and opposition, all fostered by the lack of a suitable and timely strategy to inform public opinion. In turn, and just as importantly, the demand for education – also a significant factor when it comes to improving educational quality – is very low in Latin America.

Through their education sections, newspapers can help boost educational demand. This was precisely the starting point of the seminar on the role of journalism in education held in Madrid from 14 to 16 June this year. The meeting brought together education editors from Latin America, Spain, and Portugal. Its purpose was to provide the latest information on three educational themes relevant to Latin America, namely: education and employment, evaluating education, and education, poverty and inequality, enabling participants to share their thoughts with specialists and discuss how these topics were conveyed and disseminated in the Latin American press.

Some of the more salient issues discussed by the press professionals and specialists were: How to avoid evaluation outcomes turning into league tables, which only deepen the rift between schools? How can journalists communicate information on education without implying that education generates jobs? To what extent does the press portray the potential and the limitations of schooling in establishing equal opportunities?

Actually, the debate centered around one main issue: Are the education sections of the print media essentially service providers, or do they aim to enhance social demand for education?

Journalists acknowledged that education does not usually feature on page one – unless there is controversy (strikes, curriculum reform, and so forth). Newspaper people themselves admit that the education section tends to focus on day-to-day matters rather than medium- and long-term analyses.

Participants also agreed that press coverage of education had increased over the last decade. The lack of time to research educational matters and the scarcity of space to write up any findings are some of the difficulties most frequently encountered by education journalists. Another element highlighted by participants had to do with editorial decisions, which often govern whether or not education is to be covered. The absence of specific training makes it even harder to explore and clarify educational matters which might be newsworthy.

The debate concluded with a look at future courses of action. These included organizing seminars on different topics, developing Web sites, creating a network of education journalists from the Latin American press, disseminating lists of researchers and research subjects, holding national and sub-regional meetings, and undertaking study visits to other countries and analyses of different contexts.

A. Morduchowicz and Juan Carlos Tedesco
Alchemists of the mind

Excerpt from the Director’s address to the participants in IIEP’s 35th Annual Training Programme in Educational Planning and Management at the end of their training, Paris, 23 May 2000.

You, the trainees, have had a challenging year, far from families and friends, in an alien environment and education regime. This is all the more reason to congratulate every one of you on your efforts and accomplishments.

Let me now draw your attention to a simple fact. Looking around the room, you will find many have adorned themselves with pieces of gold: rings, bracelets, and necklaces.

Some of this precious metal may originate from the Gold Rush that started some 150 years ago. Thousands of adventurers – from France to Turkey, from Chile to China – were caught by the epidemic gold fever and scrambled to California where gold at first was easy to get and free for the taking. Gold is found only in a few places in the world, and the forty-niners (named after the year 1849) scurried to the rivers where it was concentrated. The world rushed in, and eventually the gold ran out.

The great gold discoveries played an important part in the decline in the value of gold in terms of silver, which brought about a widespread swing from a silver standard to a gold standard. In the early part of the twentieth century, the gold standard ruled the world. There was, in effect, a single world money under different names – currencies’ relative values were determined by their weight in gold, which served as the common yardstick.

Now young adventurers are again flocking to California from all over the world. They land at San Francisco Airport, but do not go to the American River or other parts of the former Gold Country, they go to Stanford and Silicon Valley. This is very curious, for silicon is extracted from one of the most common elements on earth: sand. Indeed, it can be made from sand that the forty-niners washed away to get at the gold. To make silicon, quartz – a mineral which makes up 28 per cent of the earth’s crust – is mined and purified by heating to 1,423°C.

