

PROSPECTS

quarterly review of
comparative education

ISSUE NUMBER 104 ONE HUNDRED AND FOUR

OPEN FILE

EDUCATIONAL REFORM: THE DECISION MAKER'S APPROACH



INTERNATIONAL BUREAU OF EDUCATION

Vol. XXVII, no. 4, December 1997

With articles by Victoria CAMPS and Stephen P. HEYNEMAN

ISSUE NUMBER ONE HUNDRED AND FOUR

PROSPECTS

quarterly review of comparative education
Vol. XXVII, no. 4, December 1997

Editorial

Juan Carlos Tedesco 489

VIEWPOINTS/CONTROVERSIES

Education for democracy

Victoria Camps 493

Economic growth and the international trade
in educational reform

Stephen P. Heyneman 501

OPEN FILE: EDUCATIONAL REFORM: THE DECISION MAKER'S APPROACH

Educational change from the perspective
of decision makers

Juan Carlos Tedesco 533

Switzerland: in a changing world, schools, too,
are gradually changing

Martine Brunschwig Graf 541

Spain: the decision-making process in
educational reform

Álvaro Marchesi 549

Finland: restructuring higher education

Olli-Pekka Heinonen 559

Hungary: priorities—partners—implementation

Benedek András 571

The Russian Federation: the humanization
of education

Vladimir D. Shadrikov 577

Argentina: priorities in the education sector
and how they are identified

Susana Beatriz Decibe 587

Chile: generating social consensus for
a long-term reform of education

Ernesto Schiefelbein 595

Senegal: defining and implementing priorities
in the education sector

Mamadou Ndoeye 609

Mozambique: some considerations on educational research,
policy formulation and decision making

Zeferino Martins 619

Jordan: the dynamics of educational decision making

Munther W. Masri 627

Egypt: a strategy for educational reform

Ahmed Fathy Sorour 637

Asia: the impact of educational research
on decision making

*Victor Ordoñez and
Rupert Maclean* 645

Index to volume XXVII

655

Authors are responsible for the choice and presentation of the facts contained in this publication and for the opinions expressed therein, which are not necessarily those of UNESCO:IBE and do not commit the Organization. The designations employed and the presentation of the material in *Prospects* do not imply the expression of any opinion whatsoever on the part of UNESCO:IBE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Please address all editorial correspondence to: Juan Carlos Tedesco, Editor, *Prospects*, International Bureau of Education, P.O. Box 199, 1211 Geneva 20, Switzerland.
E-mail: j.tedesco@unesco.org

To find out more about the International Bureau of Education, its programmes, activities and publications, see the IBE's home page on Internet: <http://www.unicc.org/ibe>

All correspondence concerning subscriptions should be addressed to: Jean De Lannoy, Avenue du Roi 202, 1190 Brussels, Belgium. E-mail: jean.de.lannoy@infoboard.be
(See order form at the end of this volume.)

Published in 1997 by the United Nations Educational, Scientific and Cultural Organization, 7, place de Fontenoy, 75352 Paris 07 SP, France.

Printed by SADAG, Bellegarde, France.

ISSN: 0033-1538

© UNESCO 1997

EDITORIAL

Educational change is on the agenda of most countries today. It is no longer called the *reform* approach, so popular in recent decades, nor the centralized planning method. Innovations, strategic planning, negotiations and agreements are, nowadays, the most commonly encountered actions through which educational change takes place. Here too, the role and profile of those responsible for educational decision making have also been affected. There are few studies on change among those responsible for educational decisions and, for these people, it appeared to be necessary and important to make the pages of *Prospects* available so that they could express their views about how they perceive the processes of educational change to be taking place at present.

The collection of articles prepared by ministers and vice-ministers presented in this issue of *Prospects* also allows us to identify various interesting features of the decision-making process, as analyzed in the introductory article to the 'Open file'.

Two important articles in the 'Viewpoints/controversies' section are also included in this issue. In the first one, Victoria Camps examines the relationship between education and democracy, the problems of relativism in values, and the extent of the crisis in authority and responsibility, which is evident in the behaviour of various social actors. In the second, Stephen Heyneman presents a controversial analysis of the arguments supporting an increase in educational investments, particularly for basic education, together with a concrete proposition about a policy on teachers' salaries, which links the function carried out with the salary received.

JUAN CARLOS TEDESCO

VIEWPOINTS/CONTROVERSIES

EDUCATION FOR DEMOCRACY

Victoria Camps

One of the contradictions of modern democracy is the growing apathy on the part of the citizen. There is widespread scepticism and a manifest distrust of politics in general. Democratic participation has been reduced to its very minimum: citizens turn out to vote when the opportunity presents itself and, having done so, consider that they have discharged their political obligations. Not to mention that growing minority, mainly the young, who do not even feel that they have any particular duty to vote and have a sovereign contempt for all forms of political activity. In short, democracy is no longer—if it ever was—that community of individuals working together for the common good. And yet it is an ideal worth striving for. To do so, however, would mean breaking with the tendency in advanced societies towards individual and corporate insularity and a reluctance to deal with common problems.

Democracy has to be taught, because nobody is born a democrat. The mere existence of democratic institutions is not enough in itself to ensure that people automatically become democrats and appreciate the values of democracy. Established procedures and rules are one thing, but individual attitudes or a sense of citizenship are quite another. Both of these are prerequisites for a properly functioning democracy, which is not just a form of government based on elections by the people, but a system that requires active co-operation and participation by its citizens.

Original language: Spanish

Victoria Camps (Spain)

Doctorate in philosophy from the University of Barcelona. She is currently Professor of Moral and Political Philosophy at the Autonomous University of Barcelona. She was a senator during the 1993–96 legislative session and has been a member of the Trilateral Commission since 1994. She is the author of several books, including *The ethical imagination* (1983), *Ethics, rhetoric and politics* (1988), *Public virtues* (1990), *Paradoxes of individualism* (1993), *Educational values* (1994) and *The malaise in public life* (1996), and is the editor of the *History of ethics*, 3 vols. (1990–93). She is currently carrying out research on ethics as applied to health and education.

However, it has been clear for some time now that citizens no longer possess the ability to learn or to teach democratic habits. I have chosen the word 'habit' deliberately. The Greeks used to say that it was through the repetition of habits that virtuous behaviour was born. In fact, it is specifically civic virtues that we lack, i.e. those habits conducive to co-operation in solving common problems. Democracy has not become so deeply rooted within us that it forms part of the intrinsic nature of each citizen. It is clearly an asset from which we benefit, but it develops and evolves without the active participation of those who make up the *demos*.

There are reasons why it has been so hard to achieve democratic progress along these lines. The liberal democracies exist within an economic system that prizes values that are difficult to reconcile with, or are even contradictory to, democratic participation. A market economy encourages individual initiative, holds freedom to be sacrosanct and promotes the hedonism of a mass consumer society, where there is no limit to people's needs, but where the means of satisfying these needs are unequally distributed. The market is under no obligation to be equitable and just. Democracy, then, is seen, if anything, as a hindrance to efficiency and productivity or to pure economic gain.

The democratic deficit: a deficit of education

This means that there is a very serious need to re-examine the role of education. If democratic behaviour means the acquisition of certain habits, certain civic virtues, these can only be inculcated through education. Democratic apathy has to do with educational apathy. That education has an essential role to play in creating sound political practice was fully understood long ago by Aristotle,¹ who, with good reason, defined man as a 'political animal'. In *Politics*, a work specifically intended to establish the relationship between politics and education, this is clearly stated:

But the most powerful factor of all those I have mentioned as contributing to the stability of constitutions, but one which is nowadays universally neglected, is the education of citizens in the spirit of the constitution under which they live. You may have an unsurpassed legal system, ratified by the whole civic body; but it is of no avail unless the citizens have been trained by force of habit and teaching in the spirit of the constitution depending on whether the laws are democratic or oligarchic. For self-discipline may be lacking in a state no less than in an individual.²

Aristotle was aware of this failing in his own times and, no doubt, given the present state of affairs, would still think the same now, 2,400 years later. If we want citizens who are democrats, then it is up to education to plan accordingly. Of the theoretical truth of this there can be no doubt, but I should like to refer specifically to the situation in Spain, since I feel sure that it cannot differ greatly from the situation in other countries with similar forms of government and education systems. The Spanish Constitution is very clear in this respect, since it recognizes that the right to education has at least two fundamental aspects. Thus, Article 27.1 of the Constitution states that: 'Everyone has the right to education'; while Article 27.2 states that: 'The aim of education is the full development of the human personality having due regard for the democratic principles of living together

in harmony and for fundamental rights and freedoms.’ In short, the Constitution lays down two obligations: to extend compulsory education to all and to ensure that such education has a moral basis and is not mere instruction.³

It has to be acknowledged, however, that it is by no means easy to reconcile these two rights with respect for civil liberties and educational freedom. In other words, it is not easy to safeguard these freedoms and, at the same time, seek to direct them along the most appropriate lines. While there can be no doubt (coming back to the Constitution) that the first part of Article 27 deserves unqualified and universal support, the second part, which refers to moral or democratic education, is shrouded in uncertainties. It is generally agreed that education must be public, since it is something of fundamental value that must be available to all without distinction or discrimination of any kind. Education understood in this way can be seen as the first, basic step towards equality of opportunity. However, it is by no means equally clear what we should understand by education: should it aim to instruct or to form the whole person? And if education includes the latter, what concept of the person should we set out from? And can any consensus be reached on such a definition in plural and multicultural societies?

In attempting to answer such questions, philosophers have failed to reach any definite conclusions. There is clear evidence, however, of a trend in favour of abandoning any commitment to support for universal rights on the grounds that they have no real foundation or rational basis. It is claimed that in the world in which we now live—which is so manifold and diverse—it is no longer possible to establish any universally valid principles. There is no longer unanimity—as there was among the Ancient Greeks or the Christians of the Middle Ages—as to what constitutes a person, so that we are now unable to identify the characteristics that a good person might possess. There is no single example of human nature that we can take as our ideal. Education will be possible if it takes a specific cultural or religious basis as its starting point, but not if we seek something as general as teaching human rights or democracy.⁴

I totally disagree with such views. On the contrary, I believe that we must be militant and forthright in asserting, as a minimum, the universality of human rights. Only once this is accepted as a basic premise can there be room for disagreements. Consequently, any such disagreements will not be concerned with the fundamental rights themselves, but only, with the way they are to be applied, in view of the many different situations in which they have to be put into practice. Should Muslim girls be allowed to wear the *chador* in supposedly secular schools? Should such a symbol be seen as a threat to the equality of women? Clearly, such an issue is not trivial—although less so than some other issues, such as female circumcision—and needs to be discussed, so that agreement can be reached after all of the arguments and points of view have been heard. However, what cannot be allowed is the view that absolutely everything is open to discussion, including those things that we have accepted as being fundamental and basic. There are some things that are not negotiable and are not open to debate. There are some minimum standards without which the words ‘justice’ or ‘equality’ would be meaningless. And yet, even when these irreducible minimum standards are accepted, we find very little enthusiasm for the need to educate people about and for human rights. Why is this so?

In the case of Spain, there are reasons that explain—even if they do not justify—a

certain disengagement from their educational role on the part of educational institutions. The first of these reasons is that the transition from education monopolized by the Catholic Church during the Franco regime to secular education has brought with it a mistaken belief that education must be 'neutral' and value-free. The expression 'We are not educators, but merely teachers' has become commonplace among teaching staff in Spain. Secondly, progressive ideologies mainly rooted in Marxism have sought to convince us that the evils of society are not the fault of individuals, but of the way society is organized. Consequently, any talk of individual responsibility has been avoided or even regarded as reactionary. Finally, criticism of the kind of authoritarianism that existed during a highly dictatorial period has ultimately undermined the whole concept of authority. And yet without authority no education is possible! Moreover, this crisis of authority has led to an attempt—good and understandable in itself, though ill-conceived—to narrow the gap between generations and break down the hierarchies that separated parents from their children and teachers from their pupils. In fact, however, this attempt has largely failed, since it has done little to increase mutual understanding and dialogue between the generations. Finally, the little—and indeed dwindling—esteem in which the teaching profession is held by society as a whole is a factor that does nothing whatsoever to help teachers to regain their authority.

In short, schools are in a state of confusion and disorientation. And disorientation is not confined to the school, but has extended to another basic pillar of education—the family. Working mothers and shorter school hours have meant that children are left alone in front of the television much longer than is either prudent or necessary. A feeling of powerlessness in the face of television itself, and towards social fashions and trends, together with the fear of authoritarianism mentioned above, have, in turn, caused parents to relinquish their educational function. Despite the existence of institutions such as parent/teacher associations, designed to encourage social participation in the school, there is a clear lack of dialogue and understanding between parents and teachers. There is a mutual lack of trust between the family and the school and co-operation is virtually non-existent.

The crisis of authority

Back in the 1950s, the philosopher Hanna Arendt explained the crisis in education as a crisis of authority,⁵ which, in her opinion, was due to the confusion in people's minds between authority and totalitarianism. This confusion was perhaps understandable given the proliferation of totalitarian systems of government in Europe during the first half of this century, but is none the less incorrect. To hold authority is not the same as to be totalitarian, dogmatic or even authoritarian. Authoritarianism is something that is imposed, if necessary by force, because of a lack of confidence in oneself and doubts as to whether reason is on one's side. Authority, on the other hand, stems from the conviction that there is something worth teaching or passing on to other people. The problem is that, in amongst all of this confusion, there is one question that remains unanswered: who is competent to teach?

The authority exercised by the older generation is now a thing of the past. In classical antiquity the 'elders' were, by definition, great, in all senses of the term: through their

experience, their wisdom and their age. The authority of Roman senators was based on their command of tradition and the past. The modern world, on the other hand, has destroyed all of these myths and sought to eliminate everything that seemed to legitimize the exercise of undisputed authority. Secularization, the breakdown and questioning of traditions, the relativism resulting from scientific discoveries, the loss of conscience and its replacement by a deep sense of solitude and rootlessness, the lack of a god that is the custodian of eternal truths and of a heaven and a hell that mete out justice—all of this has conspired to undermine the certainties on which authority once rested. The individual, helpless and vulnerable to doubt, is unable to find a firm foothold and neither the revolutions nor the utopias of the nineteenth century were able to re-establish the foundations of authority.

To all of this confusion typical of a liberal society that has lost its sense of direction we must add some of the influences of modern educational theory that have also helped to undermine authority. In this context, Hanna Arendt specifically criticizes the tendency to place the 'nature of the child' on a pedestal and treat it as something sacrosanct. It will be difficult to educate people if we start out from the assumption that human nature is all right as it is and that no attempt should be made to develop its potential in any way for fear of distorting it or producing irremediable traumas. Furthermore, the increasingly technical nature of all disciplines has robbed pedagogy of all substance. 'How' to teach has ultimately become more important than 'what' to teach. As a result, learning is confused with play, and action with work. The idea that education is an arduous and complex task that requires a joint effort by both the teacher and the student has been lost. A love of work cannot be learned if work is replaced by play, unless it is able to inculcate respect for work itself.

In short, the disappearance of authority has meant the disappearance of responsibility. According to Hanna Arendt, this means that adults are refusing to accept any responsibility for the world in which their children will grow up. In one way or another, they lead them to believe that everything is an incomprehensible mystery that not even they have been able to fathom. Everybody washes their hands before an enigmatic future where work is scarce, new technologies invade all fields of life and economic development is dependent upon uncontrollable forces.

In a similar fashion, one of our contemporaries, the constitutional expert Manuel Ramírez, points to the error of the proponents of the modern functionalist school of sociology in North America in seeking to distinguish between two processes that cannot be dissociated so easily: socialization and indoctrination.⁶ In their view, socialization differs from indoctrination in that the latter is attributable to a specific person, while the former derives from the group, from everyone or from no one in particular. Furthermore, socialization is a long-term process, while indoctrination is much more rapid and much more obviously a form of manipulation. For very sound reasons, Manuel Ramírez rejects this distinction and holds that socialization cannot be understood as being totally free of doctrine. The same might be said of education. Both should be seen—to quote the author himself—as 'a collective undertaking that can be neither neutral nor aseptic'. If this is true of socialization, then it is even more so of education, which is a process with an even more deliberate aim in view. Clearly, there must be something to distinguish socialization or democratization in a democracy from education or socialization in a dictatorship, and that

'something' cannot only be the absence of moral content, a lack of ideas or a failure to provide a clear ideological direction.

A sociologist who took a great interest in the role of education in promoting social cohesion and progress is Emile Durkheim,⁷ who drew a very clear distinction between totalitarian, dogmatic indoctrination and a form of indoctrination which is legitimate and absolutely essential in understanding where we are starting out from and where we are going:

The school cannot be the instrument of any particular party and the teacher will be totally failing in his duty if he uses the authority conferred upon him to induce the student to share his own personal prejudices, however justified they may seem. However, despite all disagreements, there do exist, forming the very basis of civilization itself, a series of principles that we all hold in common and that few dare to openly reject: respect for reason, for science and for the ideas and feelings that underlie democratic morality. It is the role of the state to emphasize these fundamental principles, have them taught in schools and ensure that children know about them and that they are spoken of everywhere with due respect.⁸

Reorienting education

The quotations to which I have referred clearly reveal two essential ideas: (a) that education must be the guiding light of democratic culture; and (b) that education is not possible unless it conveys moral values. At a time when modern societies are tending to subordinate all development to the dictates of the prevailing economic orthodoxy, we need to find a way of overturning this monopoly that has the effect of eroding political participation and citizenship. The lack of respect for public property, the temptation of fraud, tolerance of those who engage in corrupt practices, indifference to the problems of those who are outside the social mainstream and a general lack of interest in politics are clear signs that there is something wrong, something that tarnishes and undermines the democratic ideal. Habits, customs, attitudes, behaviour and reactions will not change unless people want them to change. We must take issue with Marx and acknowledge that a change in government or political structure is not enough: we also have to change people themselves. Or subscribe to Vico's⁹ view that 'it is not good laws that make good people, but good people that make good laws.' If that is to be achieved, there is no alternative to, or substitute for, education.

Notes

1. The reader will find a profile of Aristotle in the series 'Thinkers on education', *Prospects*, vol. XXIII, no. 1, 1993, p. 39–51.
2. Aristotle, *Politics*, Book V, 1310a, in 'Aristotle's politics and the Athenian Constitution', edited and translated by John Warrington, Everyman's Library, London, J.M. Dent and Sons Ltd., 1959.
3. The work by R. Sánchez Ferriz and Luis Jimena, *La enseñanza de los derechos humanos* [The teaching of human rights], Barcelona, Ariel, 1996, comments in detail on the essential complementarity of these two constitutional provisions.

4. The leading representative of these ideas is Alasdair MacIntyre. See, in particular, his books *After virtue: a study in moral theory*, Notre Dame, IN, University of Notre Dame Press, 1984; and *Three rival versions of moral enquiry: encyclopedia, genealogy and tradition*, Notre Dame, IN, University of Notre Dame Press, 1991.
5. cf. Hanna Arendt, *Between past and future*, chapter 5, New York, Penguin Books, 1954.
6. cf. Manuel Ramírez, *Europa en la conciencia española* [Europe in the Spanish consciousness], Madrid, Trotta, 1996.
7. The reader will find a profile of Durkheim in the series 'Thinkers on education', *Prospects*, vol. XXIII, no. 1, 1993, p. 303–20.
8. E. Durkheim, *Education et sociologie* [Education and sociology], Paris, Presses Universitaires de France, 1992.
9. The reader will find a profile of Vico in the series 'Thinkers on education', *Prospects*, vol. XXIV, no. 4, 1994, p. 731–41.

ECONOMIC GROWTH AND THE INTERNATIONAL TRADE IN EDUCATIONAL REFORM¹

Stephen P. Heyneman

Introduction

Issues of trade, health, agriculture and science have historically been at the forefront of international discussions, while education has traditionally been treated as a domestic problem and, therefore, has generated less extensive exposure at the international level. This is now changing. Education is increasingly a focus of international attention and educational reform ideas are frequently traded from one part of the world to another. The reason for this trade is that traditional arguments for investing in education are changing, particularly the arguments for investing in basic or compulsory education. This paper attempts to describe the basis for the trade in educational reform by describing the changes in the argumentation over basic education.

First, it summarizes the traditional arguments for making basic educational investments, emphasizing that quality is low and the economic returns in both learning and earnings are likely to be higher than from investments in secondary, tertiary or vocational education. Second, the paper summarizes problems with this traditional view—the fact that expectations for economic performance have changed; that standards for the quality of basic education have changed; and that other levels, specializations and functions of the educational sector are interdependent. If insufficient attention is paid to these linkages, investments in basic education can have a distorting effect.