But the important parts of a silicon chip are the transistors and circuits etched on to them. The first to be made, in 1958, had only two transistors. Intel’s first microprocessor, shipped in 1971 for Japanese calculators, held 2,300. The Pentium II processor cartridge found in many of the PCs at IIEP and UNESCO incorporates 20 million. In other words, the important part of a silicon chip or microprocessor is not the silicon it is made of – it is the knowledge embedded in it: the know-how to purify silicon from quartz, to make and use the diamond saws that cut silicon into wafers, to design complex circuits, to use lasers to etch them, to write programmes that make them work, etc. From this embedding of knowledge, fortunes many times larger than those produced by the gold rush have been made – by Sony, Microsoft and Amazon.

In contrast to the gold standard, which remained constant for many years, new standards of knowledge are created all the time. One such standard is Windows. Another, ‘http’ or hyper-text transfer protocol, which is the language that transfers hypertexts across the Internet.

But the most general of all standards is the digital number system. It enables us not just to send messages...
within and between PCs, but also allows microprocessors built into different machines to communicate without human intervention, such as in navigation systems in aeroplanes. The digital number system is the esperanto of the new millennium: say ‘0’ or ‘1’ and everybody and everything can understand.

Now more countries subscribe to these electronic standards than ever subscribed to the gold standard. The most usable knowledge quickly becomes universal.

Why am I telling you all this? It is to illustrate three points.

First: the content of knowledge increases in everything Man makes – in medicines, in materials, in foods, in tools, in telephones. Less and less of what we see, use or consume is nature’s own, pure and unadulterated. Information technology is not something coming in addition to other technologies – it transforms them all, from taxi services to education systems. Biotechnology is at the edge of great breakthroughs. In the laboratories, researchers are testing results which can overturn entire branches of the economy.

Second: not only are knowledge and technology changing – the same holds for the social organization built around them. The economy is globalized – by expansion of world trade, integration of financial markets, internationalization of companies. Firms increasingly produce for customers abroad and labour markets gradually fuse across national boundaries. The changes are felt in everyday life, whether in the form of cellular phones which can be used in many countries, in entertainment that can be loaded down from the World Wide Web, or in financial crises reverberating across continents. There is a mismatch between the stiffness of traditional institutions and the revolutionary impact of new technology. Language itself shows the speed with which the changes occur: words like ‘Internet’ and ‘e-commerce’ are not found in dictionaries published 10 years ago.

In short, the growth in knowledge has become the most irresistible force of social transformation – of technologies, of organizations, of economies, of cultures. It makes the world one, and it makes the world smaller by concentration, by integration, by interaction. Our world is becoming a denser place in which to live, where we must keep our minds open to what is new, and yet maintain our heritage.

Third: in contrast to gold, knowledge is not a finite quantity that can be depleted – it increases continually and becomes constantly more potent. Its usefulness multiplies the more who share it. Unlike the gold standard, the knowledge standard is not fixed – it is a moving, continually developing, target.

Indeed, if you wish to define development, it cannot be done relative to gold – it must be defined in terms of knowledge. Development can most simply be measured by the capacity a country has to acquire, use and transmit knowledge – i.e. by its capacity for knowledge management in the broadest sense of the word. In short, the wealth of a nation and the welfare of a society are decided by its capacity to train its young and educate its people to share in making and applying knowledge in all spheres of life.

What then, is the state of the world?

At the start of the new millennium the three parts of UNESCO’s original mandate – education, science and culture – are caught in crosswinds. The Education for All assessment shows that for large parts of humanity education has improved and expanded since the Jomtien Declaration 10 years ago. However, in other countries, the supply of education has been reduced

Where are they now?

Every so often, the IIEP Newsletter likes to bring its readers up to date with news from former trainees.

Ana Maria Ribeiro Agostinho Guimarães (Angola), participant in the 1994/95 ATP, is actually Vice-Minister of Posts and Communication.

Hon. Samuel Mumbengegwii (Zimbabwe), ATP trainee in 1980/81, was appointed Minister of Education, Sport and Culture of Zimbabwe in June 2000.

Hon. Jean-Marie Atangana Mebara (Cameroon), trainee in 1980/81, is currently Minister for Higher Education.

Duy Pheng (Cambodia), ATP trainee in 1991/92, retired in January 2000, but still works as Advisor to the Ministry of Education, Youth and Sport, and as UNICEF Consultant for the Planning Department.

Kuy Phala (Cambodia), 1995/96 trainee, has been appointed Acting Director of the Planning Department in the Ministry of Education, Youth and Sport.

Julien Daboué (Burkina Faso), who attended the 1992/93 Annual Training Programme, is now Technical Advisor to the Minister of Basic Education and Literacy.

News of former IIEP trainees

Unfortunately, it is also our duty to inform readers of the deaths of the following former trainees. The Director and staff of IIEP would like to convey their deepest sympathy to the families of these trainees, whose demise is a great loss not only to their countries but also to the IIEP.

Joseph Nathaniel Chikungu (Zambia), ATP trainee in 1991/92.

John Odour Manasseh (Kenya), ATP trainee in 1994/95.

Bester Mphande (Zambia) ATP trainee in 1990/91.

Manasseh C. Nkamba (Zambia), ATP trainee also in 1990/91.
and quality has fallen. For education then, the record is mixed.

Science has made enormous gains in all fields. It has helped cure disease, reduce hunger, lessen toil and enrich experience. Yet millions are starving and diseases such as AIDS are spreading. In many countries, life expectancy has declined. For science then, the impacts are uneven.

A global culture based on common values, notably those found in the United Nations Universal Declaration of Human Rights, is gaining hold. A common culture based on contributions from around the globe is spreading to all countries by modern media. But this very globalization threatens the richness and variety of the human heritage – many human languages are disappearing. The homogenizing forces of modern technology and communication are enormous – oneness can produce sameness. For culture then, the effects are contradictory.

The new technologies generate new disparities. Imbalances are aggravated when the most advanced nations develop most rapidly and set the new global standards others must follow, while those worst off remain stagnant or fall back. Inequities are increasing and inequalities are widening. In some cities of the world, the number of street children is growing; in others, the number of Internet cafes is sprouting. Indeed, sometimes both happen in the same city at the same time.

These threats will grow stronger before they can be countered. There are great advances, but also breakdowns, relapses and reversals – hence growing disparities.

Should we be pessimistic?

My answer is no, and for five reasons:

Firstly, I reminded you that the forty-niners went to California, because that was where the gold was. Nature concentrated its golden gifts. But as knowledge expands, its role in human affairs, the destiny of a society will depend less and less on nature’s gifts – it will depend more and more on the trained talents of its people. The material basis of welfare will above all result from the capacity of a population to develop new knowledge and apply new technology. Here, no country at the outset has any special advantage. At birth, all people are equally well endowed from nature – Norwegians are born no smarter than Swedes. Native talent is the most evenly distributed resource in the world. At the societal level, all humans are born equal – no country is more privileged than another in that respect. Whereas gold is found only in a few places, such as Johannesburg in South Africa or Kolar in Southern India – human endowments are found all over, like sand on the earth’s crust. It is a resource that can be tapped wherever it is.

Secondly, in the knowledge economies into which all countries are pulled, development and welfare will grow out of human capital. Per capita income will emanate from capita content – what people have in their heads. Already there is a scarcity of trained professionals – multinationals in ICT are recruiting from India, Ireland, from Taiwan, from everywhere they can find people who can do the jobs. Indeed, the lack of trained professionals is the greatest bottleneck in the global economy. Hence, in the future no country can afford to lose the talents of anyone. Of course you cannot afford to idle the potential of half the population by discriminating against women. You cannot afford not to use the gifts of disadvantaged groups – look at Stephen Hawkins. Of disadvantaged groups we must ask: disadvantaged for whom? A country that keeps them dependent rather than makes them productive, will inhibit their development. The same holds for the disenfranchised and unemployed: those excluded from the world economy will rally against it, as we have seen recently in Seattle and Washington. In the new world market, those who do not share in its benefits will reduce its profits. In short, a country who does not provide equal opportunities for its citizens will never make it in a global economy. Equity will become a necessity.