Original language: English

Stephen P. Heyneman (United States of America)

Lead Education Specialist serving countries in the Europe and Central Asia region of the World Bank. After teaching and research in Africa, he completed a doctorate degree at the University of Chicago. He has been president of the Comparative and International Education Society, a member of the board on International Comparative Studies in Education of the United States National Academy of Sciences, and a lecturer at American University and the University of Maryland. On behalf of the World Bank, he has advised senior educational officials in many different countries and other international institutions on educational programmes.

The paper then summarizes new arguments for making educational investments. These include the need to create: (i) the skills necessary to be productive in a new kind of economy; (ii) a distortion-free education system; and (iii) a socially cohesive society through educational mechanisms.

Twenty years ago it was common to assume that investment in basic education was a problem limited to low-income countries, but this is no longer the case. Expectations for the performance of basic education is a continuum. All countries require new investments and, therefore, share a basic dilemma. Requirements for social cohesion and economic competitiveness raise new expectations for basic education, resulting in a demand for system-wide effectiveness larger than the public resources available. This dilemma commonly leads to a tough questioning of traditional mechanisms of educational administration, finance and provision. Since this dilemma is universal, the result has been a massive expansion of international trade in ideas about educational reform. This expansion in trade can be expected to affect international relations among States and nations in the field of education well into the next century.

Traditional arguments for investing in basic education

QUALITY IS LOW

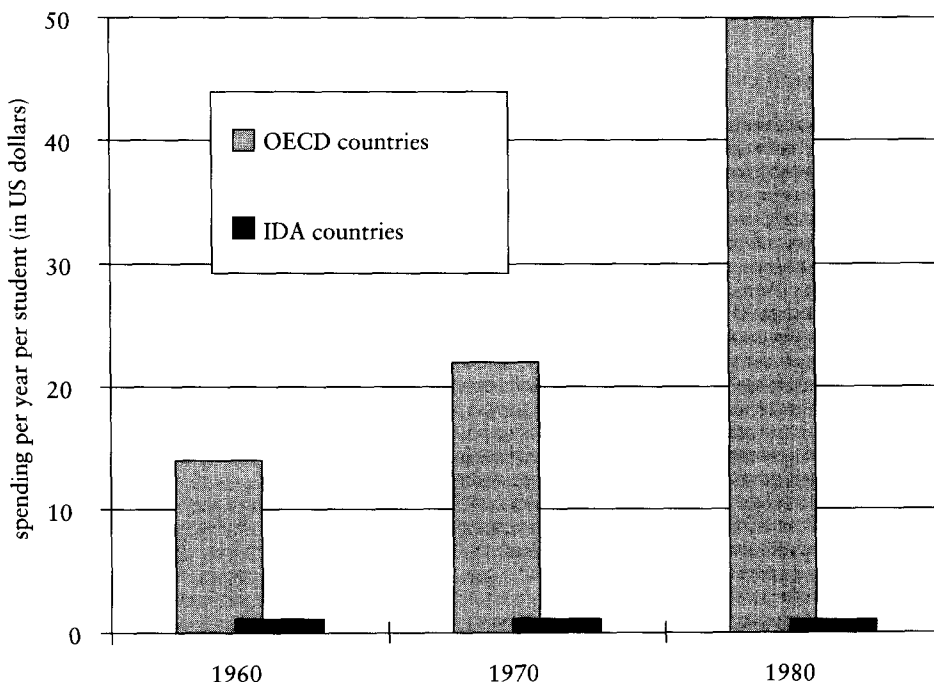
The macro-economic problems of the 1970s and 1980s threatened improvements in educational access and quality which many developing countries experienced in the 1960s. The economies were adversely affected by the decline in primary product prices, increases in petroleum prices, and obligations to service public debt. During this period, expenditure per student rose by over 40% (from US\$1,229 to US\$2,257) within industrial economies of the Organisation for Economic Co-operation and Development (OECD). For middle income countries student expenditures rose by 25% (from US\$135 to US\$180), but in the less-developed countries, expenditure per student declined by a third (from US\$122 to US\$81). There is a traditional gap in spending between low- and high-income countries, but the gap increased during this period. In 1960 the average OECD country was able to spend about fourteen times more per student than the average less-developed country (Heyneman, 1990a; Heyneman & Fuller, 1989). By 1970 that difference had grown to 22:1, and by 1980 it had grown to 50:1 (see Figure 1). These developments reinforce the conclusion that the quality of basic education in developing countries was very low, and in many respects, it was declining relative to the quality of education in high-income countries.²

INVESTMENTS IN BASIC EDUCATION ARE HIGHER THAN FOR OTHER LEVELS

Two traditional arguments have been used to support this conclusion, one based on evidence of external efficiency, the other based on evidence of internal efficiency. Since the 1970s it has been argued that the economic rate of return to investments in basic education have been higher than for either secondary or for tertiary education, and that this dif-

ference in rates of return by level is particularly characteristic of countries at the lowest income levels. The 1980 *World development report* (World Bank, 1980) for instance, displayed average returns to investments in basic education in the lowest income countries as about 27%; 17% return for investments in secondary education; and 12% returns for investments in tertiary education. If middle-income developing countries were included, the figures were 24%, 15% and 12%. In the higher income countries the comparable figures could not include basic education (which was universal, hence without sufficient variance), but could include returns to investments in secondary (10%) and tertiary (9%).³

FIGURE 1. The education spending gap: spending per year per student in US dollars



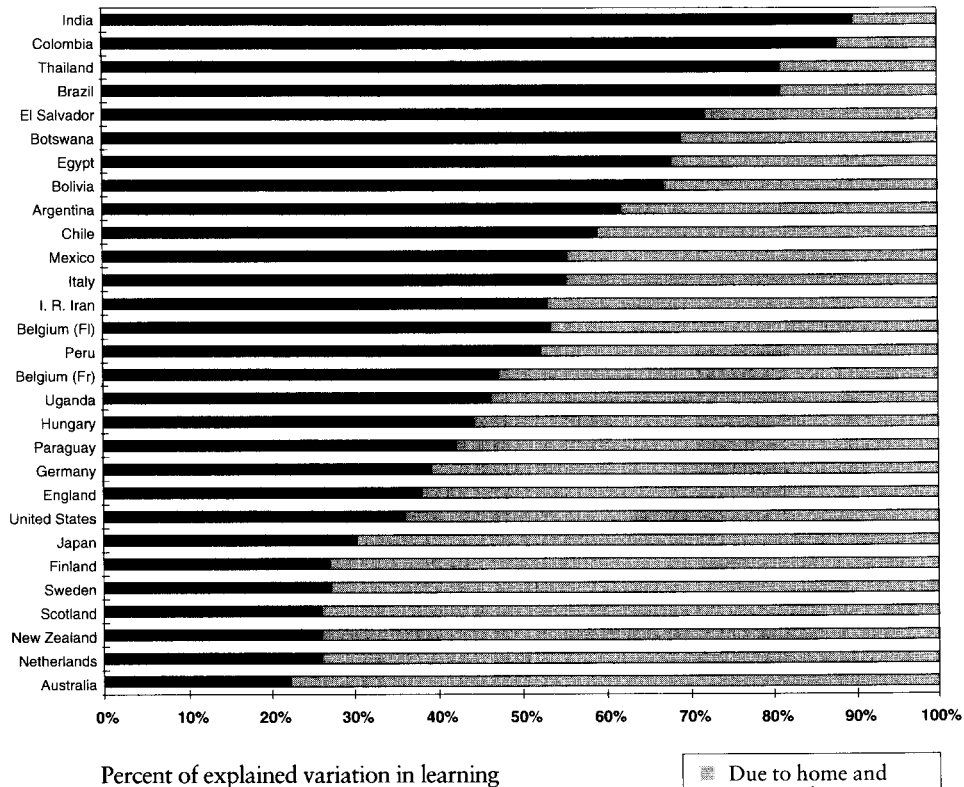
The evidence on internal efficiency was slightly different. Data on different levels of education were insufficient to generalize across countries, but were sufficient to draw some conclusions about the potential productivity of basic education in one country versus another. A summary of that evidence, first published in 1983, can be found in Figure 2.⁴

This figure separates influences on academic achievement into two large categories; those over which educational authorities have no control (a child's socio-economic status, gender, ethnicity, home environment) and those over which educational authorities have considerable control (teacher quality, school administration, physical facilities, pedagogical equipment, etc.). The aggregate influence of these in-school and out-of-school influences on achievement in science is calculated for fifteen developing countries and fourteen industrialized countries.

In industrial countries, such as Australia, New Zealand, Scotland and the Netherlands, the largest influences on science achievement are the out-of-school factors over which edu-

cational authorities have no control. In the developing countries it is the opposite. The largest influence on science achievement are the factors over which educational authorities have control. In fact, the relationship appears to be linear—the wealthier the country, the more science achievement can be explained by out-of-school influences; the poorer the country, the more science achievement can be explained by the quality of the school and its teachers.⁵ This implied that the impact of an investment in school quality might be expected to be very different in different parts of the world. In general, the lower the income of the country, the higher the expected impact of that investment. For example, if one were to take an amount of money and invest it anywhere in the world for the purpose of increasing science learning, the investment would have more impact on students in India than it would on students in Indiana. These two arguments appeared compelling in the 1980s.

FIGURE 2. Influences on primary school science achievement



Notes: Technical details are given in: The effect of primary school quality on academic achievement across twenty-nine high and low-income countries, *American journal of sociology* (Chicago, IL), May 1983.

The correlation between the influence of the school quality/national GNP per capita, $R = 0.72 (P < 0.001)$.

Source: Heyneman & Loxley, 1983b.

They helped to stimulate research on other influences of basic education (health and family planning behaviour for instance); they helped to focus attention on the impact of economic problems on the poor; to generate a consensus among countries on basic education-for-all; and to lay the groundwork for the re-ordering of priorities within international agencies of the United Nations, bilateral development assistance agencies and national governments in many different parts of the world. Basic education was believed incontestably important for reasons of both economic efficiency and social equity.

Problems with the traditional view

These traditional arguments have been overtaken by several changes. Expectations for economic performance have shifted since the 1970s, making the previous definitions of 'basic' education outdated. New definitions of basic or compulsory education apply not only to low-income countries but to all countries. This has led to a greater understanding of the educational sector and, in particular, the degree to which various functions depend upon each other for efficient operation. This, in turn, has led to the realization that a concentration of attention only on one part of education, such as basic education, can have a distorting effect on other parts. This would suggest that domestic educational authorities as well as international agencies would be more effective were they to not decide on educational priorities by level, but rather after careful reflection about the system at large.

ECONOMIC EXPECTATIONS HAVE CHANGED

In the 1970s and 1980s, it was common to rely on the State for economic growth (World Bank, 1995a; 1995b; 1995c) and on official development assistance for stimulating the State. Today private transfers of investment capital outstrip official development assistance (World Bank, 1996). Moreover, within countries, private investment to less privileged areas may also be more than what is expected from official governmental sources. Regions in different parts of the world now compete for the same private investment. A computer manufacturing plant might be located in Northern Ireland or southern Italy; a textile plant in Bangalore or Senora; a farm for winter oranges in Kenya or Morocco. What determines the choice of where to invest? Why does investment capital flow to one location over another?

Many factors determine investment confidence, such as rules regarding the repatriation of profits, taxation policy and risk of property expropriation. Another factor is labour productivity, with more investment likely in areas of higher worker productivity. In East Asia and the Pacific, the growth of GDP per worker increased from 4% between 1965 and 1980 to 5% between 1980 and 1990, and to almost 8% between 1990 and 1993. The growth of GDP per worker actually declined on average in OECD countries, in Sub-Saharan Africa and most dramatically in Europe and Central Asia. It also declined substantially in the Middle East and North Africa, particularly after 1990.

Worker productivity can also be monitored through trends in per capita exports. By this measure the Middle East and North African region has demonstrated consistent increases, from about US\$40 per capita in 1981, to US\$50 in 1985, to US\$100 in

1989, and finally to about US\$120 in 1993. However, the increases in Latin America (from US\$50 per capita in 1985 to US\$100 per capita in 1989, to US\$200 in 1993) exceed those of the Middle East and North Africa by a large margin. Still, the increases in East Asia (from US\$50 per capita in 1981 to US\$275 per capita in 1993) exceed those of Latin America. Lastly, the increases in the Europe and Central Asia region (from US\$75 per capita in 1981 to over US\$300 per capita in 1993) are the greatest. The lesson is that even though productivity is increasing in general, it is possible for productivity to increase in one region yet fall behind other regions where improvements are occurring at an even faster rate.

How do productivity improvements occur? The workplace seems to be profoundly changing. Twenty years ago, when growth was commonly assumed to result from State enterprise, an effective enterprise had a strong system of command, control and supervision. Emphasis was placed on production. Employees were assigned specific routine tasks, and were expected to perform them reliably (Golladay et al., 1995). Today an effective business operates under different assumptions. Workers are expected to identify and solve problems, learn new skills, personally manage non-routine problems and make decisions which require a broad understanding of the work context.

Expectations for competitive agriculture are also shifting. Traditional farmers used local varieties of seeds and implements, and it was common to pass techniques from parent to child. Today, agricultural trade depends on more complex technologies, new seed varieties, changing mixtures of fertilizer, pest control and irrigation. There are many places in Africa, Asia and the Middle East where winter tomatoes and flowers can be exported. Why does one location have a comparative advantage? One reason is a labour force able to mix inputs in response to changes in weather, soil, crops, quality control and regulations governing the environment.

Changes in standards for manufacturing and agriculture have educational prerequisites. The traditional workplace required teachers to convey knowledge emphasizing factual information. It did not matter that learning was segmented from meaningful context. The math requirements of traditional agriculture were addition and subtraction and often acquired outside formal education. With new and complex inputs to factor into a 'production equation', other operations became necessary: complex division, multiplication, more complex literacy skills, writing ability and rudimentary knowledge of chemistry and biology. These are known as 'hard skills'. Also expectations for 'soft skills' are increasing: punctuality, diligence, ability to research unfamiliar concepts and access new information through both print and electronic means. These changes in the standards for economic competition have triggered changes in the requirements for basic education.

DEFINITION OF BASIC EDUCATION HAS CHANGED

Each country has a unique education system, but there are similarities across countries as well. If one divides education systems according to the quantity of the available goods and services, they generally fall into four categories (Table 1). In category A, generally in the poorest countries, teaching and learning is characterized by a small number of avail-

able textbooks per classroom. The content is written on the blackboard and pupils are expected to copy from the blackboard to a copy book. This 'copy/copy' circumstance is typical of many rural classrooms in sub-Saharan Africa and South Asia. In terms of student learning, the only product which can be expected will be rote memorization of fairly unsophisticated and poorly interpreted information. Even after six years of primary education, a typical student may acquire only a fraction of the skills expected from categories B, C or D of primary education.

TABLE 1. Categories of school quality

Category	Level of expenditure on non-salary materials/student	Indicator	Product	Example
A	1	1 textbook/class. With some exceptions the teacher has the only available book. Pupils expected to copy the text from the blackboard and memorize.	Rote memorization of unsophisticated and poorly interpreted information	Uganda Liberia Haiti
B	3:1	1 textbook/student. Each student has access to one book in each subject. Comparatively few prerequisite pedagogical skills.	Major expansion of information and efficiency of presentation; little progress on self-generated skills of learning	Philippines China
C	40:1	Several textbook titles available/student. Pupils in lower grades work on locally designed exercises, teacher picks and chooses from among the best or the most appropriate available materials. Requires significant intellectual independence on the part of teachers.	Range of pedagogical programmes based upon individual student ability; significant increase in the mastery of cognitive skills	Malaysia
D	300:1	15 titles to 40 copies/student available in supplementary reading materials in each school in addition to a wide variety of curriculum packages, reference books, maps, dictionaries, film strips, lesson tapes, documentary films and computer-assisted instruction. Significant managerial skills required on the part of teachers at all levels of education.	Self-generated habits of learning; ability to investigate new ideas and to recognize strong and weak arguments; major improvement in cognitive creativity; wide exposure to culture as well as science	Japan United States Sweden

Source: Heyneman & Fuller, 1989.

If a school system has access to about three times the level of resources per pupil it may resemble the second of the four levels, category B. At this level, each pupil generally has access to a textbook in each subject. This constitutes a major expansion of information and efficiency of learning. Nevertheless, the bulk of the teaching is confined to the content of the available textbook, and comparatively undifferentiated by a pupil's style of learning. School systems in category B are unable to encourage self-generated learning.

If a system has access to about forty times the level of per pupil resources as category A, it may resemble a system in category C. Every student has access to several textbook titles per subject. Teachers are expected to target content differently to different students, and school systems at level C expect teachers to play different functions in the classroom. Instead of being 'a provider' of text-based information, the teacher is expected to be 'a manager' of information drawn from a variety of different sources.

Lastly, if a school system has available 300 times the per pupil resources as those in category A, it will have attained the resources typical of many OECD systems. A school system in this category will have a wide variety of sources for print as well as electronic information. The expected product is a latitude of new ideas, self-generated learning and the differentiation by students of strong and weak argument.

One illustration of how the different categories of school systems relate to the economy can be taken from the example given about agriculture. Productivity in agriculture falls into four different categories, roughly equivalent to the products from the four categories of basic education. These are illustrated in Table 2.

Two centuries ago, most agriculture was characterized as level A, where local varieties of seeds and implements were utilized, and techniques were passed down from parent to child within communities. With the introduction of fertilizer, techniques became more complicated and the cognitive requirements for calculating application rates with different water and soil assumptions required a level of basic education in excess of level A. The same increasing complexity is evident with each new variable: pest control, seed varieties, quality control and environmental regulation, until the ingredients of agricultural productivity reach level D. At level D the prerequisites for basic education are similarly expanded. The number of years of education is not the principle variable; the principle variable is the increment in the expectations for basic education itself (Bishop, 1989). The higher the level of complexity of economic performance, the greater the demand for a higher level of quality in basic education.

If monetary resources were the sole determinant of more effective learning, then educational strategy would be relatively straight-forward. Results from recent international studies have suggested that resources alone do not determine an education system's effectiveness. One illustration is the difference between school systems in centrally planned economies and school systems in market economies. Results from the Second International Assessment of Education Progress showed a systematic difference between effective school systems in market economies and effective school systems in centrally planned economies. The seven most effective school systems at teaching math and science out of the nineteen countries in the sample are displayed in Figure 3. Student performance is divided between awareness of factual information, application of factual

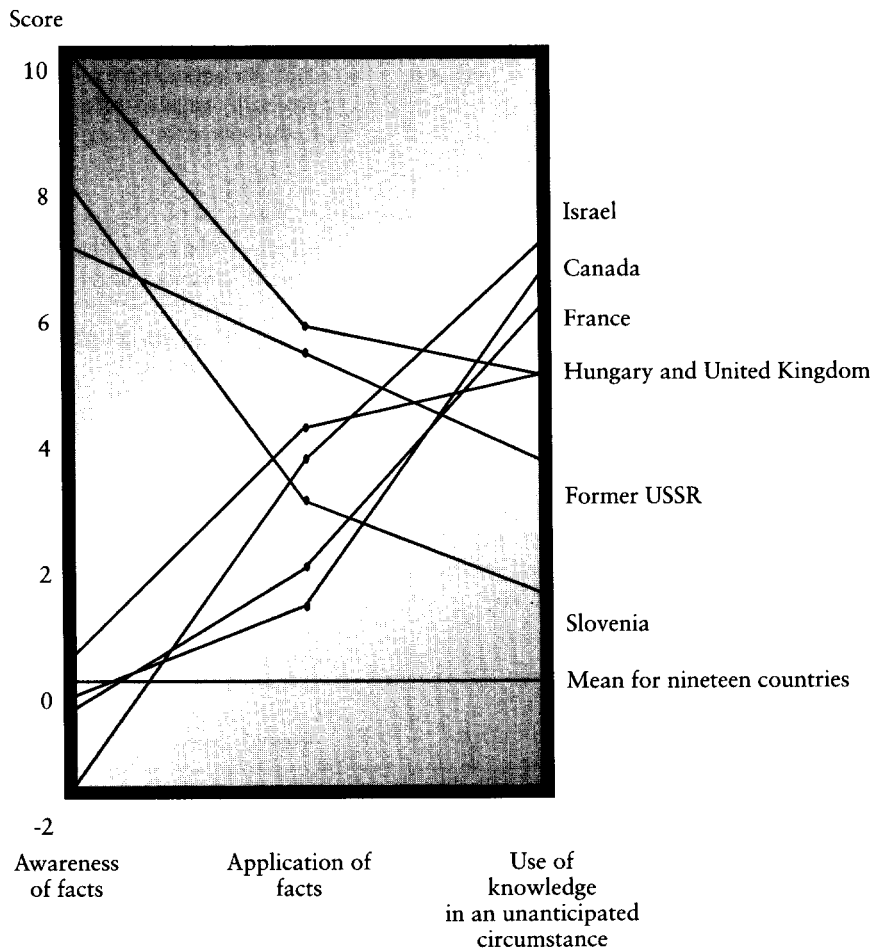
TABLE 2. Four basic stages of agricultural productivity and their learning requirements

Level	Technology level	Agricultural inputs	Minimum learning requirements
A	Traditional farming techniques passed from parent to child	Local varieties of seeds and implements	Addition and subtraction—not necessarily acquired through formal education
B	Intermediate technology	Small quantities of fertilizer	Addition, subtraction, division and rudimentary literacy
C	Fully improved technology	High-yielding varieties; proven seeds; rate of application of seed; fertilizer and pest control per acre.	Multiplication, long division and other more complex mathematical procedures; reading and writing abilities; rudimentary knowledge of chemistry and biology
D	Full irrigation-based farming	All above inputs and tube well access during the off season; water rates per acre	Mathematics; independent written communication; high reading comprehension; ability to research unfamiliar words and concepts; elementary chemistry, biology, physics; regular access to information from print and electronic sources

Source: Heyneman, 1990a.

information, and the use of information to solve new and unanticipated (i.e. not in the text) problems.⁶ Students in the four most effective school systems in the market economies performed lower on the first, higher on the second and highest on the third. Students in the school systems with centrally administered economies performed better in the opposite direction: highest on awareness of facts and lowest on solving unanticipated problems. This suggests that school systems in centrally administered economies demand a different balance of skills than systems in market economies. School systems in market economies have to prepare students for an uncertain occupational future in which movement across many possible vocations and sectors is normal. School systems in administered economies had a different task. In those circumstances, the economy was planned, technical change was predictable, hence skill training was relatively certain. Curriculum emphasis was placed on the acquisition of information. The problem is that in Central and Eastern Europe and the former USSR, the economic context has significantly shifted. Today, occupational uncertainty resembles that of market economies, and so the challenge to school systems in that region has shifted. The challenge is similar to that of school systems in market economies. Their effectiveness in the future will be predicted by whether they can adjust to these new requirements.