The third reason for optimism is this: in Dakar a new commitment to education for all was made. The President of the World Bank wrote: “No country with a sound plan to achieve education for all its children will fail from lack of funds”. Its Vice-
President said: “The constraints on this programme will not be monetary. Rather it will be the political will in the developing countries to produce a viable and sustainable plan to transform education”. In short, resources will focus on poor nations that produce a comprehensive blueprint for enrolling more children in school, for eliminating illiteracy and for ensuring that girls have equal access. Capacity to plan and implement will be the prime mover for development.

The fourth reason for optimism is that in Dakar, UNESCO was mandated a leading role in pursuing and promoting the global agenda of education for all. UNESCO cannot afford to fail in this leadership role – indeed, the Director-General has staked UNESCO’s role and his personal reputation on this commitment.

The fifth and final reason why I am optimistic is you, the trainees. Education is seen as being the prime requisite, the moving cause for reducing poverty, improving health, for increasing welfare, for preserving heritage and for maintaining variety.

I argued that all societies are equally well endowed with talent incorporated in humans when babies are born. The question is not whether a country has the talent but whether it uses its talent – that is, whether it translates the innate endowments of its people into skills and competence by education and training.

For the skills available are not a fixed quantity – it is a variable whose value depends on political action. We know pretty well what should be taught and how the young learn.

The World Bank and the world community say that lack of funds shall not be a cause of failure. Already some countries have more funds than they can use well. The critical factor will be capacity to organize education – the capacity to make coherent plans, to implement them and to make them work – in short, to build the institutional framework by which education is managed, training is organized and progress is monitored. Monitoring is not just a question of statistics, but of providing information that can become a premiss for public choice. The key task is to train planners and politicians to use data and analysis for effective strategies, i.e. for correcting errors and finding problems about which something can be done with the resources at hand.

UNESCO and IIEP can only make a difference by bringing knowledge to bear on education. The key task is to enhance the capacity to exploit the potential of education. Indeed, capacity building is itself an educational task.

To succeed, it has to be based on knowledge gained from science and on concrete strategies sensitive to culture.

UNESCO’s task is to aid societies to build the capacity to develop the potentialities of their citizens. This is precisely what you have been trained to do and is at the core of IIEP’s mission. Capacity building is where the action is. You have been trained to define goals and find routes to reach them, to use data to develop plans, to structure financing – to implement and manage and monitor. You have been trained to foresee challenges and overcome obstacles. You have found new friends and established a network among colleagues that will last you a lifetime. You have been trained to make what one can do into what one is trusted to accomplish – to educate people and make institutions work. In short, you have been trained to design and to deliver.

Those who can do this will be the forerunners of the future and in charge of the most important task for the twenty-first century: to make a difference where differences will have the greatest impact, for personal growth and social development. For in the global knowledge economy, the ‘know-nots’ will remain the ‘have-nots’.

You will not be helped by searching for gold, like the forty-niners. You are IIEP’s Class of ninety-niners. You will be true ninety-niners if instead you search and find, develop and transform what UNESCO’s Delors Report called The treasure within. Like sand turned into silicon, it can be embedded with knowledge and converted into something much more valuable than gold.

With the relationships you have established among yourselves, with IIEP and UNESCO, and with the skills you have developed to bring about change, you will then become a worldwide web of true alchemists of the mind.
Recent trends in university management

Declining public funding of higher education in the 1990s triggered off an urgent demand for reform in the ways universities were financed and managed in many countries. Using the findings of research it has undertaken in this area, the IIEP has been conducting a number of workshops in different regions of the world in order to help university administrators cope with emerging challenges. A recent workshop organized in Israel provided yet another opportunity to generate discussion on the policy options open to university managers.