FIGURE 3. The seven most effective school systems at teaching math and science and the mean for nineteen countries



Source: World Bank, *The World Bank development report*, Washington, DC, 1996, p. 125.

But curricular emphases differ from one country to the next even within market economies. Some school systems expect more complicated and varied performance skills than others. One illustration is a comparison of objectives in biology and mathematics between France and countries in the Middle East and North Africa (Table 3). From an analysis of examinations of school systems in the Middle East and North Africa, objectives in math focused on performing routine procedures, justification and proof, whereas in France, the objectives at the same age/grade level also included use of equipment, solutions, predictions, verification, generalization and problem description (Valverde, Schmidt & Bianchi, 1996). Similar differences were noted in biology. In France objectives included complex and thematic information, abstraction, deduction of scientific principles and the use of those principles to explain, construct and use models, and the design of investigations and the interpretation of data derived from them.

TABLE 3. Expectations for performance in mathematics and biology: France compared with the Middle East and North African (MENA) countries

Expectations in mathematics	MENA	France	Expectations in biology	MENA	France
Representation	x		Simple information	x	
Use of equipment		x	Complex information		x
Performance of routine procedures	x	x	Thematic information		x
Use of more complex procedures	x	x	Abstraction, deduction of scientific principles		x
Solving		x	Use science principles to explain	x	x
Predicting		x	Construct and use models		x
Verifying		x	Design investigations		x
Generalizing		x	Interpret, investigate data		x
Justifying and proving	x	x			
Description/discussion of problems		x			

Source: Valverde, Schmidt & Bianchi, 1996.

Do wealthier school systems systematically out-perform others? From the Third International Math and Science Study (TIMSS) it was clear that school systems had access to very different levels of monetary resources but at the same time, they had divergent results in putting resources to use. One illustration can be found in Table 4. In column A, countries are listed by the levels of public expenditures on education per capita. Column B displays the proportion of 8th grade students performing over the international median for all forty-one countries participating in the TIMSS exercise. Column C is the ratio of A:B and therefore is the amount of investment per capita necessary to increase the portion performing over the international median by 1%. Norway, for instance, spent US\$1,111 per capita and had 46% of the students perform over the international median. This suggests an investment of US\$24 for each 1% of the students performing over the international median. The United States spent US\$1,040 per capita and had 45% of the students over the international median, hence an investment of US\$23 for each 1% of the students over the international level. Korea, on the other hand, spend US\$362 per capita, had 82% of the students over the international median with an investment of US\$4 for each per cent. In Latvia, Lithuania and Romania the efficiency levels were even more dramatic. Those countries were able to invest a much smaller level of resources per capita, but were able to get 1% of their students over the international median for only two or three dollars. Using this criteria, school systems in Latvia, Lithuania and Romania were more efficient than any others in the worldwide sample. This suggests that performance expectations of school systems are shifting. It is no longer sufficient to know that attendance is universal or that school achievements are high. Now it is necessary to have additional information. What are the expectations of the curriculum? How much is being invested for each child? How much of that investment is reaching specific classrooms? Though it may be premature to draw simple judgements about results, it is safe to suggest that the wealthier school systems are not necessarily the most effective (Howson, 1997; Schmidt et al., 1997a; 1997b).

TABLE 4. Educational expenditures and mathematics achievement (in order of expenditure)

Country	Public expenditure on education/capita* (A) in dollars	Proportion of students over the international median in 8th grade mathematics (B) as a percentage	Ratio A/B
Norway	1,111	46	24
United States	1,040	45	23
Kuwait	848	3	287
Singapore	724	94	7
United Kingdom, England	649	48	14
Japan	602	83	7
Israel	584	56	10
Republic of Korea	362	82	4
Hong Kong	309	80	4
Czech Republic	297	70	4
Hungary	272	60	4
Thailand	206	54	4
Islamic Republic of Iran	183	9	20
Latvia	147	40	3
Lithuania	71	34	2
Romania	55	36	2

* Calculated by multiplying the GNP/capita (in international dollars) by public expenditures on primary and secondary education.

Source: Beaton et al., 1996.

EDUCATIONAL LEVELS AND SPECIALIZATIONS: INTER-DEPENDENT

The health sector provides an analogy. Primary health care is incontestably important. Yet primary health care depends upon an efficient system of referrals to increasingly specialized sources of care, research, diagnostic information and professional training. The same holds true for education. No country has developed its economy by investing in only one level of education. In spite of the compelling arguments, investing in basic education at the exclusion of other essential educational priorities creates distortions. Low-quality higher education affects teaching and administration throughout the system. Unreliable or invalid educational statistics prevents understanding of educational progress. An absence of co-ordination between different levels, or between curriculum content, textual material, pedagogical training and examination content lowers the effectiveness of the education system in general. The main objection to the traditional arguments for basic education is that they ignored these sector interdependencies and created a set of essentially artificial investment priorities.

But what should one look for in a well-functioning educational sector? What are the necessary ingredients? This is illustrated by Figure 4. Every educational sector has three essential levels: pre-compulsory, compulsory and post-compulsory. The ideal ingredients of financing and provision may be quite different at each of the levels. Attention to specialized abilities and interests begins at the pre-school level and continues through-

out. School systems with more resources are able to deliver greater attention; those with fewer resources, less attention. All systems of education require:

- schools which respond quickly to local demand;
- teaching materials obtained on the competitive market;
- a teaching force characterized by professionalism;
- descriptive statistics and indicators of internationally acceptable quality;
- multi-channel financing which maximizes public desire to make local investments, without abrogating general standards for equal opportunity; and
- research which is informative.

There are other characteristics, however, which are necessary for only certain specialized parts of the sector: professionalized skill training; establishment of exit standards and modern entrance examinations to higher education; and financing for profit-making institutions.

FIGURE 4. A cohesive education sector

	Pre-compulsory	Compulsory	Post-compulsory
Specialized abilities and interests			
Responsive schools			
Competitive materials			
Professional teachers			
Descriptive statistics			
Informative research			
Multiple sources of finances			
—public			
—private individuals			
—NGOs			
—profit-making institutions			
Exit standards			
Modern entrance examinations			
Specialized skills/professions			

New rationales for investing in education

If investing by level creates distortions, and if a cohesive educational sector is the desired outcome, what then are the reasons for making educational investments? What rationales are most relevant for future economic and social demands? There are three new types of rationales. One is the argument that higher productivity is the result of educational outcomes, but they use new definitions of education and new measures of economic productivity. A second is the argument that educational efficiency requires a cohesive educational structure and an enabling educational policy framework. Last is the rationale that education makes a specific and identifiable contribution to social cohesion and social stability, and that these are necessary for a nation's growth.

PRODUCTIVITY

Measuring individual productivity in the future will differ from the past in several ways. The *definition of educational quality* will become increasingly sophisticated and full of detail (Vari, 1997; Schmidt, McKnight & Raizen, 1997; Schmidt et al., 1997a; 1997b; Heyneman, 1997b). Traditional economics recognizes only crude measures of human capital which differentiates individuals on the basis of years of schooling 'exposure'. In the future, it will be necessary to differentiate the marginal productivity of individuals on the basis of differences in intended, delivered and received curriculum; differences in the quality of educational resources brought to bear on the curriculum; and differences among the intended educational products. These might include not only earnings functions but specific cognitive skills, successful citizenship behaviour and work habits such as diligence, creativity and personal responsibility, family and private endeavours (Bishop, 1989).

Aside from the new definitions of human capital and the new measures for the quality of education, it will also be necessary to focus attention on the *policy environment of the labour market*. This environment significantly affects the productivity of the educational sector. Attention in the future will fall into two categories. There will need to be a better balance between public and private functions governing unemployment. A consensus will have to be developed where public responsibility ends and private responsibility commences. If compensated in an overly generous fashion, unemployment may distort demand for education and allow the educational sector to remain impervious to changes in labour force requirements. For reasons of fiscal necessity, public responsibility for unemployment in many cases will decline. Attention will need to be paid to the portability of pension and health insurance. If insurance is linked only to a single employer, changing occupations will be constrained. In general, there needs to be fewer regulations governing labour turnover. To be competitive employers have to hire quickly and efficiently and other staff may have to count on opportunities elsewhere as a matter of normal change. Last is the question of youth policy. In many instances, vocational education is used more as a means of youth control than as a provision of skills. Fear of youth unemployment is real, and the political ramifications of youth misbehaviour are disturbing. However, using vocational education as a means to keep youth off the streets is not a solution (Gill & Heyneman, forthcoming). The solution lies in a creative youth policy which mixes volunteer and community obligations to engender social commitment and in student loans which provides incentive for further educational opportunity.

To be sure, there are numerous cultural and national differences among these policies. Countries are not likely to reach the same view of unemployment compensation simultaneously. The point of mentioning these difficult areas is not to suggest that there is a single solution or a single correct policy. The point is to reiterate the notion that the productivity of educational sectors around the world will depend on the efficiency and fluidity of the labour market and its policies.

INTERNAL EFFICIENCY

The list of common areas for improving educational sector efficiency can be very lengthy, but it may be useful to mention four immediate areas: descriptive statistics, the produc-

tion of competitive educational materials, a professionalized teacher force, and creative financing and delivery of higher education.

Statistics

The professional quality and variety of educational statistics and indicators have been growing in OECD countries, but have remained stagnant or even declining in many of the non-OECD countries (Heyneman, 1993*b*; Puryear, 1995; BICSE, 1993; 1995). OECD countries agreed on thirty-six indicators in 1992, thirty-eight in 1993 and forty-nine in 1994. These included twenty-six indicators of resources and processes, thirteen on context and ten on outcomes (OECD, 1995). What reliable indicators are available elsewhere? Table 5 provides a list of the forty-nine indicators available in OECD countries by comparison to countries in the Middle East and North Africa region. About 60% of the indicators are either not available or are 'notional', suggesting that they are not reliable. The countries of the Middle East and North Africa for instance, have no indicators at all of student outcomes, no systematic data on opinions and expectations for education, and only a notional idea of education's labour market outcomes. Africa and Latin America are beginning to organize strategies to combat this problem (Sauvageot, 1992; 1993; 1996; 1997; McMeekin, 1997). But the challenge is more complex than simply adding new data. Not only is the number of expected indicators increasing, but the expected quality for current descriptive statistics is increasing as well. New professional standards for reliability and validity, now applied in OECD countries, will have to be applied more generally to enrolment and progression rates, to definitions of literacy, and to vocational education which are currently collected but unreliable by these new standards.

Competitive production of educational materials

Like pharmaceuticals and fertilizers, the production of educational print and electronic materials is a large and growing industry. The problem is that the policy assumptions behind educational materials have not kept pace with the industrial and marketing changes. In many countries it is believed that educational materials should be designed, manufactured and delivered through the ministry of education. Countries of the former Soviet Union, Eastern and Central Europe, and many in sub-Saharan Africa and other parts of the world held to this assumption a decade ago (Heyneman, 1990*b*; 1990*c*). When governments get involved in manufacturing products, particularly in instances when those products are widely available in the private sector, the general effect is to lower the quality of the product, raise the (real) price and inhibit innovation. Ministries of education in OECD countries generally concentrate on five essential functions common to all ministries of education: (i) setting the objectives for the curriculum; (ii) approving the materials for use in public schools; (iii) financing those materials (as can be afforded); (iv) insuring that students from underprivileged backgrounds have an equality of access; and (v) disseminating the results of innovations and reporting progress to the public at large (Heyneman, 1994*a*; 1994*b*). The difference is illustrated in Figure 5.

TABLE 5. List of OECD education indicators and their availability in Middle Eastern and North African (MENA) countries

Resources and processes	Available in MENA*
Financial resources	
<i>Expenditure on education</i>	
Educational expenditure relative to GDP	Yes
Expenditure of public and private educational institutions	No
Expenditure for educational services per student	No
Allocation of funds by level of education	Yes
Current and capital expenditure	Yes
<i>Sources of educational funds</i>	
Funds from public and private sources	No
Public funds by level of government	Notional
Share of education in public spending	Yes
Participation in education	
Participation in formal education	Yes
Early childhood education	Notional
Participation in secondary education	Yes
Transition characteristics from secondary to tertiary education	Yes
Entry to tertiary education	Yes
Participation in tertiary education	Yes
Continuing education and training for adults	No
Processes and staff	
<i>Instructional time</i>	
Teaching time per subject	No
Hours of instruction	No
<i>School processes</i>	
Grouping within classes	No
<i>Human resources</i>	
Staff employed in education	Yes
Ratio of students to teaching staff	Yes
Teaching time	No
Teacher education	Yes
Teacher compensation	No
Teacher characteristics	No
Educational R&D	
Educational R&D personnel	No
Educational R&D expenditure	No
CONTEXTS OF EDUCATION	
Demographic context	
Educational attainment of the population	Yes
Gender differences in education	Yes
Youth and population	Yes
Social and economic context	
Labour force participation and education	Yes

Unemployment among youth and adults	Notional
National income per capita	Yes
Opinions and expectations	
Importance of school subjects	No
Importance of qualities/aptitudes	No
Public confidence in the schools	No
Educational responsibilities of schools	No
Respect for teachers	No
Priorities in school practices	No
Decision-making at school level	No
RESULTS OF EDUCATION	
Student outcomes	
Progress in reading achievement	No
Amount of reading	No
System outcomes	
Upper secondary graduation	Yes
University graduation	Yes
University degrees	Yes
Science and engineering personnel	Yes
Labour market outcomes	
Unemployment and education	Notional
Education and earnings	No
Educational attainment of workers	No
Labour force status for leavers from education	Notional
N = 49; Yes = 43%	
* Available to officials in the Ministry of Education only. Countries in the MENA region generally do not publish educational statistics for use by the general public.	
Source: Heyneman, forthcoming <i>c.</i>	

Teacher professionalization

For the most part, educational expenditures are driven by the salaries paid to teachers. Therefore, the degree to which salaries reflect differences in professional ability determines to a large extent the responsiveness of an education system to pedagogical and curricular reform (Chambers, 1985; Cohn, 1996; Holtman, 1969; Murnane, 1984; Murnane & Olsen, 1990; Kenny & Denslow, 1980; Rickman & Parker, 1990; Rumberger, 1987; Southwick & Gill, 1997; Zarkin, 1985; Dolton, 1990). In most countries the salary structure is determined by a teacher's level of prior or in-service education and by the number of years teaching. Neither has proved to be a robust influence on classroom behaviour. The result is that education is perceived by parent and political authorities as impervious to educational reform. How can teachers be paid well and fairly but, at the same time, paid in accordance with professional ability?

One suggestion has been to sponsor periodic teacher recertification over a career, but with sufficient salary differences at each level to encourage continual in-service preparation. An illustration of this principle can be found in Table 6.

FIGURE 5. Competitive production of educational materials

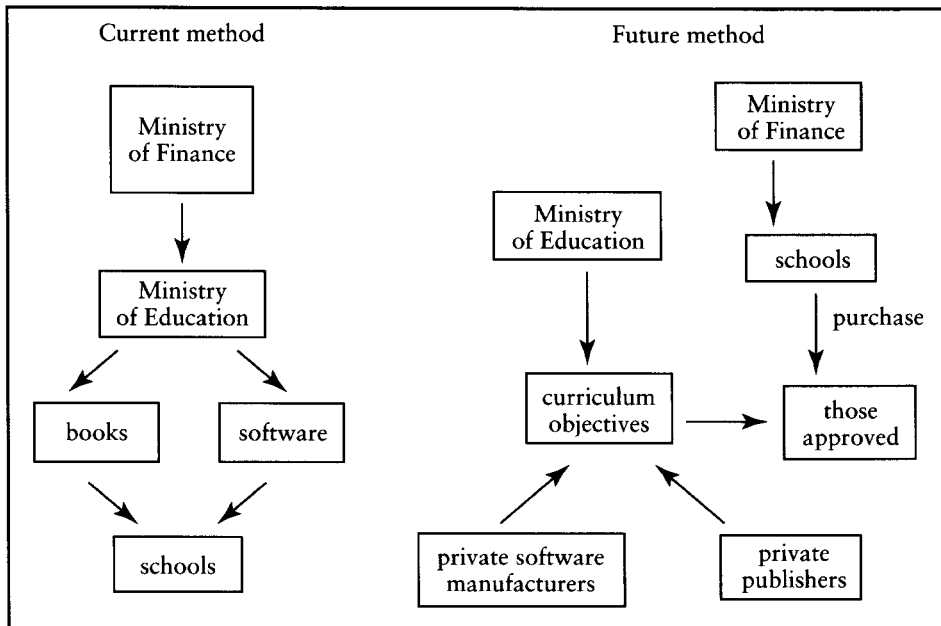


TABLE 6. Professionalization of teachers

PROFESSIONALIZATION OF TEACHERS													
% Reaching	100		80					50			20		
Salary scale by comparison to apprentice	A		B					C			D		
		Exam*					Exam*	Exam*					
Years teaching	0	1	2	3	4	5	6	7	8	9	10	11	12 13 14
	Apprentice		Grade 1 teachers					Grade 2 teachers			Grade 3 teachers		

* Based on:

- (a) Subject matter knowledge;
- (b) Knowledge of didactics;
- (c) Observed classroom performance;
- (d) Contribution to the profession or to the school.

Source: Heyneman, forthcoming c.

Teachers would first enter the profession as apprentices, paid at 'Salary Level A'. They would sit for their first licensing exam after a year or two. The exam would consist of four criteria: subject matter knowledge, knowledge of didactics, observed classroom performance,

and reported contribution to the profession or the school. After six or seven years in the profession, a teacher might sit for a new and more difficult license examination with the same components but changes in the criteria parallel to the changes in the standards for curriculum and pedagogy. Similarly at eleven or twelve years, a third examination could be set with similar requirements. Salaries of the teachers with more advanced licenses would be sufficiently higher to provide the necessary incentives to remain in the profession.

Individual teachers and teacher associations may favour such a system because they could claim, with justification, that salaries reflect performance competence. They could, therefore, justify higher salaries. Educational managers might look favourably on such a system because it provides a mechanism for infusing new curriculum and pedagogy into the teaching force at any stage of a teacher's career simply by changing the content of the certification examinations. Finally, fiscal authorities may favour such a system and more readily agree to the higher salary scales because studying for the examinations can be classified as a private expenditure, and because teachers who continually fail may leave the system. The general public and parent groups may favour such a system because they would have increased confidence that the teachers in their local schools were subject to rigorous standards like other professions.

Many questions remain. Who should grade the examinations and provide school-level observations? The answer could include teacher associations, parent committees and representatives of the ministry and the academic community. What should be the level of salary differences from one salary category to another? The answer might well be sufficient to provide the necessary incentives. What should be done with those who cannot pass? The answer may be to ask them to leave the teaching system as newer and more highly qualified teachers become available. The point is not to suggest that there is one system for resolving the issue of teacher professionalization. Rather the point is to highlight the overwhelming importance of teaching and teachers in education and to recommend creativity at bringing the public investments in salaries in line with classroom behaviour.