The measures most frequently adopted by universities to counter the decreased availability of funds include strategies to reduce costs, measures to recover costs and efforts to mobilize new resources. At the same time, higher education institutions have been increasingly solicited for accountability and performance appraisals. The ten-day workshop organized by the IIEP in collaboration with the Galilee College, Nazareth in Israel from 19 to 28 June 2000 not only generated discussions on the policy options open to university managers, but also to providing training for financial managers in dealing with situations of declining public support.

The workshop discussions focussed on recent trends in university management and in particular changes made to improve efficiency in both the mobilization and utilization of financial resources. The aim was to acquaint the participants with the issues involved in financial management and ways and means of creating income-generating activities.

More than 40 senior level administrators and managers – vice-chancellors, presidents, rectors and financial managers – from higher education institutions in Africa, Asia, Eastern Europe and Latin America, attended the course. The programme included both general plenary discussions and working group sessions in specific areas. While all participants attended the sessions on the management of higher education and income-generating activities, they were divided into groups to attend specialized modules on: human resource management, university management and financial management. The IIEP was responsible for the sessions on financial management and the training of 14 participants from 12 very different countries, namely: Colombia, Croatia, El Salvador, Hungary, Latvia, Lesotho, Malawi, Mexico, the Philippines, Slovenia, South Africa and Uganda.

The discussions in the workshop highlighted the direction of change taking place at the tertiary level of education in different parts of the world. One of the significant changes in the recent past is the move towards private provision of higher education. In many countries, the private sector has become an active partner in providing higher education and in other countries it has become the dominant sector in terms of number of institutions and enrolments. While this is a recent trend in African and Central Asian countries, the private sector has become an active partner in providing higher education and in other countries it has become the dominant sector in terms of number of institutions and enrolments. While this is a recent trend in African and Central Asian countries, the private sector has been active in higher education in countries of Latin American and some of Southern and Eastern Asia.

Many universities have amalgamated institutions as a cost reduction strategy. While this was the case in Hungary and Belize, it took the form of re-organization of departments to create study centres in Brazil. This led to the closure of some university departments.

Student choices for areas of study have dramatically changed in some countries. In Nigeria, for instance, where Basic Science was a popular area study for a long time, a quota of 60 per cent enrolment was fixed. Now the demand for student places and enrolment in science subjects has declined. Students increasingly opt for market-friendly courses. Interestingly, the drop-out rate of male students at university is on the increase, whereas many more female students are continuing their studies at the university level in Nigeria.

The discussions revealed that budgetary cuts have seriously hampered the staffing of many universities. The recruitment of full-time faculty teachers has declined in almost all countries in the 1990s. Correspondingly the share of part-time teachers has increased in most of the countries represented, particularly in Mexico and Zimbabwe. Another trend is staff movement from universities to private sectors and to multinational companies, which guarantee higher

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salaries and better working conditions. This trend is more visible in the case of faculties involved in professional and technical subjects. An extreme case of faculty exodus to multinational corporations was reported from Romania where the Computer Technology Centre had to be closed down for lack of teachers.

This was the first time that the IIEP organized a programme jointly with Galilee College and the venture proved a good and mutually rewarding experience. The possibility of organizing similar courses for university and school education was discussed and some countries represented at the seminar expressed their eagerness to collaborate with the IIEP in organizing regional training programmes.

N.V. VARGHESE

Tackling social exclusion in India and Pakistan...

free hand with no concept of accountability.

Finally, the alternative non-formal education programme was the one that achieved the most impressive results in improving the education of young people, and especially girls living in rural zones. Ms Kazi strongly urges the development of non-formal projects and community-supported schools which, in her opinion, can prove a cost-effective back-up to the formal provision of education and ease somewhat the financial burden on government.

Although the Social Action Programme in Pakistan did not bring all the desired changes, it did, however, have a very direct and positive impact on federal and provincial resources, and prepared the ground for a second programme.

The Pratham Project, developed in Mumbai, India, where 60 per cent of the population lives in slums, took a quite different approach. Launched in 1994 by a group of individuals in cooperation with Mumbai’s municipal authorities and various private concerns (including banks), and gradually adopted in other cities throughout the country, Pratham aimed at broadening access to pre-school and primary education. He also stresses the extent of the project, which created a network of over 5,000 young people—mainly girls from shanty towns—and which is likely to raise education levels in each community and school.

As regards the project’s failings, he mentions the difficulties in mobilizing teachers, reaching the most marginalized groups (street children, beggars, etc.), decentralizing management of the programme, and dealing with contradictory policies advanced by municipal and central authorities, the project’s main partners. He denounces the temptation of some members of the movement to consider Pratham as a ‘model to be reproduced elsewhere’, without having first acquired the needed creativity for such a programme to continue developing in the future, especially in widely divergent contexts.

Both Ms Kazi and Mr Chavan agree on the need to assist the targeted communities to participate in the process of change. They stress the importance of projects being founded on the intense involvement of people at the local level, through private organizations which not only work closely with the populations concerned, but also in partnership with other organizations, and which are connected to the formal education system—even directly through teachers, heads of establishments, or through local, provincial or national public authorities. In short, this is the only way to achieve a greater coverage. The co-operative methods highlighted appear especially promising for the future, and should serve as a source of inspiration for all of those anxious to promote equal access to education.

MURIEL POISSON


Private tutoring is an increasingly important phenomenon in a number of countries and has significant educational, social and economic ramifications. However, the subject is under-researched, since much tutoring is a ‘shadow’ activity, beyond the control of ministries of education and those responsible for formal education systems. In this booklet, Mark Bray, Director of the Comparative Education Research Centre and Professor of Education at Hong Kong University, has decided to shed some light on the matter. His investigation focusses on the scale and nature of supplementary private tutoring at primary and secondary levels and highlights the variations in different regions of the world. Notorious in parts of East Asia, in countries such as Japan with its jukus, South Korea, Taiwan and Hong Kong, supplementary private tutoring is less obvious but growing in Africa and Latin America, and becoming increasingly evident in parts of Western Europe and North America. Bray insists that it has already grown into a huge profit-making business. In Japan, tutors can earn up to US$14 million per annum. In Egypt, private tutoring eats up 20 per cent of a household’s total expenditure per pupil in an urban primary school. And in South Korea, the equivalent of 150 per cent of the state education budget is spent by parents on private tutoring.

Some of the underlying factors are cultural and reflect the value that families place on education. However, the nature of education systems is also significant since private tutoring is especially common in stratified education systems where exams serve as ‘filters’ for the next level of education. A third factor is economic: private tutoring is widespread in societies which give strong economic rewards to educational achievement. According to Bray, it is a ‘necessary evil’ resulting from the marketization of education services in countries where exams dominate and teachers are badly paid.

Bray’s book raises fundamental issues about the role of the private sector, the channels through which pupils learn and the implications of ‘hidden’ forms of educational activity for academic achievement, economic growth and social inequalities.

The management of education systems in many countries of the world is characterized by the re-positioning of certain powers and responsibilities away from central governments towards local communities. The most extreme forms of this re-alignment of power have been associated with the restructuring of public education systems into networks of self-managing schools that are organized around centralized policy guidelines, combined with school-level autonomy for the management of the educational environment and the deployment of resources. This is often described under the general heading of ‘school-based’ management.

This booklet commences with a review of the origins and basic features of the concept of decentralization and its operationalization as school-based management. The review highlights the concern of how to increase school-level autonomy and, at the same time, ensure an orderly delivery of high-quality education that is equitable across the geographic, socio-economic and cultural divisions of society.

The booklet then moves on to describe the implementation of school-based management models in six countries, and also documents various decentralization movements that have emerged in several European countries. An overview of these case studies notes that the most radical application of school-based management has occurred in the Australian State of Victoria, where some 90 per cent of the ministry’s total operating budget has been delegated to school-based control.