Creative provision and financing of higher education

In the 1960s, higher education enrolment in Western Europe was typically less than 10% of the age cohort. Today, enrolment in higher education is above 30% in France, 45% in the United Kingdom, 49% in Belgium and 60% in Finland and in the United States. Moreover, because of political and social priorities, the percentage of higher education enrolment, particularly in North America, can be expected to increase into the next century. With increases in enrolment there has been an increase in the expectations for higher education quality, library and laboratory resources, and the number of curricular offerings and disciplines from which to choose. OECD higher education capital and recurrent expenditures amounted to about US\$40 billion in 1960, US\$100 billion in 1980 and US\$162 billion in 1993 (of which the United States accounted for 54%). While the price of higher education may differ significantly from one country to another because of cultural differences in the expectations for private responsibilities, the actual (real) cost (US\$12,000 excluding fees for board and room) is similar across many OECD countries. Low-income countries are able to allocate significantly less for pupils in higher

education. On the other hand, no country is satisfied with the current quality, availability or equity in student participation of higher education (Heyneman, 1994*b*). They want to raise all three.

In few countries can improvements in access, equity of participation and quality be 100% publicly financed. Public financing might have been understandable with less than 10% of the age cohort enrolled, but at 30% or 60%, the logistics and fiscal requirements have put new and unprecedented pressures on public finance. Since scarcity is a universal problem, the kinds of reform choices considered relevant are now international. These come in four groups.

The first group derives from the pressure to diversify the mechanisms for providing higher education—from public to private, profit-making as well as non-profit-making, international networks of universities and specialized training institutions. A second group responds to the pressure to diversify financing—fees for laboratories, targeting of scholarships for the poor, restrictions of student welfare, different tuition in different faculties, income from rental or leasing of property, marketing of university-copyrighted inventions and contracts, grants and consultancies. A third group responds to pressures to increase institutional efficiency. This includes close attention to student/faculty ratios, judicious use of new technologies, less expensive contractual arrangements, department-based budgets and divergence in salaries to reflect market demand for students. The last group responds to the pressures to shift public functions, such as fewer welfare services in lieu of better libraries, and lower transport subsidies in lieu of greater access to computer equipment.

Higher education is also struggling with similar reform issues. They include determining a mechanism by which institutions become accredited and how professionals become licensed; establishing open and fair competition for public research support and for student enrolment; and establishing a salary structure determined at the institution level and according to discipline. Additional issues include: developing a credit system for the completion of courses, shifting to fixed-term teaching contracts instead of lifetime tenure, making student loans portable from one institution to another, creating other per student funding formulas, allowing for the operation of universities outside of the country of origin and setting international recognition of degrees and certificates. At one time these issues may have been considered of local relevance. Today however these issues are universal.

SOCIAL COHESION AND SOCIAL STABILITY

The first two rationales described above, changes in the economy and demand for efficiency, both concern economics, marginal improvement in skill, adaptability to new labour markets and contribution to economic growth. However, the third rationale for making educational investments is not economic but social. It concerns a sense of citizenship, a general acceptance of obligations and responsibilities and clear individual rights and privileges. This social rationale, in effect, is education's contribution to social cohesion and social stability.

What Dewey refers to as 'education and democracy' (Dewey, 1916) implies the manifest influence of education on personal and individual rationality in contrast to blind obedience which may have characterized individuals without education. Since Dewey's time

there have been a variety of claims for education's efficacy and many efforts to empirically demonstrate education's effect on the individual. Lipset (1959) investigated how schools may broaden outlook and increase tolerance and the desire to participate in the political process. Almond and Verba (1963) explored the association between more and better education and a nation's democratic stability. Meyer (1970) and Kamens (1988) investigated the connection between educational structures and democratic stability. Inkeles and Smith (1974) worked on the linkage between education and political participation, and Verba, Nie and Kim (1978) on education and an individual orientation toward citizenship. Lastly, Torney-Purta and Schwille (1986) investigated the connection between classroom climate and civic behaviour.

These investigations have not been able to isolate the unique characteristics of school systems which contribute to democratic values and stable societies net of other influences. The 1990s have brought a new group of independent countries onto the world scene, all of them anxious to participate in democratic structures. Also, the demand to participate has risen in many regions where one-party rule had once been the norm. These events constitute a new phase of nation-building, but this second phase differs from the first in the 1960s in several important respects. Citizens today have access to world information and are able to contribute to that information more quickly and simply than before. On the other hand, new freedoms are accompanied by intense pressures for stability and social cohesion. The question remains: what is the role of education in contributing to this stability? Can education help?

In general, education can make a contribution to social stability when it can offer: (i) equal educational opportunity for all citizens; (ii) a professional consensus around the content of civics and history curriculum; (iii) an ethnically tolerant classroom atmosphere and pedagogy; and (iv) democratic institutions to adjudicate when there are differences over what to teach.⁷ On the other hand, if tensions in the wider society spill over into the curriculum or management of the schools, education can become an instrument for exacerbating social tensions and threatening social cohesion of the society (Heyneman, 1995*c*; forthcoming *a*; *b*). How are nations to learn the techniques by which education becomes a contribution to social cohesion rather than a handicap? How are countries to assess the degree to which their school systems are performing as well as school systems in other parts of the world in providing this constructive function? What agreements should be established between school, family, church, mass media and local political leaders to insure consistency in concept of good citizenship? Where are educational leaders to locate possible ideas on reform in this area? Since social cohesion and social stability constitute universal concerns, improving the manner and effectiveness of education's contribution is rapidly becoming a new rationale for making educational investments, hence a new international area of demand for creative reform.

International trade in educational reform

Much has changed since the Cold War rivalry ended, but one of the most important changes has been with the factors which motivate foreign assistance. This assistance is no longer so easily justified on the grounds of competition between East and West. Domestic eco-

nomic priorities, such as unemployment, fiscal deficits and imbalance in trade, have replaced foreign assistance as a public priority. Between 1992 and 1996, sixteen of the twenty-one donor countries reduced foreign aid as a percentage of GDP (World Bank, 1996, p. 13). The decline has been as vivid within educational assistance as well. Between 1989 and 1994 educational assistance (in constant prices) from France declined by 13%; from the United Kingdom by 16%; from the United States by 22%; from New Zealand by 31%; from Belgium by 44%; and from Canada by 56% (Bennell & Furlong, 1997, p. 7). Moreover, in spite of the considerable consensus on the importance of basic education stemming from the discussion at Jomtien Thailand in 1990, the proportion of bilateral assistance allocated to basic education in many instances has also declined. It declined by 0.5% in the United States, 4% in Norway, 6% in Canada and 13% in Australia (Bennell & Furlong, 1997, p. 6). Foreign assistance has decreased in real terms and in many instances the proportion of assistance allocated to basic education has also decreased. However strongly one may feel (including this author) about the importance of basic education, the case has not been sufficiently compelling for the public to reconsider their many other important priorities and problems in order to allocate more international assistance to education.

The voting public in donor countries tends to be older, hence more concerned with issues of pensions, health insurance and personal safety. Questions have been raised about the effectiveness of development assistance agencies themselves and if they are really helping the poor. Could non-governmental organizations (NGOs) deliver assistance more effectively with less bureaucracy? Would NGOs be more free to operate autonomously from governments with records of corruption and human rights problems? There are also the circumstances where drought and civil war have reduced the effectiveness of public institutions to near zero. Voting publics tend to see these situations as more compelling justifications for foreign assistance. Lastly, there are the economic problems of the former USSR which was once a major source of foreign assistance in Africa, Asia and some parts of Latin America. Official development assistance will continue to be driven by humanitarian motives and justifications, but it is safe to assume that other motivations will play a role as well. Aid will likely be delivered and targeted differently and be lower in magnitude.

As traditional aid declines, what will happen to education? Much of the international co-operation in education has developed under the auspices of international aid. Will the decline in aid spell a similar decline in international co-operation in education?

There is reason to believe that the level of international co-operation in the field of education is on the increase in spite the fact that the level of international aid in the field of education is on the decline (Heyneman, 1993*a*; 1995*b*; 1997*b*). Four Nobel Prizes have been awarded dealing with human capital issues.⁸ There have been a flurry of reports on the status of education by international agencies.⁹ There are three educational boards established at the United States National Academy of Sciences, various congressional committees, and the Carnegie, Spensor, Ford, Ball and Soros Foundations. There is an ongoing co-operative effort on African Education, a new European Training Foundation, major new initiatives in the Asia/Pacific Economic Conference (APEC), the Inter-American Dialogue Foundation, the Inter-American Development and the Asia Development Banks, and in the Dutch Ministry of Education, the National Foundation for Educational Research (NFER).

Within the National Center for Education Statistics, spending on international studies has risen from US\$165,000 in 1988 to US\$10 million in fiscal year 1993. Today there are more countries participating in the International Association for the Assessment of Educational Achievement (IEA) studies than at any other previous time over the past thirty years, and the majority are classified as developing countries. Projects include studies of literacy, mathematics, science and civics education. Comparative teaching techniques are now analyzed internationally by using digitized video tapes. Curriculum emphases and objectives are broken down to increasingly specific and educationally meaningful components. Demand is high for joining OECD's co-operative project on educational indicators, including demand from countries with only loose affiliation with OECD itself. Other trading interests, including the North American Free Trade Agreement, the Asia-Pacific Economic Co-operation Council, the European Union and Mercosur, have initiated comparative studies of labour markets and educational quality. What is behind these new demands for information? And why is it that at the same time as humanitarian-based assistance is on the decline, international co-operation in education is on the rise?

What is being traded back and forth? Who is doing this trading? Will this trade continue? Below are a few words on its cause, content, participants, prospects and implications of the international trade on educational policy reform.

CAUSES

The explanations are not identical in every part of the world, nor are the explanations permanent. Marshalling educational evidence which may lead to a more competitive labour force and, therefore, a trade advantage may be the primary motivation in the Americas and in Europe; in Asia it is more for social cohesion; and in the former USSR it is for social and economic integration. In many regions education is rising on the political agenda, and is a topic of intense debate. Frequently debates centre on language of instruction, history, widening access, improving quality and expanding equity. Ideas on policy reform are in high demand because of the wide recognition of both poor and rich countries that public resources are inadequate.

PARTICIPANTS

In the 1960s the central education representatives were often the sole representatives. Today, however, education is frequently a decentralized activity. Budgets and policy priorities are driven by local authorities. This is particularly evident in federal systems where local states and school districts increasingly finance and conduct evaluations, research projects and policy reviews on their own initiative. Local or municipal initiative is often a leading force in centralized education systems as well, and is driven not only by educational authorities but by local business and community groups, industries and non-governmental organizations. In higher education and in private education where policy reform decisions are increasingly the responsibility of individual institutions, these institutions are involved in international relations on their own. Educational software companies, publishers and training firms are increasingly active and are demanding new and current information on

the size of the educational markets in many different countries. Taken together, these new categories of participants have deeply affected the 'vision' and expressed interests of the traditional central education authorities.

CONTENT

Ministries of education are increasingly preoccupied by the demand for (i) good ideas on policy reforms; (ii) relevant and reliable statistical data; (iii) state-of-the-art analytical techniques; and (iv) sources of experienced advice on these areas. They are motivated in this regard, not so much by a shift in philosophy, but rather by the requests from local and non-governmental educational interests. The ideas of central and/or federal authorities may indeed differ from one part of the world to another about what constitutes appropriate reform, but they share one important characteristic—the requirement that they respond to domestic demand for international information.

PROSPECTS AND IMPLICATIONS

As long as there is a scarcity of public resources to finance public education demands, there will be an international trade in ideas for educational reform. The demand can, therefore, be expected to increase well into the next century. Moreover the demand can also be expected to continue the process for a shift away from the traditional lines of international relations that tend to focus on: north and south interests; centrally planned and market-driven economies; geographical neighbours; linguistic blocks; and ex-colonial and historical connections. These traditional linkages may be replaced gradually with interests of partners or competitors in trade, and with interests in similar educational issues, such as higher education diversity, experience with voucher and loan schemes and the like.

The implications of this trade may well be profound. The kinds of questions emerging from developing countries may shift from monetary assistance to new ideas for policy reforms. This, in turn, will affect the functions of international agencies with educational interests which will have to respond to these demands just as the national agencies have had to respond to local demands. The changes in question may influence the types of functions and mandates of international agencies, and the kinds of staffing appropriate to fill these new functions. Similar pressures can be expected to be felt by bilateral development assistance agencies with educational interests. With the general decline in foreign assistance, the type and justification of that assistance may have to reflect domestic educational demands instead of isolated humanitarian purposes. This may require those agencies dealing with foreign aid to develop closer links with the domestic educational ministries and to acquire staff familiar with domestic education policy experience.

Summary

The decline in foreign assistance for education can be considered a tragedy. On the other hand, the elevation of education in domestic debate and the increase in trade of professional ideas on educational reform might be considered a benefit. The adjustment to these

new functions on the part of development assistance agencies and international agencies familiar with the traditional rationales for educational investment will be difficult, however, in the end, their successful adjustment will be good for the field of education.

Notes

1. The opinions are those of the author alone and do not necessarily represent those of the World Bank or any of its affiliated institutions.
2. Is it inevitable that low-income countries invest in education proportional to their low-income status? If a country invests in education at a higher rate than others at similar levels of GDP per capita, would the effect be noticeable? Experience over the last three decades suggests that low-income countries which invest in education at higher than 'expected' levels have higher rates of economic growth. This seems to be a significant explanation for the recent economic performance in East Asia (World Bank, 1993).
3. Rates of return data, methods of analysis and common interpretations have been questioned by Bennell, 1995; 1996a; 1996b; 1996c; Curtin, 1996a; 1996b; Colclough, 1996; Hammer, 1996; Birdsall, forthcoming; and Heyneman, 1995a.
4. These analyses were conducted originally by using ordinary least squares methods or regression analysis. Later some argued that multi-level analytic techniques would be able to capture new types of influences on learning, hence change results (Heyneman, 1989; Riddell, 1989). In the last decade there have been sixteen multi-level analyses, each limited to single country example (Riddell, 1997, p. 198). On the other hand, two decades of experience using large data sets to analyze questions of school and home effects on academic achievement suggest that the results differ from one country to another; from one subject to another; and by gender, age and grade level (Heyneman, 1997a).
5. The correlation between the influence of the school quality and national GNP per capita is $r = -0.72$ ($p < .001$) (Heyneman & Loxley, 1983a).
6. The World Bank, *The world development report, 1996: from plan to market*. New York, Oxford University Press, 1996, p. 124–5.
7. The provision of an equality of opportunity is important in both public perception and in measured results (Heyneman, 1980; 1982; Heyneman & Loxley, 1983b). One of the most critical mechanisms of providing both is through a modern system of examinations to higher education which is perceived by the public to be fair, accurate and affordable (Heyneman, 1979; 1983; 1987; Heyneman & Ransom, 1990; Plomp & Voogt, 1994).
8. Edward Dennison, Jan Tinbergen, T.W. Schultz and Gary Becker.
9. United Nations Development Programme, 1990; International Labor Organization, 1989; International Development Research Centre and Canadian International Development Agency, 1982; Inter-Agency Commission, World Conference on Education for All (UNDP, UNESCO, World Bank), 1990; Inter-Agency Commission and United Nations Children's Fund, June 1990; Hawes & Coomb, 1986; United Nations Children's Fund, 1992; Carnoy, 1992; Thorsby & Gannicott, 1990; World Bank. 1988; 1990; 1991; Singapore, 1987.

References

- Almond, G.A.; Verba, S. 1963. *The civic culture*. Princeton, Princeton University Press.
- Beaton, A.E., et al. 1996. *Mathematics achievement in the middle school years: IEA's Third International Mathematics and Science Study (TIMSS)*. Chestnut Hill, MA, TIMSS International Study Center at Boston College.

- Bennell, P. 1995. *Rates of return to education in Asia: a review of the evidence*. Brighton, UK, University of Sussex, Institute of Development Studies.
- . 1996a. Privatization, choice and competition: the World Bank's reform agenda for vocational education and training in sub-Saharan Africa. *Journal of international development* (Washington, DC), vol. 8, no. 13, p. 467–87.
- . 1996b. Rates of return to education: does the conventional pattern prevail in sub-Saharan Africa? *World Development* (Oxford, UK), vol. 24, no. 1, p. 183–99.
- . 1996c. Using and abusing rates of return: a critique of the World Bank's 1995 education sector review. *International journal of educational development* (Oxford, UK), vol. 16, no. 3, p. 235–49.
- Bennell, P.; Furlong, D. 1997. *Has Jomtien made any difference? Trends in donor funding for education and basic education since the late 1980s*. Brighton, UK, University of Sussex, Institute for Development Studies.
- Birdsall, N. forthcoming. Public spending on higher education in developing countries: too much or too little? *Economics of education review* (Cambridge, MA), vol. 15, no. 4.
- Bishop, J.H. 1989. Is the test score decline responsible for the productivity growth decline? *American economic review* (Cambridge, MA), vol. 79, p. 178–97.
- Board on International Comparative Studies in Education. 1993. *A collaborative agenda for improving international comparative studies in education*. Washington, DC, National Research Council.
- . 1995. *Worldwide education statistics: enhancing UNESCO's role*. Washington, DC, National Academy Press.
- Carnoy, M. 1992. *The case for investing in basic education*. New York, UNICEF.
- Chambers, J.G. 1985. Patterns of compensation of public and private school teachers. *Economics of education review* (Cambridge, MA), vol. 4, p. 291–310.
- Cohn, E. 1996. Methods of teacher remuneration: merit pay and career ladders. In: Becker, W.E.; Baumol, W.J., eds. *Assessing educational practices: the contribution of economics*, p. 209–38. Cambridge, MA, Massachusetts Institute of Technology.
- Colclough, C. 1996. Education and the market: which parts of the neo-liberal solution are correct? *World development* (Oxford, UK), vol. 24, no. 4, p. 589–610.
- Curtin, T.R.C. 1996a. Fallacy and fraud in human capital theory. *Papua New Guinea journal of education* (Papua New Guinea), vol. 11, no. 2, p. 66–78.
- . 1996b. Project appraisal and human capital theory. *Social investment forum* (Boston, MA), vol. 11, no. 2, p. 73–78.
- Dewey, J. 1916. *Democracy and education*. New York, Dutton.
- Dolton, P.J. 1990. The economics of UK teacher supply: the graduate's decision. *Economic journal* (Oxford, UK), vol. 100, p. 91–104.
- Gill, I.; Heyneman, S.P. forthcoming. Egypt: Reforming vocational education and training to meet private sector skill demands. In: Gill, I.; Fluitman, F.; Dar, A., eds. *Constraints in reform of vocational education and training*. Washington, DC, World Bank and International Labor Organization.
- Golladay, F., et al. 1995. *A human capital strategy for competing world markets*. Washington, DC, World Bank. (Document of the Technical Department, Middle East and North Africa Region.)
- Hammer, J. 1996. *The public economics of education*. Washington, DC, World Bank. (Document of the Policy Research Department.)
- Hawes, H.; Coomb, T., eds. 1986. *Education priorities and aid responses in sub-Saharan Africa*. London, Overseas Development Administration.