Another issue taken up in the booklet is the matter of ‘leadership’ and its key function within school-based management reforms – especially the role of decision-makers with respect to enhanced levels of financial delegation.

At a time when many ministries of education are contemplating more decentralized models of administration, this booklet arrives at an opportune moment. It clarifies concepts and provides an informative account of the lessons already learnt by any school system.
Because the effects of globalization are many and far-reaching, educational planners need to have conceptual tools to discern what the phenomenon is and what its implications are. This booklet by American economist Martin Carnoy is an important contribution.

Carnoy contends that globalization has changed the nature and requisites of jobs – having a major impact on labour markets. Education systems must evolve as more people with different competencies are required. Information technology is used to increase the scope and effectiveness of education, and more sophisticated instruments are used to measure educational quality. Globalization also changes cultures, creating struggles for the control of schools as instruments of socialization.

The strength of Carnoy’s work is that it seeks to differentiate between globalization’s actual effects and the conventional wisdom on what its repercussions should be. The following ideas are valuable contributions:

➤ States now derive political support from their roles as economic actors, as competition between countries for international capital increases. Policies to heighten economic competitiveness gain importance at the expense of those geared to preserving social cohesion or national identity.
➤ An educated population is crucial for states to ensure a domestic environment attractive to investment – yet measures such as decentralization may have been the search for new resources, particularly at the local level, through special taxes or community participation.

The resource mobilization argument is also the cause of much concern. Provinces and communities have very unequal human and financial resources. If the state does not compensate such inequalities, then decentralization can lead to serious disparities.

This booklet by Thomas Welsh and Noel McGinn provides policy-makers with tools for approaching the debate by examining how authority for decision making in public education systems can be decentralized and what effects this can have. While analyzing the different ways of decentralizing, the authors admit a preference in favour of decentralization to community representatives, what they call the ‘political legitimacy approach’.

Another set of questions that interests decision-makers is what are the conditions to be fulfilled to successfully implement a decentralization reform? Which political context is more suitable for what type of decentralization and what measures can be taken to ensure its success?

In this booklet, the authors analyze a great deal of literature on the topic. But their work is more than a state-of-the-art: it adds enormously to the stock of knowledge on the decentralization debate.
Planning physical facilities
(30 October to 24 November)
Open to former IIEP trainees.
Planned for October, the forum will be based upon the booklet *Physical facilities for education: what planners need to know*, a title in the series *The Fundamentals of Educational Planning*. The forum will be in English.

Using indicators in planning basic education
(13 November – 29 February 2001)
For selected ministries of education.
The aim of this course is to explore the concepts, methods and strategies needed to improve the process by which indicators are determined for educational planning purposes. The language of the course will be English and interaction will be through the Internet.

Management of industry-university relations
(2 October – 12 January 2001)
For selected universities.
Offered in conjunction with the European Centre for Strategic Management of Universities, this course has been developed for English-speaking senior managers of university-industry relations in the East Mediterranean. It will address issues of strategic management of university-industry relations, interface, financial and personnel management. Interaction will be through Internet and the web.
IIEP ACTIVITIES

- **Intensive course on ‘Educational costs, finance and budgeting for English-speaking African countries’**
  (Mauritius, 11-22 September 2000)

  Announced in the April-June 2000 issue of the IIEP Newsletter, this activity, organized in co-operation with the ADEA Working Group on Educational Finance and CODESRIA, will now take place in Mauritius from 11 to 22 September 2000.

- **ANTRIEP seminar on ‘Better school management: the role of the headteacher’**
  (Shanghai, China, 19-22 September 2000)

  The fourth meeting of the Asian Network for Training and Research Institutions in Educational Planning (ANTRIEP) will take place in Shanghai from 19 to 21 September 2000 to discuss ways of improving school management and in particular the role of the headteacher. The seminar aims to study the efforts being made by some 15 countries in the region to strengthen the capacities of school managers. Participants will discuss not only how national authorities deal with the new situation, but also how headteachers actually manage their schools.