- Heyneman, S.P. 1979. Why impoverished children do well in Ugandan schools. *Comparative education* (Oxford, UK), vol. 15, no. 2, p. 175–85.
- . 1980. Planning the equality of educational opportunity between regions. In: Carron, G.; Chau, T.N., eds. *Regional disparities in educational development: a controversial issue*. Paris, UNESCO, International Institute for Educational Planning.
- . 1982. Resource availability, equality, and educational opportunity among nations. In: Anderson, L.; Windham, D., eds. *Education and new issues in the analysis and planning of post-colonial societies*. Lexington, MA, Lexington Books.
- . 1983. Education during a period of austerity: Uganda, 1971–1981. *Comparative education review* (Chicago, IL), vol. 27, no. 3, p. 403–13.
- . 1987. Uses of examinations in developing countries: selection, research and education sector management. *International journal of educational development* (Oxford, UK), vol. 7, no. 4, p. 251–63.
- . 1989. Multi-level methods for analyzing school effects in developing countries. *Comparative education review* (Chicago, IL), p. 498–504.
- . 1990a. Economic crisis and the quality of education. *International journal of educational development* (Oxford, UK), vol. 10, no. 2/3, p. 115–29.
- . 1990b. Protection of the textbook industry in developing countries: in the public interest? *Book research quarterly* (New Brunswick, NJ), p. 3–11.
- . 1990c. The textbook industry in developing countries. *Finance and development* (Washington, DC), p. 28–9.
- . 1993a. Comparative education: issues of quantity, quality and source. *Comparative education review* (Chicago, IL), vol. 37, p. 372–88.
- . 1993b. Educational quality and the crisis of educational research. *International review of education* (Dordrecht, Netherlands), vol. 39, no. 6, p. 511–17.
- . 1994a. *Education in the Europe and Central Asia region: policies of adjustment and excellence*. Washington, DC, World Bank. (Document of the Office of the Vice President Europe and Central Asia Region, #IPD – 145.)
- . 1994b. *Issues of education finance and management in ECA and OECD countries*. Washington, DC, World Bank. (HRO working paper, no. 26.)
- . 1995a. Economics of education: disappointments and potential. *Prospects* (Paris), vol. XXV, no. 4, p. 559–83.
- . 1995b. International education cooperation in the next century. *CIES newsletter*, no. 109.
- . 1995c. Thoughts on social stabilization. In: CIVITAS, ed. *Strengthening citizenship and civic education, East and West*, p. 70–4. Washington, DC, United States Information Agency.
- . 1997a. Jim Coleman: a personal story. *Educational researcher* (Washington, DC), 2C, no. 1, p. 28–30.
- . 1997b. *Using TIMSS in a world of change*. Paper presented to the National Academy of Sciences, Washington, DC.
- . forthcoming a. Educational choice in Eastern Europe and the former Soviet Union. *Educational economics* (Abingdon, UK).
- . forthcoming b. Educational cooperation between nations in the next century. *Festschrift for Professor Wolfgang Mitter*. Frankfurt, Deutsches Institut für Internationale Pädagogische Forschung.
- . forthcoming c. The quality of education in the Middle East and North Africa. *International journal of educational development* (Oxford, UK).
- Heyneman, S.P.; Fuller, B. 1989. Third world school quality: current collapse, future potential. *Educational researcher* (Washington, DC), vol. 18, no. 2, p. 12–9.

- Heyneman, S.P.; Loxley, W. 1983a. The distribution of primary school quality within high- and low-income countries. *Comparative education review* (Chicago, IL), vol. 27, no. 1.
- . 1983b. The effect of primary school quality on academic achievement across twenty-nine high- and low-income countries. *American journal of sociology* (Chicago), vol. 88, no. 6, p. 1162–94.
- Heyneman, S.P.; Ransom, A. 1990. Using examinations to improve the quality of education. *Educational policy* (Washington, DC), vol. 4, no. 3, p. 177–92.
- Holtman, A.G. 1969. Teacher salaries and the economic benefits of search. *Journal of human resources* (Madison, WI), vol. 4, p. 93–103.
- Howson, G. 1997. *Mathematics textbooks: a comparative study of grade 8 texts*. Vancouver, British Columbia, Pacific Educational Press. (TIMSS monograph series, no. 3.)
- Inkeles, A.; Smith, D.H. 1974. *Becoming modern*. Cambridge, MA, Harvard University Press.
- Inter-Agency Commission. World Conference on Education for All. 1990. *World Conference on Education for All: meeting basic learning needs*. New York, Inter-Agency Commission. (Final report.)
- International Development Research Centre; Canadian International Development Agency. 1982. *Financing educational development*. Ottawa, IDRC.
- International Labor Organization. 1989. *International labor report, 1989*. Geneva, ILO.
- Kamens, D. 1988. Education and democracy: a comparative institutional analysis. *Sociology of education* (Washington, DC), vol. 61, p. 114–27.
- Kenny, L.W.; Denslow, D.A. 1980. Compensating differentials in teachers' salaries. *Journal of urban economics* (San Diego), vol. 7, p. 198–207.
- Lipset, S.M. 1959. Some social prerequisites of democracy: economic development and political legitimacy. *American political science review* (Washington, DC), 53, p. 69–105.
- McMeekin, R.W. 1997. Education statistics in Latin America and the Caribbean. Santiago, UNESCO/Ford Foundation. (mimeo.)
- Meyer, J.W. 1970. The charter: conditions of diffuse socialization in schools. In: Scott, W.R., ed. *Social processes and social structure*, p. 564–78. New York, Hold, Reinhard and Winston.
- Murnane, R.J. 1984. Selection and survival in the teacher labor market. *Review of economics and statistics* (Amsterdam), LXVI, p. 513–18.
- Murnane, R.J.; Olsen, R.J. 1990. Effects of salaries and opportunity costs on duration in teaching: evidence from North Carolina. *Journal of human resources* (Madison, WI), vol. 25, p. 106–24.
- Organisation for Economic Co-operation and Development. 1995. *Education at a glance. OECD indicators of education systems*. Paris, OECD.
- Plomp, T.; Voogt, J. 1994. *Entrance to higher education: problems and dilemmas with the transition from secondary to tertiary education in the Russian Federation*. Enschede, University of Twente.
- Puryear, J. 1995. International education statistics and research: status and problems. *International journal of educational development* (Oxford, UK), vol. 15, no. 1, p. 79–91.
- Rickman, B.D.; Parker, C.D. 1990. Alternative wages and teacher mobility: a human capital approach. *Economics of education review* (Cambridge, MA), vol. 9, p. 73–9.
- Riddell, A.R. 1989. An alternative approach to the study of school effectiveness in Third World countries. *Comparative education review* (Oxford, UK), vol. 33, no. 4, p. 481–98.
- . 1997. Assessing designs for school effectiveness research and school improvement in developing countries. *Comparative education review* (Chicago, IL), vol. 41, no. 2, p. 178–206.
- Rumberger, R.W. 1987. The impact of salary differentials on teacher shortages and turnover: the case of mathematics and science teachers. *Economics of education review* (Cambridge, MA), vol. 6, p. 389–99.

- Sauvageot, C. 1992. *Primary education in Lesotho: indicators*. Paris, UNESCO, International Institute of Educational Planning.
- . 1993. *L'Enseignement fondamental au Mali: indicateurs* [Basic education in Mali: indicators]. Paris, UNESCO, International Institute of Educational Planning.
- . 1996. *Development of indicators for educational planning in Eastern and Southern Africa*. Paris, UNESCO, International Institute of Educational Planning.
- . 1997. *Indicators for educational planning: a practical guide*. Paris, UNESCO, International Institute of Educational Planning.
- Schmidt, W.H., et al. 1997a. *Characterizing pedagogical flow: an investigation of mathematics and science teaching in six countries*. Hingham, MA, Kluwer Academic Publishers.
- . 1997b. *Many visions, many aims. Volume I: a cross-national exploration of curricular intentions in school mathematics*. Hingham, MA, Kluwer Academic Publishers.
- Schmidt, W.H.; McKnight, C.C.; Raizen, S.A. 1997. *A splintered vision: an analysis of U.S. mathematics and science curricula*. Hingham, MA, Kluwer Academic Publishers.
- Singapore. Ministry of Education. 1987. *Towards excellence in schools*. Singapore, Ministry of Education.
- Southwick, Jr., L.; Gill, I.S. 1997. Unified salary schedule and student SAT scores: adverse effects of selection in the market for secondary school teachers. *Economics of education review* (Cambridge, MA), vol. 16, no. 2, p. 143–53.
- Thorsby, C.D.; Gannicott, K. 1990. *The quality of education in the South Pacific*. Canberra, National Centre for Development Studies.
- Torney-Purta, J.; Schwill, J. 1986. Civic values learned in school: policy and practice in industrialized nations. *Comparative education review* (Chicago, IL), vol. 30, no. 1, p. 30–49.
- UNESCO. 1991. *World education report, 1991*. Paris, UNESCO.
- United Nations Children's Fund. 1990. *Protecting the world's children: a call for action*. New York, Rockefeller Foundation. (Primary education policy papers.)
- . 1992. *State of the world's children*. New York, UNICEF.
- United Nations Development Programme. 1990. *Human development report*. New York, Oxford University Press.
- Valverde, G.A.; Schmidt W.H.; Bianchi, L.J. 1996. *An exploratory analysis of the content and expectation for student performance in selected mathematics and biology school-leaving examinations from the Middle East and North Africa region*. Washington, DC, World Bank. (mimeo.)
- Vari, P., ed. 1997. *Are we similar in math and science? A study of grade 8 in nine Central and Eastern European countries*. Budapest, Orszagos Kozoktatasi Inteznet.
- Verba, S.; Nie, N.; Kim, J. 1978. *Participation and political equality: a seven nation comparison*. London, Cambridge University Press.
- World Bank. 1980. *World development report 1980: adjustment and growth in the 1980s*. Washington, DC, World Bank.
- . 1988. *Education in sub-Saharan Africa: policies for adjustment, revitalization and expansion*. Washington, DC, World Bank.
- . 1990. *Primary education policy paper*. Washington, DC, World Bank.
- . 1991. *Vocational and technical education and training policy paper*. Washington, DC, World Bank.
- . 1993. *The East Asian miracle: economic growth and public policy*. New York, Oxford University Press, Inc.
- . 1995a. *Claiming the future: choosing prosperity in the Middle East and North Africa*. Washington, DC, World Bank.

- . 1995b. *Regional perspectives on the World Development Report: will Arab workers prosper or be left out in the 21st century?* Washington, DC, World Bank.
 - . 1995c. *World development report 1995: workers in an integrating world*. Washington, DC, World Bank.
 - . 1996. *Global economic prospects and the developing countries*. Washington, DC, World Bank.
- Zarkin, G.A. 1985. Occupational choice: an application to the market for public school teachers. *Quarterly journal of economics* (Cambridge, MA), p. 409–46.

OPEN FILE

EDUCATIONAL REFORM:
THE DECISION MAKER'S
APPROACH

EDUCATIONAL CHANGE

FROM THE PERSPECTIVE

OF DECISION MAKERS

*Juan Carlos Tedesco*¹

Introduction

The voices most frequently heard during discussions on educational change are those of researchers. Their analyses usually come *after* the changes that have been implemented as a result of reform and are aimed at identifying the limitations or explaining the failures. The protagonists of change, on the other hand, make their voices heard either *before* or *during* the educational change process in order to justify, convince or advertise what they are doing. Unlike researchers, the agents of reform very rarely try to explain the difficulties they encounter or set up institutional mechanisms so that others might benefit from the lessons learned. This phenomenon has been mutually impoverishing. Researchers continue to have little knowledge of the special requirements of managing educational change, while politicians involved in education do not have a capital of systematized knowledge to which they can turn or which they can enrich with their own experience.²

The objective of this issue of *Prospects* is to contribute towards a better understanding of educational change on the basis of the experience of the actors actually involved in the process. The methodology used was relatively simple. A number of senior political officials in ministries of education in various regions of the world (ministers or deputy ministers in office or who had recently left office) were identified and were each asked to write an article following a pattern comprising three basic elements:

Original language: Spanish

Juan Carlos Tedesco (Argentina)

Director of the International Bureau of Education of UNESCO, Geneva. Formerly Director of UNESCO's Regional Office for Education in Latin America and the Caribbean (OREALC). Former professor at the University of La Plata (Argentina) and the Latin American Social Sciences Faculty (FLACSO). His research work relates to the sociology of education and the development process. Author of *Educación y sociedad en Argentina* [Education and society in Argentina] (1971), *Conceptos de sociología de la educación* [Concepts of educational sociology] (1980), *El desafío educativo: calidad y democracia* [The educational challenge: quality and democracy] (1986) and *The new educational pact* (1998).

- (a) what were the priorities during their terms of office and how were they defined?
- (b) what were their relations with the various sectors involved in educational change (trade unions, political parties, researchers, information media, etc.)?
- (c) what lessons did they learn from their experience?

Eight ministers or deputy ministers in office and three former ministers agreed to reply to these questions. For the Asia and Pacific region, two experts—one a former deputy minister for education in his country—made an assessment of the situation on the basis of interviews with senior officials in nineteen countries. The actual process of identifying participants in office and obtaining their agreement highlighted some of the principal difficulties confronting the activities of those responsible for decisions on education: they have little control over the time that would enable them to think and to write; there is the difficulty of analyzing the process while at the same time dealing with the everyday issues and problems of management; there are certain limitations on expressing opinions in a completely transparent way; and, lastly, there is an attitude typical of politics in which neither doubt nor uncertainty have any place.

The content of the texts prepared by the decision makers in itself constitutes an eloquent testimony of current trends in educational transformation at the international level. In this introduction we will not refer to the substance of these trends, but to the characteristics of the actual process of educational change. As far as possible, several comparisons will be made of the form in which these characteristics are to be found in developed and developing countries.

The need for educational change

All of the educational decision makers, both in developed and developing countries and in centralized or decentralized school administration systems, based their replies on the assumption that change is necessary. As already noted on other occasions, no one at present is happy with the education provided. Although the reasons for their lack of satisfaction differ according to a country's level of development, it is interesting to note that there are also similarities.

The information obtained for developing countries shows that educational change is directly linked to the need to overcome a large number of problems caused by the failure to achieve the objectives of universal enrolment in basic education, increasing access to education, and reducing the high levels of repetition and drop out. In developed countries, on the other hand, these problems have more or less been resolved and the need for change is not justified so much by the deficiencies of the past as by the challenges of the future: establishing a closer link between education and the demands of the labour market; adapting the supply of education to the need for on-going adaptation throughout life; and civic education. In addition, in both groups of countries there is a strong emphasis on renewing teaching methods, and overcoming the obsolescence of curricula and bureaucratic management methods.

Consequently, the nucleus of problems common to all countries consists of at least three major categories: (i) definition of more effective methods of linking education and work; (ii) revision of management styles to include greater decentralization and improv-

ing systems for the assessment of results; and (iii) modification of the teaching guidelines which govern the learning process in classrooms. In addition to these three categories, however, which concern the substance of the reforms, decision makers also identified a number of serious difficulties when implementing change processes because of the resistance inherent in the functioning of the system, particularly on the part of teaching staff. We shall refer to some of these problems below. For the time being, it is interesting to highlight the existence of a common nucleus of problems, a comprehensive set of motivations specific to each group of countries and, lastly, some notable lacunae in the responses of educational decision makers.

In this respect, the most interesting lacunae concern the need to reform education from the point of view of the socialization process: developing values, relations with the family and with the communication media. Educational deficiencies in these sectors are particularly evident in the case of countries in transition from authoritarian to democratic regimes, or countries which have experienced periods of strong political authoritarianism. Nevertheless, when analyzing the action taken in the course of the reform process, it can be seen that introducing items concerning these problems into the curriculum (transverse subjects, common basic content, etc.) is an important issue that is relatively common to all countries.

It is possible to note the existence of a sort of 'asynchronism' between a diagnosis of problems and strategies for their solution. For example, even though a particular diagnosis does not specifically mention problems, such as the need to reduce costs, limit the number of staff, weaken the corporate power of teachers' unions or modify the new generations' socialization guidelines, a large number of measures are aimed precisely at these problems. On the other hand, although the diagnosis often refers to the need to increase participation in decision making and promote greater equity in the distribution of the supply of education, the concrete measures needed to deal with these problems are never spelled out. This phenomenon may respond to one of the characteristics of the rationale of political action, where certain objectives may not be defined although actively pursued, while other objectives have to be expressed, even though no activities are proposed to deal with them.

How are the priorities defined?

A general tendency was noted to recognize the need to define educational policy priorities through consultation, dialogue and consensus. This type of process is obviously more institutionalized in countries that already have a high level of social consensus regarding development strategies than in countries where the degree of conflict, caused in particular by the unequal distribution of wealth, is more acute. The contributions by ministers, however, helped to identify two important aspects.

The first concerns the role of research and educational information and shows that the relationship between the technical dimension and decision making is much more important prior to the decision-making stage on educational reform (*before* the government takes office, *before* seeking loans, *before* launching reform) than during the actual process of implementation. There is therefore a marked difference between the role played by research and information *before* and *during* the change process. *Before* the change process is initiated,

general data and information are required so as to define priorities and the main trends of the policies and strategies. However, once this outline has been adopted, the information and research required come from the actual execution of the project itself. At this time, inputs that might cast doubt on the general orientation are neither required nor allowed. Questioning the general orientation would mean changing the leadership, in other words a political crisis. The relevant information and research *during* implementation are different from those required at the planning stage. In the implementation stage, decision makers have a political rationale that requires a great deal of 'relational' information: contacts, information on the political situation of each group and as a whole, and skills that can basically resolve problems, negotiate solutions to isolated conflicts and carry out the action envisaged.

The second aspect that arises from the analysis of the contributions by ministers shows that there is also an important difference between the agreements and the consensus reached at the time of defining policies and those reached during the implementation process. The responses in this respect are telling: it is relatively easy to obtain a consensus during the priority definition phase in comparison with the major difficulties that arise when seeking a consensus during the execution stage. This phenomenon is related to at least three different aspects. Firstly, prior agreement concerns objectives rather than the procedures to be followed to achieve them. Secondly, the rationale of prior agreements tends to prevent the true problems and the real impact of the changes on the various actors from entering into the discussion. Thirdly, it is likely that none of the actors really understand what the impact of the changes will be and it is only when applying the change strategies that the true magnitude of the planned changes emerges.

To summarize, it can be stated that in the policy drafting and planning stage the rationale of educational objectives tends to predominate, and this makes it relatively easy to reach agreement. When starting to implement the changes, however, the original objectives take second place and the rationale of corporate interests predominates. In this sense, in the ministers' view, the conflicts caused by educational change are not related to different views of the world or different ideologies, but rather to the uncertainty and the modifications that the educational change project generates in the situation facing the various actors involved in the educational process. For example, heads of families resist paying enrolment fees, students resist changes in the examination system, teachers resist changes in the guidelines governing their careers or, alternatively, they call for higher salaries.

The possibilities of fulfilling the agreements reached in the stage prior to implementation are, of course, less evident in developing countries. The lack of resources makes it necessary to define priorities that have little chance of satisfying the demands of the various sectors. Moreover, this lack of resources is long term, thereby making the demands more urgent. In such a situation, it is very difficult to obtain agreement in the timing of changes that will imply postponing the satisfaction of certain demands.

Teaching reforms

One of the common aspects of current educational transformation is recognition of the need to achieve better results in the teaching/learning process. Policies are basically directed at having an impact on the various inputs into the process: the *time* devoted to learning,

the availability of *textbooks* and *teaching materials*, the *infrastructure*, the *nutrition* and *health* of students, the training and working conditions of the *teachers*. Although there is a general consensus on the need to adopt systemic approaches that permit simultaneous action on all of the inputs, the responses from ministers indicate that it is impossible to do so. The definition of priorities and calendars is the most important and sensitive task because the factors involved are not solely nor mainly technical factors. Political and economic variables have a very significant impact on decisions about when and where to invest. Investing in infrastructure before investing in the salaries of teachers or nutrition, for example, implies forging political and economic alliances with very different sectors. Indeed, the future of the change processes is, to a large extent, dependent on these decisions.

A new actor: international co-operation

The responses of the ministers indicate the marked presence of the international dimension in educational change processes. This has different implications and takes different forms according to a country's level of development. In developed countries, the international dimension appears as a component of the new reality in which the country has to integrate itself. In this respect, internationalization is an enriching source of national innovation. International contacts, participation in joint projects, comparing results, etc., are seen as an increasingly necessary factor in the management of national activities.

In developing countries, on the other hand, the international dimension appears basically from the perspective of the financing of projects that will bring about change. The relationship between the two dimensions—national and international—is therefore quite distinct from that in developed countries. Firstly, the international dimension has an effect on the definition of priorities for change. In some cases, this external influence coincides with national priorities, although in others the reverse is true and it becomes necessary to modify the national attitude. Some of the responses from the ministers identify cases where, for example, the international priority accorded to basic education and to modifying bureaucratic styles of management coincides with national goals. But there are also other examples where the national priority of teaching languages or directing education towards productive work has had to give way to international priorities, such as education for environmental protection or population education.

In developing countries, international co-operation can also play a very important internal legitimizing role. Over and above discussion on the content of proposals, the experience of those responsible for educational decisions shows that international bodies, especially financing organizations, play a role in promoting particular changes defined at the international level that are not necessarily linked to the processes of change generated locally.

The importance of communication

Information and communication are indispensable tools for change policies in a democratic context. There is a general consensus among decision makers on the need to inform in an on-going way and to convince all of the actors, whether within or outside the system, about the meaning of the changes. Nevertheless, this phenomenon constitutes a new

challenge for public policies as a whole. Incorporating public information as a component of management raises problems that have not yet been resolved. Deciding *what* information should be made available to each of the actors (officials, teachers, parents, etc.), *when* it is appropriate to disseminate the information and *how* to do so in order to ensure that it reaches the person to whom it is addressed, are questions which currently occupy a large part of the debate on evaluation mechanisms and educational information. Purely technical analyses of evaluation mechanisms tend to underestimate the political importance of using the findings, whereas purely political analyses transform information systems into instruments that quickly lose their reliability and validity. This aspect touches upon one of the most important linkages between researchers and decision makers; here, it would probably be appropriate to accept a certain degree of tension as a normal and permanent feature.

The responses by policy decision makers regarding this aspect confirm the hypothesis that there is no permanent and harmonious relationship among researchers, information and decision making. This does not mean that decisions are not soundly based on the information available. On the contrary, almost all of the examples given here show that transformations have been based on an analysis of the situation and an assessment of their future impact. Researchers, however, as actors in the transformation process, appear to be behind the transformation phenomena, whether as critics or as suppliers of information before the process begins. In some instances, researchers become decision makers, resulting in a special phenomenon in which the adaptation, or failure to adapt, to the new rationale for action determines the success or failure of management.

The time variable: long term or short term?

There is also general awareness of the importance of the long term in educational change strategies. Almost all of the decision makers agreed on the need to separate the educational change processes from the influence of the political situation. This awareness, however, has not yet resulted in the definition of practical methods of change in the decision-making process. In this connection, it is useful to note the existence of an interesting contradiction. The most common way of making educational decisions independent of government upheavals is to give schools greater autonomy. Greater autonomy does not, however, appear in the planned changes as a result of a demand by local actors but as a decision by the central authorities. In this context, the autonomy process can be paradoxically opposed by its supposed beneficiaries.

Greater autonomy for schools is often linked to the readjustment of education budgets and not to teaching processes. The responses from the ministers in this regard show an absence of references to a policy of educational innovation at the school level. It would thus appear that there is still no appropriate approach to the management of educational change that satisfactorily links institutional autonomy to overall educational change. Although institutional autonomy is proposed in many of the ideas for change, there is no clear expression of the components of a policy to strengthen institutions that would make autonomy a reality. The main instrument mentioned by the ministers is the

assessment of results, but this tool concerns the central administration and not educational institutions themselves. At the ministerial level, institutional strengthening seems to be related more to the tools used by the Ministry itself rather than to the rest of the educational institutions.

Institutional strengthening

The ministers of education agree that institutional capacity to implement educational change is one of the most important criteria for success. This criterion is, of course, much more important in developing countries. In the last instance, the difference in institutional capacity levels is one of the most eloquent indicators of the gap between developed and developing countries. Paradoxically, the lack of institutional capacity is the factor which, on the one hand, allows developing countries to introduce very radical reforms because there are few institutional limits, but at the same time hinders the reforms from being carried out. On the other hand, the strong institutional pressure in developed countries restricts the scope of reform, but allows the reforms approved actually to be implemented. For this reason, it is possible to sustain the hypothesis that *higher levels of innovation are associated with higher levels of stability*. In this connection, it suffices to note a circumstance that is obvious to any observer of international trends in education: developed countries are those which simultaneously have stable educational and institutional traditions and more and better supported innovation and change.³ This fact made it possible to suggest a few years ago that one of the most important lessons to be drawn from a comparative analysis of educational change processes was that no one innovates outside their traditions.⁴

Concluding remarks

To sum up, the personal accounts gathered together in this issue of *Prospects* demonstrate the extraordinary complexity of educational change processes taking place at present in different regions of the world. This complexity is linked to the arrival of two new factors on the scene: (i) the globalization of economic, social and cultural links; and (ii) the importance attributed by society to knowledge and information. These two factors modify not only the aims and objectives of education, but also the methods and techniques of its management. Here, as in many other aspects of society, we are experiencing a period of transition where traditional instruments are failing and their place may not yet have been taken up by new ones. The new manner of conducting educational policies requires more information, a greater capacity for agreement and dialogue, a better ability to cope with diversity and more responsibility for the outcomes. The personal accounts by ministers indicate that reality is remote from the ideological positions expressed at present that attempt to describe the situation either in terms of market pressures, discounting agreement, dialogue and the search for equity, or in terms of the new or old fundamentalisms that nullify politics so as to place all decisions in the hands of a single social actor.

Notes

1. Massimo Amadio co-operated actively in planning the consultations with decision makers and revised the first versions of this text, providing very relevant comments.
2. The following is among the recent literature on the relationship between educational research and decision making: F. Reimers, N. McGinn, K. Wilde, *Confronting future challenges: educational information, research and decision making*, Paris, UNESCO, 1995.
3. A few years ago, the International Bureau of Education of UNESCO set up a databank on educational innovations (INNODATA). Out of approximately 500 innovations recorded, almost 50% have come from twenty-two countries (Western Europe, Australia, Canada and the United States), while the remaining 50% originated among seventy-four developing countries.
4. ECLAC-UNESCO, *Educación y conocimiento, base de la transformación productiva con equidad* [Education and knowledge: foundations of productive and equitable change], Santiago, Chile, 1992.

SWITZERLAND: IN A CHANGING WORLD, SCHOOLS, TOO, ARE GRADUALLY CHANGING

Martine Brunschwig Graf

Introduction

The education system in Switzerland is organized in such a way that authority for compulsory education is vested in the twenty-six cantons that make up the Confederation. However, the Confederation has final authority as regards vocational training and the recognition of certificates at the upper secondary level. Switzerland possesses not just one, but twenty-six 'ministers of education', each with full powers in their particular canton. To facilitate co-ordination, they are all members of an inter-cantonal co-ordination body known as the Conference of Cantonal Public Education Directors (CDIP). Clearly, the following article cannot give a detailed account of all reforms under way in every canton. It does, however, describe projects being implemented at the national level in the Confederation's area of competence, together with certain reforms being introduced at the cantonal level in Geneva.

A clear objective for education: to produce free and responsible citizens

In Switzerland and in Geneva, as in many other countries, the economic and social changes that have taken place since the beginning of the 1990s have prompted those responsible

Original language: French

Martine Brunschwig Graf (Switzerland)

State Counsellor with responsibility for public education, member of the Government of the Republic and Canton of Geneva. Trained as an economist. Assistant, then Deputy Secretary and later French-speaking Switzerland Secretary of the Society for the Development of the Swiss Economy. Elected to the Government of Geneva in 1993. Responsible for education and training from nursery school to university level and for cultural affairs. Member of the Federal Commission of Specialist High Schools and of the Council of Federal Polytechnic Schools.

for education to raise questions about the future of the system and the need to adapt it to on-going and future changes.

A LIFELONG NEED TO LEARN

One fact has become increasingly clear: education and training are playing a role of steadily growing importance in the lives of individuals. The days when people could consider themselves 'trained for life' are gone. Most young people engaged today in basic training will probably change their profession once or even several times during their working lives. Those who remain in the same occupation will see that occupation evolve radically. Even more fundamentally, people will need to be capable of moving from a wage-earning to an independent activity, from the status of job-holder to that of job-creator.

Hence, it is becoming as necessary to be capable of learning as it is to have learned something. Innovation and creativity, a capacity to adapt, curiosity and a thirst for new knowledge are assets that are just as important as command of the language or of mathematics. Moreover, school is not the only place where knowledge can be acquired. The media and the new information technologies all constitute other sources of knowledge available to those capable of understanding and mastering them.

RADICAL REFORMS IN BASIC TRAINING

All of these factors count as reasons for the reforms under way for the last few years in the training system of Switzerland and the Canton of Geneva. The most notable efforts have been directed at basic training. At the same time, however, further vocational training, tertiary training and, more generally, in-service training are becoming very valuable assets in a society where people never stop learning.

We have thus been prompted, both nationally and in each canton, to overhaul basic training at all levels—vocational training included. We have sought to clarify what basic knowledge constitutes a foundation for other types of training and to accord recognition within the training system and in the assessment process to the concept of certain skills (autonomy, capacity for teamwork, capacity to adapt and integrate, etc.).

Moreover, at the national level, it has become indispensable to reform the system of vocational training and to adapt it to changes in the economic context, with more emphasis on general culture and the development of co-operation between school and the world of work.

REALITY AND THE FIGHT TO OVERCOME UNDERACHIEVEMENT

Apart from these general observations, a piece of research carried out by the Sociological Research Department (which in 1996 became the Educational Research Department) of Geneva's Department of Public Education¹ has contributed powerfully to overall reform as it affects primary education. According to this study, the considerable resources used to combat underachievement at school (fewer pupils per class, back-up teaching arrangements) have not produced the hoped-for results. The study shows that where success in

education is concerned, social inequality has not decreased but has, on the contrary, tended to increase over the fifteen-year period of observation.

That study sparked off a lively debate in the world of education, brought about a certain growth of awareness, and later led to the main points of the renewal scheme for primary education: differentiation in the learning process for pupils, introduction of learning cycles, and greater emphasis on a teachers' co-operation in the continuous educational assessment of pupils. It is probably the most striking example of a piece of educational research which, through its findings, served as a catalyst for a reform whose main features were already firmly a part of the trend towards change in teaching habits.

Reforms on all fronts

Apart from the renewal of primary education mentioned above, a number of priorities have been set for public education in Geneva in the years to come:

Redefinition of learning objectives in compulsory schooling: this approach is coupled with a gradual move towards formative assessment designed to measure how these objectives are attained. Such an operation is essential, since it subsequently determines the cohesion of the entire training system.

Reform of education at the gymnasium level: introduction of a progressive system of options for further specialization in each discipline; a new curriculum for the school year starting in 1998 with the award of new *maturité* certificates in 2002.² This reform entails abolition of the various types of *maturité*, to be replaced by a certificate showing that pupils, depending on the special and complementary options they have chosen, have concentrated on certain study areas without necessarily becoming specialists.

New emphasis on vocational training: improvement of the training curriculum and introduction of a system of certificates compatible with practice elsewhere in Europe at upper secondary³ and tertiary level.⁴ This is a large-scale operation calling for close co-operation with the vocational circles concerned.

Introduction of a procedure for the evaluation of the training system: it is hard to describe the decision-making processes that led to the introduction of these reforms without going into full details.

NATIONAL STRATEGIES

The first steps towards the reform of vocational training were taken at the national level: introduction of the vocational *maturité*⁵ certificate and, at the higher vocational training level, setting up of specialized *Hautes Ecoles* (HES).⁶ Considering the complexity of the democratic system in Switzerland, the legislation was adopted quite quickly by the government and Federal Parliament, even though it involved prior consultation throughout the country to determine the main features of the bill. It should, however, be noted that the adoption of this legislation is merely the first stage in the reform process. It now remains to give practical effect to the reform in scientific and pedagogical terms, a task that will require considerable efforts in training institutions and in the cantons.

JOINT ACTION BY CONFEDERATION AND CANTONS

As regards the *maturité* for gymnasium students, the decision taken in common by the Confederation and the twenty-six cantons responsible for basic training made it necessary to draft a second bill, as the first one had attracted increasing opposition during the consultation process. In Switzerland, before any major bill is prepared, all of the political parties and circles concerned (training institutions and scientific, vocational, employer and trade-union circles, etc.) are consulted. It is only then that the government prepares a final draft. The diversity of practices in the various cantons and the traditional search for consensus naturally influence the content of the bills.

In the case of the new *maturité* for gymnasium students, which will be phased in at the start of the 1997 academic year in certain cantons (but 1998 in Geneva), the decision-making process led to joint action, since the federal government had adopted a text identical to the one that had been studied, worked over and negotiated by the twenty-six cantons in the CDIP! This kind of decision-making process takes time and rules out the adoption of any 'revolutionary' reform bill.

ACTION AT THE CANTONAL LEVEL WHERE RESEARCH IN EDUCATION ACTS AS A CATALYST

Compulsory education is the prerogative of the cantons. In Geneva, reforms have been much more closely based on the thinking of researchers, but have also taken account of the changing experience and practices and the views and proposals of teachers. The fight against educational under-achievement is a constant driving force for change in the education system in each canton.

**Relations with the various protagonists:
crucial role of research in education**

In Geneva, educational research is conducted within a long tradition of debate and experimental innovations in teaching. The Department of Public Education has its own educational research division, which plays a supporting role. Reforms in progress can accordingly be based on the findings of various nationally and internationally recognized research projects.

FROM RESEARCH TO IMPLEMENTATION:
NOT ALWAYS AN EASY TRANSITION

It must be admitted that the introduction of reforms generates criticism directed at researchers. There is real tension between theory and practice, and we have come to realize that no reform can be justified by research findings alone. We have also noted that the language adopted by scientists is not necessarily to the liking of educational professionals.

CHANGE INTERPRETED AS CENSURE

Overhauling the education system is not a straightforward process, untroubled by opposition or difficulties. For example, the main problems raised by teachers concern change itself. The reforms being introduced are felt strongly as implying disapproval of existing practices and as a disavowal of what had been done for many years. It is therefore important to explain the purpose of the reforms and the reasons for the changes and to give due recognition to all of the work done in previous years. The establishment of permanent procedures for evaluating the education and training system should facilitate this approach.

Resistance to change also feeds upon a problem inherent in any public body: the political authority decides on reforms, which must then be implemented by educational professionals. This makes it tempting to contest all decisions that do not originate wholly from professionals. More generally, we have observed some reluctance to accept the definition of a framework for the reforms, needed because the reforms concerned could not be treated as the mere aggregate of separate local initiatives. It has now become necessary to spell out the respective roles of the central administration and educational institutions with a view to encouraging the projects of schools which fit into an overall strategy.

The aim is to reconcile the necessary cohesion of the education and training system with the indispensable latitude that schools need in order to be dynamic, motivated and creative in their own right.

POLITICAL PARTIES AND FINANCIAL RESOURCES

When we turn to political parties, the most important criticisms and objections are directed at the means needed to carry through the reforms. Some people fear that the reforms will entail extra expenditure, while others fear that they are not sufficiently backed up by resources; these themes occur again and again in the political debate. The long period of prosperity enjoyed by the Swiss public authorities, and particularly by those in Geneva, have, in the past, made people link the idea of change with increases in funding. The present crisis in public finances, on the contrary, is bringing awareness of the idea that available resources must now be used more effectively and that ways must be found to make more rational use of public funds.

Furthermore, the democratic system in Switzerland and in Geneva is so designed that it offers many possibilities of intervening at the parliamentary level. For example, any reform introduced in schools may be contested by petition, by tabling a motion, or by bills introduced by members of the cantonal parliaments. This may occur at any time during the reform process and have a significant impact on its development.

CHANGE IS UPSETTING

Lastly, and more vaguely, we find that any major change in our education system meets with a certain amount of resistance from members of the public. The more thorough the reforms, the more difficult they are to explain simply. It is somewhat paradoxical that, although the school is an institution familiar to all ordinary people, most of them see it as

fundamentally different from the one they themselves are familiar with. This makes it all the more necessary to develop evaluation tools that will enable people to follow the progress of schools and gauge their results by information that is as objective as possible.

The necessary conditions for reform

Reforms in the education system in Switzerland and the Canton of Geneva are in their infancy. Any comments made cannot therefore be regarded as proper conclusions concerning the final outcome of a completed process. Nevertheless, it is possible to lay down certain important conditions for successful reform:

Transparent formulation of the reforms' objectives, in order to make them intelligible to all those directly involved, both in political circles and on the ground. Admittedly, this requires time and the commitment of all administrative professionals concerned by the reforms. We have found the explanation of objectives to be a key factor, which in turn requires an appropriate policy of communication.

Introduction of regular evaluation of the education and training system, for the purpose of measuring as objectively as possible—by indicators and other methods—the results of the reforms in question. Geneva is in the process of providing itself with an instrument for overall evaluation. Moreover, in the area of primary education, the reform process is being monitored by international experts who are responsible for its external evaluation. Individual citizens have their own experience and their own ideas about schools. Judgements concerning the quality of schools vary from person to person. It is therefore vital to collect objective data that will subsequently make it possible to build up as broad a consensus as possible regarding the conclusions drawn and the steps to be taken. Swiss tradition has hitherto not been in favour of introducing evaluation systems as such. Like other cantons, the Canton of Geneva is now moving towards the adoption of such a system. Its task should be eased by international research already carried out and, in particular, by the indicators developed by the Organisation for Economic Co-operation and Development (OECD).

Parents' co-operation. Any change causes anxiety. From the very start of a reform process, it is particularly important to decide how parents can make their voices heard and be kept informed, and to determine the role that they may be called upon to play in the implementation of the reforms. Educational curricula and teaching methods are matters for the school concerned, but parents need to be able to feel confident about the reforms. The whole process is a delicate matter. When we introduced the reform of primary education, for example, we decided to arrange for parents to be represented on the body piloting the scheme. But that in itself would have been quite insufficient without real campaigns at the grassroots level to explain the changes and the reasons behind them. This task may turn out to be highly complex in a field such as education, in which the essential aspects are not necessarily easy to describe or explain.

Adaptation of teacher training. The current reforms affecting the education system will not be without implications for the work of teachers. This prompts us to re-examine their training, both initial and in-service. It is important to be aware of the diffi-

culties inherent in altering methods of approach. As many people have chosen the teaching profession because it allows the individual great freedom of action, the fact that the reforms require more teamwork and co-operation with others means that some friction and questioning is inevitable. Training should therefore be used to back up and ease the transition.

Participation of teachers in the implementation of reforms. Reforms cannot be decreed; they require the active support of all of those involved, and especially of teachers. Teachers must be associated with and involved in the reform process from the outset. This makes it necessary to allocate a budget and to allow them enough time to participate. The introduction of reforms also raises the question of the implicit or explicit consent of the persons who will have to implement them. No reform ever receives unanimous support, and this is all the more true of reforms in their early stages. A strategy should therefore be adopted whereby the level of support for change can gradually be increased.

By way of a conclusion, I should like to emphasize the importance of the time factor in the evolving nature of education systems. The profound changes affecting society make it necessary for the school, too, to change. Ordinary people expect education and training to measure up to short- and medium-term social, cultural and economic needs. Yet the reforms of today will only produce their effects in the long term. This fact may make it more difficult to cope with society's legitimate expectations of the education system. But we should never forget that young people in Geneva start school at 4 years of age and very few cease all forms of education or training before the age of 19 or 20. We must make sure that each person leaving the system has been offered the best possible chances of occupational, social and cultural integration. This is the challenge that our reforms should meet.

If we had to sum up in one sentence the goal of all of these gradual changes in the system of education and training, I should say that it was to prepare young people to become free and responsible adults.

Notes

1. Walo Hutmacher, *Quand la réalité résiste à la lutte contre l'échec scolaire : analyse du redoublement dans l'enseignement primaire genevois* [When reality opposes the effort to overcome underachievement: an analysis of repeated years in primary education in Geneva], Geneva, Department of Sociological Research, 1993. (Cahier no. 36.)
2. The *maturité* examination in Switzerland, known as *maturité gymnasiale* (i.e. school-leaving examination for gymnasium students), is the equivalent of the French *baccalauréat*.
3. This refers to upper secondary education. In vocational training, this three-year course of apprenticeship leads to the *Certificat fédéral de capacité* (CFC) [Federal Proficiency Certificate].
4. In vocational training, the tertiary level is the equivalent of university level.
5. The CFC, if augmented by some general education courses, leads to the *maturité professionnelle*, equivalent to the vocational *baccalauréat*.
6. Students awarded the *maturité professionnelle* qualify for admission to a technical college at which they will continue their training until they obtain a vocational degree (the equivalent in vocational training of a university degree).

SPAIN:

THE DECISION-MAKING PROCESS

IN EDUCATIONAL REFORM

Álvaro Marchesi

Educational reform is necessary and inevitable. As part of a constantly changing society, education systems cannot possibly remain distanced from ongoing transformations. Innovations in every field—economic, social, cultural, scientific, artistic—oblige educational institutions to adapt to new situations. Education systems also have to confront the changes in society which prevent them from reaching their goals.

For change does not always mean progress. Changes in education and society do not invariably improve people's general well-being or provide students with higher quality education. The value of a change can only be judged by studying its orientation and its impact on the system as a whole. In so doing, we must bear in mind that changes in education do not consist of concrete events but occur over a period of time and that the objectives of change are as important as the process itself.

There is no long-established tradition of studying the process of change in education systems and establishments. Nonetheless, in recent years there has been a substantial increase in the number of studies on planned educational reform. Our traditionally stable education systems are being replaced by structures that change constantly in an effort to respond to rapid technological and social transformations. While knowing more about education is vital, it is equally important to study the impact of the changes that are transforming the world of education. Fullan and Miles (1992, p. 745) have observed that no change could be more fundamental than the broad expansion of the capacity of individuals and organizations to understand and cope with change. Analysis of the conditions

Original language: Spanish

Álvaro Marchesi (Spain)

Professor of developmental psychology and education at the Universidad Complutense of Madrid, Mr Marchesi's research has focused on the problems of language in infancy, the quality of education and educational reform. He worked for thirteen years, until 1996, at the Spanish Ministry of Education. Initially head of the programme for the integration of pupils with special needs, he was subsequently involved in the design and implementation of the educational reform plan approved in 1990.

and factors underlying the process of change must become part of future models of educational reform.