  As is customary, the seminar will be followed by a one-day meeting of ANTRIEP member institutions on 22 September at the Shanghai Institute for Human Resources Development.

- **Orientation seminar for Colombian university administrators**
  (IIEP, Paris, 18-29 September 2000)

  Within the framework of a capacity building programme in higher education management for Colombia, six university administrators, from six different regions of Colombia, will be trained on how to run a distance education programme on strategic financial management for state universities in their respective regions. Implemented on a training-of-trainers cascade model, the programme will ultimately ensure the training of 150 public university administrators in Colombia. The six regional co-ordinators to be trained under the active supervision of the IIEP have been selected by ICFES on the basis of their performance in an IIEP-organized face-to-face programme on the same topic, their competence in English, and their knowledge of computer skills.

- **Workshop on ‘HIV/AIDS and Education’**
  (IIEP, Paris, 27-29 September 2000)

  This workshop will bring together education planners, researchers, and personnel from donor agencies in the most AIDS-stricken countries of South-East Africa and Asia to discuss:
  - How the impact of AIDS on education systems can be gauged.
  - What practices are necessary to cope with students and families in difficult circumstances.
  - How personnel practices can be adapted to deal with higher absenteeism and higher attrition rates.
  - What the training needs are to help personnel deal with the new situation.
  - How measures that will be accepted by the population can be introduced.
  - Lessons that can be drawn from those initiatives already undertaken.

- **National course on ‘The management of teachers in Morocco’**
  (Rabat, Morocco, 2-7 October 2000)

  Organized in co-operation with the Moroccan Ministry of National Education, this course targets some 25 to 30 heads of national and regional departments involved in the planning and management of teaching staff. Participants will analyze their own management tasks and identify ways of improving them. They will also learn how to develop and use information systems and monitoring tools for better teacher management, highlighting teacher needs for professional development (suitable posting, in-service training, pedagogical support, etc.).

- **Second workshop on ‘Budgetary procedures and education expenditures analysis in Angola, Cape Verde and Mozambique’**
  (Praia, Cape Verde, 6-10 November 2000)

  At the beginning of 2000, the IIEP launched a comparative research activity on budget preparation and implementation procedures. The first meeting, held in Maputo, Mozambique, in March, allowed participants to study budget procedures in the three countries. This second workshop will help participants to analyze in greater depth the links between planning and budgeting, management and budget, the issues related to budget nomenclature and education expenditures analysis. A third workshop will take place in 2001 in Angola.

- **Sub-regional workshop on ‘Strategic resource management in higher education’**
  (Harare, Zimbabwe 6-10 November 2000)

  The main objective of this workshop is to discuss the impact of declining public funding on the management of universities and to familiarize participants with methods and mechanisms for mobilizing additional resources by universities. Between 25 and 30 senior officials (vice-chancellors, registrars, financial officers, planning officers, etc.) from universities in 12 Southern African countries (Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe) will be participating. The workshop is organized by the IIEP in co-operation with the UNESCO Sub-Regional Office for Southern Africa, Harare, Zimbabwe.

- **Training workshop on ‘Reforming school supervision for quality improvement’**
  (Kuala Lumpur, Malaysia 22 November – 2 December 2000)

  This workshop, which will take place in the Institut Aminuddin Baki near Kuala Lumpur, will examine different strategies and experiences, which shift supervision away from a control-oriented device towards becoming a tool for improving the quality of teaching and learning. It aims to discuss the following four topics:
  - supervision as part of an integrated quality monitoring strategy;
  - the organization and structure of the supervision service;
  - the management of supervision services;
  - effective supervision strategies.

  Participants will come from selected countries in the Southern and South-East Asian region.