Educational reform should therefore be examined in the broadest possible variety of perspectives. This article presents only one of many possible approaches, namely the views of someone who spent ten years planning and setting the course of the comprehensive educational reform now under way in Spain. The focus is essentially on the decision-making process associated with the reform and a subjective evaluation of the outcome of the decisions made. The full consequences of the decisions taken, their ability to effect genuine change in the education system and the degree to which they have met the objectives set can only be measured by wider-ranging and more detailed and objective analysis carried out over several years.

The article does not address the reasons for the reform, its significance, its social and educational objectives or the factors which had to be taken into consideration to implement it. Its purpose is more limited: to elucidate the decision-making process and examine how it was influenced by the different sectors of society.

Defining the goals of educational reform

The educational reform plan, as finally set out in the law approved by Parliament in 1990, was the result of a long process of preparation. The initial objectives of the reform were modified and their scope was broadened in response to the majority view that the entire education system needed overhauling. This process, which took nearly ten years, lasted from 1981 to 1990. The reform itself is also expected to take ten years.

EXPERIMENTAL PHASE

The first measures focused exclusively on the reform of secondary education, including the period of optional academic and vocational training between the end of compulsory education and university. At that time, reform was needed in several areas:

- Compulsory education needed to be extended—pupils could leave school at the age of 14 but were prohibited from working until they were 16.
- Students studying for the *bachillerato* (secondary school leaving examination) were almost always expected to go on to university, despite the inability of the universities to meet the increasing demand.
- Little importance was attached to vocational training.
- Decision making and management in the area of education needed to be decentralized to reflect the new, more autonomous structure of the State.

The first text submitted by the Ministry of Education, in 1981, set out three principal objectives: full-time attendance at school until the age of 16, creation of a first cycle of secondary education, combining the first two years of the *bachillerato* and vocational training; and a new model for technical and vocational education.

In 1982, the Socialist Party came to power in Spain. During its election campaign, the Party had pledged to extend compulsory education to the age of 16 and to restructure secondary education.

One of its first initiatives was to implement the proposed reforms on a pilot basis in volunteer schools. For seven years—until a set of final decisions was adopted—a large and increasing number of schools tested the proposed reforms. Generally speaking, this strategy was very successful. It brought to the educational community an awareness of the importance of reform and involved a good number of teachers—the most enthusiastic and motivated. It also yielded valuable information on the difficulties of and resistance to reform as well as on the strengths and weaknesses of the initial model. The approach also had certain inherent problems: one source of disequilibrium was the parallel use over several years of two different systems. Moreover, the teachers who participated in the experimental phase were not too happy with the reform as finally adopted, which did not reflect the original project in all respects.

PLANNING AND DISCUSSION PHASE

After four years of experimentation, the Ministry of Education submitted a more definitive version of the reform for the consideration of the entire educational community. The original goal of extending the ceiling for compulsory education to 16 years of age was maintained, but integrated into a much more ambitious plan for a sweeping reform of the entire education system. (For a fuller account of the reform plan, see Marchesi, 1992, and Martín Ortega, 1996.)

For two years there was a wide-ranging debate on the subject, including some conflict arising from salary demands by teachers. Agreement was expressed with the principal goals of the reform, but there was disagreement on specific issues: secondary school teachers questioned the six-year secondary education model, under which all students would follow the same curriculum for the first four years, preferring a system with only three years of common classes; private schools' representatives endorsed the proposed model but wondered whether the necessary resources would be forthcoming; religious groups did not like the manner in which religious teaching was handled. Overall, the educational community was dissatisfied with three major areas: the cost of the reform, the implementation strategy, and the curriculum for each level and subject.

In 1989, the Ministry of Education published a white paper on educational reform in which it established the principal objectives of the reform and corrected the flaws noted in the original plan. It did so by specifying the cost of implementing the reform and providing a detailed plan for a new network of educational establishments and a new basic curriculum for each level of education (early childhood, primary and secondary). The proposals for curriculum change were debated again before they were finally approved. The goals of the reform, which was extended to the entire education system prior to university, can be summarized under five headings:

1. Extension of free compulsory education to the age of 16.
2. Reorganization of the levels of education to consolidate the extended period of compulsory education, and establishment of a new stage of education (early childhood), prior to the primary grades.
3. Substantial changes in vocational training. Creation of a new method of teaching which better reflects the demands of the labour market, places greater emphasis on

the on-the-job training and is tied more closely with training offered by the employment sector.

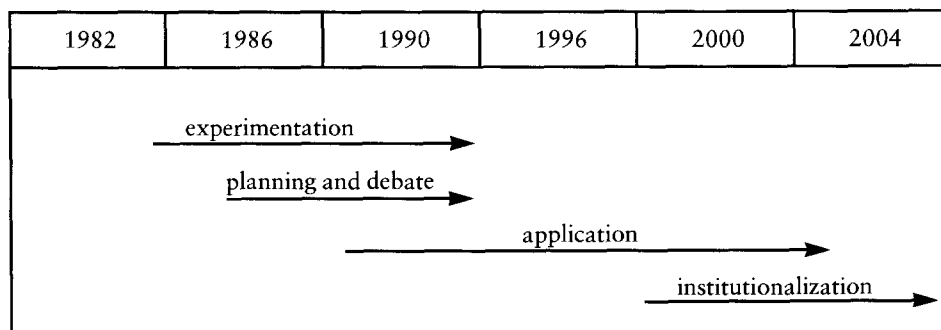
4. Improvement in the quality of teaching. In addition to the preceding proposals, a number of measures were instituted to improve the functioning of the schools. Noteworthy among them were a change in curriculum objectives and contents; greater autonomy for schools; elaboration of a national plan for teacher training and a more extensive programme of assessment of achievement.
5. Achievement of greater equality in education. The extension of free compulsory education to the age of 16 is one step which brings education within the reach of the disadvantaged sectors and helps give all students equal access to secondary-level studies. Financial assistance for poorer families was also proposed with a view to promoting the integration of children with special education needs. Greater emphasis would also be placed on schools serving students with serious learning disabilities.

All of these objectives were ultimately brought together in a single law approved by Parliament in 1990: the Organic Law on General Reform of the Education System (*Ley de Ordenación General del Sistema Educativo, LOGSE*). The law was endorsed by approximately 70% of the members of Parliament, including those belonging to the Socialist Party, which held the majority at that time, the Catalan and Basque nationalist parties, the United Left Party and other minority parties. Only the conservative People's Party, in power at the time of writing, voted against the law.

IMPLEMENTATION PHASE

The law had to be approved by Parliament before the next stage in the reform process—implementation—could begin. A ten-year period was allocated for this task. Figure 1 presents a summary of the different phases of the reform.

FIGURE 1. Phases of educational reform in Spain



Implementation of the reform was, and still is, much more complex than the first stage. Serious difficulties arose when the groups most affected by the measures initially endorsed by the majority of social sectors began to realize their full implications. The consensus of the decision-making phase broke down during implementation and the benefits obtained

were disregarded when it came to making concessions. Agreements with specific sectors frequently gave rise to consequences which were not always acceptable to the others.

The implementation phase is not simply a time to confront the resistance to change. It is also a time to realize that some decisions were unwise, that criticism by some groups merits consideration and that some of the conditions necessary to implement the reform have not been met. This gives rise to further adaptations and changes. This is certainly what has happened in Spain. In recent years, the authorities have been obliged to modify the implementation schedule owing to budgetary problems; negotiate new financial incentives with teachers; devise ways of giving more autonomy to the schools; broaden assessment systems; and strengthen the role of the administrative teams which in Spain are chosen by the educational community. Implementation is not simply a phase during which the decisions adopted by Parliament are executed. It is the time when the viability of the initial view on the changes needed is put to the test and the period during which the greatest tensions arise. It is the stage during which we are likely to forget the reasons for the reform, although there was a general consensus on them a few years before. It is the stage at which political priorities may hinder the attainment of the goals set. Finally, it is the stage in which negotiation and flexibility must be firmly and lucidly combined to achieve the desired goals.

Impact of the various sectors on the decisions adopted

A comprehensive and long-term reform of this nature requires sustained contact with the various sectors of the educational community. Ongoing consultation and negotiation have been the linchpins of the reform process in Spain. Negotiating with all sectors involved has not been an easy or an entirely successful venture. Three factors have limited its benefits:

1. Different groups often have different viewpoints and interests. For example, the teachers' unions wanted a working day which did not meet the needs of the parents, who preferred longer school hours. Another example is that of tenure: during the early years of reform, the teachers' unions agreed to a temporary system under which teachers occupying interim posts had more chance of obtaining a regular contract. This agreement was firmly rejected by students completing their studies at that time and by the public in general.
2. Representatives of the different social sectors very often failed to inform their constituencies of the negotiations held and agreements reached. Many teachers complained that they were not consulted about the reform, even though a permanent process of dialogue was maintained with their unions.
3. The agreements finally reached were not endorsed by everyone affected by them, which led to tension and ill will. The news media had a tendency to emphasize the most critical viewpoints.

Despite its limitations, the negotiating process was one of the basic elements of the reform. In the search for common ground, the goals of the reform had to be balanced against the interests of the various groups involved. The negotiations were carried out at two different levels—global and sectoral (or bilateral). The type of negotiation varied with the

two major phases of the reform—debate and implementation. Furthermore, depending on the issues under consideration, the nature of the target audience and its sphere of influence differed.

GLOBAL INSTITUTIONAL NEGOTIATIONS

In 1985, Spain established the State Academic Council, a consultative body of the Ministry of Education dealing with all matters falling within the Ministry's mandate. The Council includes representatives of the entire educational community: teachers' unions, parents' and students' associations, administrators, the Catholic Church and well-known personalities from the world of education. The Council has a dual function: to express an opinion, which is non-binding, on all of the standards and rules established by the Ministry of Education and to prepare an annual report on education in Spain. In each case the Council's views, whether positive or negative, strongly influence both the final decisions made and public opinion.

The Council's approach of ongoing debate for addressing the large number of initiatives connected with the reform was very successful. In this way the sectors were able to keep informed of each other's views, which helped to modify positions and made it easier to find common ground. The educational authorities were in turn obliged to give due consideration to the opinions of the social actors involved. This progressive climate of understanding still did not prevent the emergence of serious tensions and fierce debate, especially when the issues were highly charged. The debate on LOGSE is a good example. After lengthy negotiations, the Ministry of Education had not succeeded in getting the most representative teachers' unions, which held progressive views, to accept the text to be submitted for a vote at the plenary meeting of the State Academic Council. The unions submitted another, more critical, proposal which was defeated, in part because the private and church schools supported the more positive report.

The views expressed by members of the Council did not always coincide perfectly with or against those of the Ministry of Education. Disagreement between the two groups was evident on two issues: public and private education; and the teaching of religion in schools. The Ministry of Education defended public education and its views were supported by the parents and teachers connected with public schools. With regard to religious education, the Ministry of Education took a stand which was equidistant between those who opposed religious teaching in schools and those who advocated some type of religious instruction for students who did not wish to attend religious education classes. The discussions on this issue were interminable and satisfied no one. Each group—lay and religious—accused the ministry of yielding to the demands of the other.

While positions on these issues were sharply defined, views on other less ideological or more strictly educational matters were more flexible. The debate on curriculum planning, vocational training, the role of head teachers and the evaluation of teaching institutions reflected more flexible attitudes. There was, for example, general agreement on all aspects of vocational training. All of the sectors were united in demanding more funds from the Ministry of Education, although differences emerged when it came to the distribution of the resources. State and private school representatives differed on the ques-

tion of teaching models and curriculum planning. The former advocated comprehensive education, compensation for inequalities and equality of access to education. The latter wanted greater autonomy for the schools and attached more importance to the role of school administrators and evaluation programmes. With regard to the Ministry of Education's proposed model, the State school sector appreciated its emphasis on strengthening State education and measures to promote equality of opportunity, while the private school sector was more interested in the measures to reinforce particular aspects of the quality of education. On other issues, such as the participation of the whole educational community in the schools, there was divergence. Parents and students, in both State and private schools, demanded more say in relation to the teachers. The teachers were united in opposing these initiatives and demanded in turn a greater share in decision making.

SECTORAL NEGOTIATIONS

Bilateral consultation and negotiation with the different sectors of the educational community was as important as, and on some occasions more important than, the ongoing dialogue with the community as a whole. Employment and professional issues raised by teachers throughout the entire period of reform planning and implementation were the most difficult to resolve and required the most time and energy. The ministry knew that teachers had to be committed to the reform if it was to achieve its objectives and convince parents and the public in general of its viability. The teachers' attitudes varied according to the grade level at which they taught. A majority of early childhood, primary education and vocational training teachers supported the reform: they had a better appreciation of the social function of education and were more accustomed to teaching all types of students. They also knew that, while it required energy, the reform would improve their working conditions and professional status. Secondary school teachers were in a different situation. The accessibility of education at the secondary level to all, the changes in the school curriculum and structure and the greater variety of students in the classroom were perceived as problems by teachers who were not prepared for such changes. The model of secondary education favoured by secondary school teachers was closer to the earlier system of education which was more academically oriented and selective. Secondary-level teachers also felt that the improvements in their working conditions and professional status were not sufficient to warrant the effort required to adjust to the change.

The negotiations with political parties in Parliament and with the educational authorities of autonomous communities took place on an *ad hoc* basis. The agreements that were reached nevertheless had a broad impact on the orientation of the reform. Test runs of the reform were organized in all of the autonomous communities, some of which were run by political parties other than the party in power at the national level. This called for joint effort and reflection and eventually resulted in majority support for the reform law. In fact, the various autonomous communities experienced very similar problems during the implementation phase of the reform, which made it easier to arrive at agreements and solutions.

Special attention was also paid to the media. During the phase of planning and debate, opinions were solicited but not widely publicized. The publication of the white paper and the adoption of the educational reform law were widely welcomed and endorsed by the

majority of the media. This enthusiasm was not sustained during the implementation phase. The first reason for this was the reduction of the education budget during the early 1990s, which made attitudes more sceptical. The second reason was that each sector of society had its own problems, pressing needs and demands. It was difficult to get it across to the public and the sectors involved that it would take ten years to fulfil the pledges made, for example, placing music specialists in every primary school, providing education for all 3-year olds, building secondary schools in all towns of more than 3,000 inhabitants, or setting up a counselling unit in each school. Citizens expected immediate action; they could not understand the delays and wondered why the changes were being made in other communities and high schools before theirs.

The scientific community had mixed views about the reform. Many teachers supported the reform objectives since they had been asking for those same changes for years. A smaller group felt that the reform was too timid and that it failed to meet the expectations of society at that time. The reaction of professionals in the various scientific fields depended essentially on the changes proposed and the priority attached to their area.

Learning from experience

It is difficult to judge from one's current perspective decisions made in the past. Each moment in history is determined by particular factors which generate the pressures and expectations on which specific decisions are based. The passing of time modifies the initial context and reveals the inadequacy of certain approaches. This does not mean that a mistake has necessarily been made but rather that modifications are needed because circumstances have changed. The new strategy, which now seems more suitable, might not have worked if it had been applied in the past. With this caveat, the following are the most important conclusions to be drawn from the reform process in Spain.

1. Educational reform is not simply a technical problem. Ideological choices must be made with regard to the goals of education and the most effective way to achieve a higher quality and more equitable education system. No doubt all efforts to reform education share these same aspirations. Yet these efforts are not all based on the same conception of education nor do they have the same effects. The process of educational reform in Spain was not based on a liberal ideology which would apply the rules of the market to education, encourage competition between teaching institutions and consider the free choice of parents to be the basic way to improve the quality of teaching. The reform in Spain is based rather on support for State education and the promotion of various measures to enable all students to have access to quality education: greater autonomy for schools; design of projects adapted to particular circumstances; evaluation models which take account of socio-economic considerations, educational methods and student achievement; information systems based on school projects and undertakings rather than on a comparison of academic scores; compensatory education programmes offering greater resources and better conditions to schools whose pupils have more serious learning difficulties.
2. Experimentation and debate are necessary when far-reaching changes are proposed, and the approach adopted in Spain may be considered successful. The initial period

during which the selected educational objectives were tested in certain schools and broad debate on these questions made the whole educational community aware of the proposed changes and helped ensure the success of the reform. It must be acknowledged, however, that this phase lasted too long. The trial runs could have been organized to coincide with the public debate phase, which would have speeded up implementation of the reform. However, the widespread strikes and demonstrations of 1986 and 1987 by students and teachers demanding better conditions in the school system made it impossible to do this in Spain. The protestors were not against the reform, which was already in its initial phase, but called upon political leaders to create a calmer atmosphere and more consensus before taking and implementing any final decisions.

3. Good management of time is basic to a successful reform. A sense of how much time is needed for the proper application of the planned changes and their incorporation by the institutions concerned is important. Acceptance of political, administrative or personal priorities which operate in time-scales different from those associated with educational reform can be expected to result in superficial, short-lived changes or, in the worst case, dissatisfaction and discouragement. Educational reform requires a time-frame which corresponds to its broad scope. At the same time, a long drawn-out process set against a background of conflict tends to reinforce resistance and make change more difficult.
4. There must be continuous ongoing dialogue with all sectors of the educational community, conducted with a confidence and seriousness that will reassure those concerned that the promises made will actually be kept. This does not guarantee that agreement can always be obtained or that conflict will not arise. But it must be pointed out that communication styles may either facilitate or hinder the agreement that needs to be reached. Good relationships make it easier to find solutions while poor relationships, apart from ideological and political considerations, give rise to greater mistrust and impede agreement. One must also bear in mind that the representatives of the various sectors do not always pass on information to their constituencies or inform them of the commitments made. Negotiations with teachers' union representatives should not exclude the provision on a permanent basis of information to the entire teaching community, especially to those with particular responsibilities, such as school inspectors and heads.
5. Teachers' expectations, their working conditions and professional status should be kept in mind at all times. Future plans for innovation should focus not only on involving teachers in the reform but also on gaining their support for the proposed changes. The active participation of the majority of teachers in fact guarantees success. To achieve this, the proposed reform must include measures dealing with career development and job satisfaction, which depends on working conditions, social status and professional incentives and rewards for efforts required and made. Every proposal for change must take into consideration the teachers who will be affected by it. The most pressing need at the moment is to reform the organization of teaching and recognize and reward team teaching, training, innovation and dedication.
6. Changes made must take into account the particular circumstances of each school.

Implementation must be decentralized so that a variety of solutions can be designed to address the problems encountered. Linear and sequential models of change need to be replaced by more interactive and progressive models in which innovations are tailored to fit different social and cultural environments.

7. A major goal of educational reform is to foster change in the organizational development and culture of educational establishments. Reform should be oriented towards modifying current systems of beliefs, values and relationships in the schools. Any sustainable change must also affect schools' organizational structure. Involving different people and introducing changes in the system of internal co-ordination, the role played by the administration and the organizational culture of schools are basic prerequisites for promoting and consolidating reform.
8. The effectiveness and depth of reform depend on the stability of the process. Unless they are made for a good reason and are clearly explained, changes in goals or strategies cause confusion and consternation and are discouraging. One of the most important aspects of the reform in Spain was the stability of the project from 1982 to 1996. During that period, the country had five different ministers of education, yet each maintained the basic orientations of the reform, introducing changes of emphasis and adaptations according to their own personal style or as needed for the different stages of the reform.
9. Any expectations to which the project gives rise should be stimulating but realistic. The majority of social sectors should feel that the proposed objectives are necessary and attainable and that the benefits of the reform will offset the effort involved. The credibility of the project itself and of its initiators are factors which will affect the level of participation in it. This initial dynamism should not obscure the problems which will arise or play down the efforts that will have to be made.

These thoughts are based on personal experience of an ambitious project for change in education which took some time to complete and whose overall design and basic objectives and strategies may be rated positively. It will, however, take more time to assess the full impact of the changes made.

References

- Fullan, M.; Miles, M. 1992. Getting reform right: what works and what doesn't work. *Phi Delta Kappan* (Bloomington, IN), vol. 73, no. 10, p. 745–52.
- Marchesi, A. 1992. Educational reform in Spain. *International review of education* (UNESCO Institute of Education, Hamburg), vol. 38, no. 6, p. 591–607.
- Martín Ortega, E. 1996. Educational reform in Spain: five years on. *Prospects* (UNESCO-IBE, Geneva), vol. XXVI, no. 3, p. 589–607.

FINLAND: RESTRUCTURING HIGHER EDUCATION

Olli-Pekka Heinonen

Programme of the present government

Educational policy has always been regarded as one of the most important sectors of Finland's social policy. At the beginning of its term, every government draws up a programme setting out its main targets and outlining the main features of its policies in areas of key national importance. On the basis of this document, the various ministries make more detailed plans and carry out the measures needed to achieve the targets.

There has long been political and social consensus regarding the main direction of Finland's educational policy. This is well illustrated in the present government which (although made up of five parties—from the traditional left to conservatives and, as the first in Europe, the Environmentalist or Green Party) has not had to cope with serious political conflict over its educational strategy.

According to this government's programme, its whole educational policy is based on the need to raise the educational level of the population as a whole and put the principle of lifelong learning into effect. It further guarantees the right of every young person to free nine-year comprehensive school followed by either (three-year) upper secondary or vocational school.

Finnish society was shaken by an unprecedented deep recession in the early 1990s, which inevitably coloured the debate on education and the priority assigned to targets. One serious consequence of the recession is unemployment. This is due partly to fluctuations in the global economy, but largely to the one-sidedness of Finland's economic structure and other structural problems.

Original language: English

Olli-Pekka Heinonen (Finland)

Minister of Education. Member of Parliament. Master of law from the University of Helsinki. Formerly a teacher, special advisor to the Minister of Education and chairman of the Nordic Council of Ministers. In numerous articles and speeches in Finland and abroad he has stressed the role of Finnish culture, the information society, and international co-operation and exchanges in education.

To ease unemployment and promote a vital overhaul of Finland's industrial and economic structure, the government is determined to enhance the quality of education and its relevance to the workplace. As part of this endeavour, a process of systematic evaluation has been launched and the regulatory machinery which oversees education has been lightened. Various short-term educational measures intended to reduce unemployment have also been introduced. Every now and then these are criticized, as educational institutions—universities included—consider that large-scale programmes jeopardize the sustained development of education and put the institutions at the mercy of short-lived economic cycles.

As part of the comprehensive incomes policy, the government has designed an education-insurance model enabling the unemployed to apply for further or continuing education on better financial terms than currently possible. The primary aim of this measure is to relieve unemployment, but it also seeks to implement the principle of life-long learning and will eventually be extended to those in work, too.

The government considers it important that more effort should be put into building up a network of polytechnics responsive to the demands of the workplace and into promoting a well-balanced national innovation system. Important here is the determined commitment in the government programme to secure the funding of universities.

Another key aim mentioned in the programme is development of an information and knowledge society with due respect for human and social factors. While naturally relevant to all branches of social policy, this aim stresses the importance of education and science. Partly related to the above is the government's undertaking to raise the standard of mathematics and natural sciences to ensure that we do not fall behind in international comparisons.

Finland is investing considerably more in education than other Organisation for Economic Co-operation and Development (OECD) countries on average, and the government has no wish to reduce this investment as such. Its programme nevertheless calls for the network of educational institutions to be rationalized in order to make education more effective, both financially and academically.

Development plan for higher education and university research 1995–2000

As I said above, we are agreed on the main direction to be taken by education in Finland. Education is a subject that interests all decision makers irrespective of party loyalties. As the above references to education in the present government's programme suggest, strategies are not mapped out in detail when the government is formed. This is not done until the Development Plan for Higher Education and University Research is unveiled, an event that takes place every four years.

The Development Plan is drawn up by the Ministry of Education and approved by the government in plenary session. The planning no longer takes place behind closed doors, and various interest groups, for example, political parties, teacher and student organizations and the trade unions, contribute statements on the proceedings. I shall return to this planning stage at greater length in the context of the public debate on educational policy.

The targets of the current Development Plan cover three areas: the content of edu-

cation, educational structures and funding. Appended to the plan is a decision on how education should be dimensioned during the planning period.

The plan stresses the vital role played by education and research in Finland's strategy to promote quality of life, cultural diversity, sustainable development and the creation of wealth. The main objectives are that education should be of a high standard, equally accessible to all and in accordance with the principles of lifelong learning.

In terms of the content of education, the plan emphasizes the importance of strengthening the links between education and the workplace, in order to arrive at a system whereby education and employment alternate in people's lives. Responsibility for ensuring that students find work when they graduate or qualify has been assigned more firmly to educational institutions.

The internationalization of education has been a cornerstone of Finland's educational policy since the 1980s; today the need is greater than ever. The rapidly expanding internationalism of Finnish society requires greater expertise in both intercultural communication and vocational skills. We have to face up to the fact that a vast number of people in Europe's internal market are now competing for the same jobs as our young people and those already in employment. Finland's educational policy must be such that our education is competitive in the increasingly aggressive market and able to respond to the challenges set by globalization of the world economy.

The limited number of speakers of our language stresses the need for Finns to study foreign languages and learn about foreign cultures. At present, Finnish secondary school pupils learn more foreign languages than their counterparts anywhere else in the European Union. Comparatively speaking, the situation may be good, but we still need to broaden the scope of our language programme and improve the quality of teaching. The Development Plan has taken account of this need. A detailed language programme has been drawn up by the Ministry of Education and a special appropriation reserved for its implementation.

With regard to the emerging information and knowledge society mentioned above, the Development Plan emphasizes the importance of equality of opportunity: all citizens should be given the basic competence to use and understand information and communication technology as a tool for learning, research, work and leisure pursuits. Special attention is drawn to equality between men and women. The ministry has formulated a national information strategy for education and research which, despite the recession, has attracted considerable input of extra resources.

The financing of education is to be developed to encourage performance, the aim being that a certain share of public funds should be allocated at all levels on the basis of performance. Evaluating performance has naturally stirred up heated debate due to the difficulty of finding uncontroversial, utterly fair indicators. To date, the greatest success in this area has been achieved in the university sector, although even there only a mere 3% of the budget is allocated on the basis of performance.

Our aim in the basic financing of education is increasingly to rely on a system of core funding based on unit costs. That way the budget for educational institutions will become both more transparent and more realistic.

The Development Plan also takes into account the decision on dimensioning edu-

cation, which aims to provide higher education to 60–65% of the cohort. The intention is that two-thirds of the target will be met by the polytechnics (also known as AMK institutions) and one-third by the universities. Both university researchers and employers have expressed their misgivings about the target, claiming it is too ambitious and costly. The subject is closely related to polytechnic reform, discussed below.

The needs of adult education are given a prominent place in the dimensioning of education. About one-quarter of degrees and vocational qualifications are to be reserved for mature students. There is an urgent need to raise the standard of adult education in Finland, as there is a wide gap in education between young people and the older generation. In these days of mass unemployment, job prospects are particularly bleak for the middle aged with only basic education. We see adult education as an effective weapon in the battle against social exclusion, which is only too easily the fate of the long-term unemployed.

In the above paragraphs I mentioned a few of the key points of my educational policy. Some relate to the content of education, but others to the two main areas of educational reform. It is in light of the latter that I shall now look more closely at the course we have plotted for education in Finland.

One of the main areas of reform is the steering system and vocational education; together they have implications for our whole education system. The basic starting point and *primus motor* of many individual reforms are the speed and determination with which the steering system has been revised and the authority of individual institutions increased. The polytechnic reform, for its part, has created a need to rethink the provision of vocational education and has led to a change in the whole system of higher education in this country.

Reform of the steering system

In Finland, as in other OECD countries, the past ten years have witnessed a major effort to improve the efficiency of government and the operating potential of public management. The basic aim of the reforms introduced in all sectors of government has been to replace the old centralized system with one stressing results and service. This has entailed replacing statutes, norms and strict budget control with agreements on targets and the resources needed to attain them.

The changes to the steering system have stressed, on the one hand, the role of the government and the Ministry of Education in the setting of priorities and targets and, on the other, the responsibility that increased freedom of action gives individual units to produce results.

Although affecting education at all levels, the steering system reform has taken the different backgrounds and needs of the various levels and educational institutions into account. The Ministry of Education now holds annual target-outcome negotiations with the polytechnics and universities. There is no such practice for schools or vocational institutions; in their case the government exerts control through the provision of information and greater use of legislative measures channelled through the Ministry of Education and the National Board of Education.

The target of the Development Plan for Higher Education and University Research is to revise all legislation on education in the course of 1997 and 1998. This target reflects

the enormous change that has taken place in the relationship of the whole educational sector to government steering in the past few years.

The legislative reform requires that we further refine our chosen strategy. We currently have a vast but unco-ordinated body of legislation on education. It is based on the form of educational institution, not educational targets, and most of the provisions refer to management, staff structure and other organizational matters. The reform is seeking both to drastically prune the number of provisions and to enhance their relevance while substantially expanding the authority of those organizing education. The reform further stresses the targets of education, quality evaluation and co-operation between educational institutions.

As I write this article (May 1997), the government has submitted a legislative package on universities to Parliament, but the preparatory work on other forms of education is under way. The university reform package has already sparked fierce debate. Preparation of the whole reform was in the hands, first, of a committee of civil servants and then of a parliamentary committee, whose findings were commented on in written statements submitted by almost 200 bodies. We can expect the debate to continue equally heated in Parliament, as interest in educational issues, particularly those not concerned with higher education, is considerable.

The subject that has excited the most passion is pre-school education. (Attendance at school in Finland is not compulsory until the age of 7, and 60% of the cohort attends pre-school.) I foresee teachers' qualifications emerging as another subject of political and public debate.

There is no denying that the control of Finnish education used to be highly centralized. All schools providing general education followed the same curriculum, had the same quota of lesson hours and had their textbooks approved by the central agency. The same applied to vocational education and in some respects (budgets and the strictness of norms) to higher education as well.

The introduction of management-by-result principles to the education sector has led to sweeping changes both in administration and at the school level. Overlapping administration has been eliminated and much of the authority transferred to the actors themselves—schools, teachers and pupils.

Nowadays, the National Board of Education sets only the core curriculum for schools. This is done to ensure that at least the underlying targets of education are the same all over the country. After that, it is up to schools themselves to decide how they attain targets, prioritize subjects and so on.

Developments in vocational education have followed the same path. The aim has been to dismantle the cumbersome planning and regulatory system to enable educational institutions to respond to workplace requirements more readily and orient courses according to need. The greatest upheaval in vocational education in the 1990s has been the building up of the polytechnic system using structures already in place. I shall return to the creation of the polytechnics later.

Even though Finland's universities have enjoyed a fair degree of autonomy in teaching and research, they were constrained by tight budgetary limits and statutory provisions right up until the late 1980s.

Because it is in universities that result management has made the most progress, I shall take them as a practical example of how we have implemented the principle in Finland thus far.

Implementation of management-by-result in Finland's universities

The closing years of the 1980s were a golden age for universities in this country: the Higher Education Development Act, which secured them an abundance of resources, was passed. In September 1986, the government decided that university funding should be increased by at least 15% annually to guarantee the effective and efficient running of universities. It stressed the need to improve their prerequisites for objective-oriented management, and gave them greater flexibility in the use of their own funds and in defining the workload of teachers. At the same time the need for effective performance was underlined. The decision also gave weight to the other key elements of the management-by-result approach—evaluation and reporting on results.

The first step in bringing the principles of management-by-result to Finland's universities had been taken.

The first target outcome negotiations between the Ministry of Education and the universities were held in 1988, and for the first time a small fraction of the universities' budget was allocated on the basis of performance. In later negotiations both parties signed a written agreement covering the main targets and resources of each university.

In the late 1980s and early 1990s, management-by-result did not provoke much criticism in Finland. The recession changed all that, however, when in 1993–1994 universities' operating expenses had to be cut by almost 16%. Clearly most of the universities considered that the increased autonomy they received along with the result management model marketed by the Ministry of Education amounted to little more than freedom to do more with less. Of interest here are the conflicting views of different universities regarding the impact of result management.

The change in the relationship of the universities and the Ministry of Education resulting from the introduction of result management has highlighted the need to update the internal running of universities. Result management calls for stronger internal leadership than academia is accustomed to. Until now, power has been in the hands of unwieldy collegial networks—hardly a set-up conducive to decision making.

As an organization, a university is like no other. It is not an entity able to speak in public with one voice or present the ministry with systematic operational targets. On the contrary, it is a loose community of many disciplines whose targets take their bearing from those of the different sectors of the international science community, not the national perspectives of the Ministry of Education or the expectations of university management regarding a university's profile.

Therefore, it should come as no surprise that, at a time of retrenchment, university management has not found it easy to set priorities or introduce the necessary structural changes. Part of the reason for the difficulty, it must be admitted, is that those responsible—the rectors, deans and faculty heads—have not had all of the tools for management in their hands.

Many universities have, however, welcomed the opportunity given to them by result management to map out clear strategies, to seek their own strengths and to draw their own profiles.

Internal management of a university is extremely difficult, and the general feeling is that management and scholarship are incompatible. Finland has its share of faculties where members of the teaching staff are forced to take turns at management. Obviously, management-by-result, with its emphasis on strong, insightful leadership, is going to encounter problems in this kind of situation.

The result management ideas of the Ministry of Education have been criticized by many quarters. Many university researchers and other members of the university sector who have taken part in the debate accuse the ministry of setting targets that stress quantity at the expense of quality. They base their claim on the fact that the ministry and universities have set a target for the number of degrees (masters and doctorates) to be taken and that a certain proportion of a university's budget (90% in 2003) is calculated on the basis of that target. In previous years universities were awarded their budgets on the basis of their performance as measured by the number of degrees taken.

The Ministry of Education has, however, pointed out that the unit-cost model is only a way of ensuring that all universities get a fair share of government funding. Naturally we have stressed target-mindedness and effectiveness in developing the model: without forgetting their educational role, even the universities must be able to turn out graduates ready to play a useful role in society.

We have responded to the call for quality by developing indicators of performance that expressly reward quality. How quality is maintained is primarily up to the universities themselves, and to help them we have set up the Higher Education Evaluation Council.

The Ministry of Education has not been deaf to the criticism expressed by academia; on the contrary, we have made it clear that the unit-cost model and whole management-by-results system will be reviewed and revised where necessary together with the universities.

In the spirit of management-by-result the Ministry of Education has tried to make its preparatory processes as transparent as possible. For example, the common targets based on the Development Plan (binding on all universities and the ministry), are agreed in negotiations held with the top university management. These then form the framework for the key targets to be presented by the government when it submits its annual budget proposal to Parliament. The views of the universities are already taken into account in the preparatory work for the Development Plan.

The part of the target outcome agreement that refers to each university's project financing is renegotiated by the ministry and universities every year. Amounting to, at most, 5% of a university's budget, project financing is earmarked for innovations of national importance. Each university can submit its own proposal to the negotiations.

The complexity of the debate is illustrated by the fact that the Ministry of Education prepared the roundly criticized unit-cost model in a working group comprising representatives of the universities as well as the ministry. The criticism is not directed at the unit-cost principle as such but at its practice, as it alters in some respects the mutual relationship of the universities at the funding level.

Even though we stress the significance of dialogue in our new steering philosophy, I

have found the vast amount of often-conflicting feedback we receive from the universities problematic, even frustrating at times, when trying to take account of criticism levelled at us. While this stresses the role of the ministry as a formulator of national policy it also reinforces the arguments of those who claim that the ministry pays no heed to criticism.

The 1994 OECD Review of Finnish Higher Education Policy was a particularly valuable process for us, as it forced those responsible for educational policy to engage in a level of discussion and self-assessment that would not otherwise have been possible. The examiners noted that the principle of management-by-result had been well applied in the formulation of university policy in Finland, as it had been possible to set up a dialogue between the ministry and universities. Moreover, they considered that the mutually agreed targets gave the universities sufficient room for manoeuvre.

They pointed out, however, that the role of the Ministry of Education as a party to the management-by-result process should be clarified. I was of the same opinion and the ministry has since made every effort to concentrate on strategic steering, leaving the universities free to reach their targets as they themselves see appropriate.

The switch to management-by-result has prompted criticism not only from researchers but also from trade unions, which enjoy considerable power in Finland. A good example is the workload experiment for university teachers introduced in some universities. The purpose of the experiment is to set a maximum working year of 1,600 hours for professors, with each professor reaching agreement with the university on the distribution of the hours. Due to fierce resistance from the professors' union, however, the experiment has not been extended as the ministry and university managers would have wished.

The speed with which controls have been lifted means that the universities are still not quite clear about the legal status and validity of targets, indicators and agreements; nor, in my opinion, have they fully accepted the new practices. Dismantling the internal controls in funding and staffing has increased not only the autonomy of universities but also their responsibility for their own actions. Management-by-result is widely felt to have increased the volume of administration at all levels. A better grasp of complex issues is now expected of a university's central administration. Conceivably this is experienced as a decline in academic expertise in university administration.

The Ministry of Education has, however, also received valuable support from academia in its reform of the steering system, and there is unanimity that there should be no return to strict government control. We shall therefore continue to refine the system in a spirit of openness together with the universities in an effort to find the most appropriate way to proceed.

Creation of the polytechnics—*per ardua ad astra*

The other major educational reform currently under way concerns vocational education and the system of polytechnics now being created.

The first polytechnics were set up on an experimental basis in 1991, the aims being to raise the standard of higher vocational education, to make Finland's training and qualifications more internationally competitive, to respond to the demands for new skills, to enhance the attraction of vocational education and to increase the efficiency of the voca-

tional education system. The reform gives us an interesting perspective on educational reform in Finland, as it has been carried out in a manner never before tried in this country. Previous reforms were always prepared down to the last detail before being put into effect; the vocational educational reform was launched on the basis of guidelines issued by the government, and responsibility for bringing courses up to non-university higher-education standard was entrusted to the institutions taking part in the experiment.

The intention is to create a countrywide network of thirty or so polytechnics well balanced both regionally and by orientation. As of September 1997, Finland will have twenty permanent and nine temporary polytechnics. If all goes as planned, college level and higher vocational education satisfying quality criteria as defined by law will be brought within the scope of the experiment by 1999.

The polytechnic reform has entailed a total reorganization of other vocational education, too: the post-secondary college level is gradually being phased out, with part being taken over by the polytechnics and part going to reinforce post-comprehensive vocational training. Considerable effort is to be put into expanding the post-comprehensive level, as all courses are to be made into three-year programmes, which will include a period of on-the-job training lasting at least six months. In addition, apprenticeship training, of which there has been very little in Finland to date, is to be increased substantially by 2000.

The last major reform of Finland's vocational education was in the 1970s, but already in the early 1980s voices were heard expressing the need for reform of the post-secondary vocational college level. In the 1982 OECD review of Finland's educational policy, the examiners proposed that this level should be put on a par with higher education. At that point, however, unanimity could not be reached about just what the reform should entail. The rapid changes that followed in the employment situation combined with the new, tougher demands made on professional skills and the unforeseeable pace of internationalization led to the subject being reconsidered at the end of the decade.

The whole polytechnic reform has been carried out in an entirely new way by Finnish standards—one that reflects the changes that have taken place in government. Only the strategic guidelines and tools for the reform have been given by the government; practical implementation has been left to individual institutions.

The experiment was launched in 1991 when the recession was first making itself felt in Finland. The venture was received critically, to put it mildly, in many quarters: academia was vociferous—and highly visible—in its disapproval; the political parties were at odds with one another about the need for reform; and even the industrial sector was not convinced that Finland would need such a large number of graduates. Many voices were heard warning of the dangers of academic drift.

Still, since it was obvious that vocational education had to be restructured, if for no other reason than because of the internal inertia of the system, it was decided to set the wheels of reform in motion. Parliament was in favour of the reform proceeding through a process of experiments.

The 1994 OECD Review of Finnish Higher Education Policy dealt with the polytechnic reform at great length. The examiners noticed the lack of consensus regarding the reform, but were of the opinion that it should be continued and pressed for legislation allowing a permanent system. They, too, felt that the best course of action was experi-

ments and moreover a special programme was needed to back up the reform—to raise the standard of the teaching staff, improve the quality of libraries and information services and underpin internationalization efforts.

A subject much debated during the OECD review was our target to offer higher education to 60–65% of the cohort. Most critics of this target were opposed to or had doubts about the polytechnic reform as such. The main concern of the universities was money—they feared that the reform would consume some of the already dwindling funds allocated to them. Since, however, we have been able to implement the reform by relying largely on the existing structures and resources of vocational education, the universities have noticeably toned down their resistance.

The Ministry of Education has been at pains to stress the separate profiles and outcomes of the two higher education sectors. Basic scientific research, for example, is entrusted solely to universities; no funds will be allocated to polytechnics for basic research. The ministry has had to define the boundaries between the remits of the universities and polytechnics very carefully, and has apparently succeeded rather well, as even the traditional university sector has started to realize the value of co-operating with the polytechnics and no longer regards the newcomer as an unwelcome and suspicious rival.

Academics—and some of the ministry's own staff, too—raised doubts about the quality of the new system: they were not convinced that the existing vocational colleges could be upgraded so much that we could, with a clear conscience, speak of a new higher education sector equal to universities.

We could not afford doubts to be cast on the new system, and have sought to emphasize quality through regular evaluations and legislative measures. The Higher Education Evaluation Council issues a statement on all polytechnics applying for either a temporary or permanent operating licence. Only after the statement has been issued will the government consider whether or not the licence should be granted. The council includes experts in educational assessment and higher education from the university sector, too.

Teachers' trade unions also had their suspicions about the reform to start with, even though the teachers certainly recognized the opportunity it would give them to improve their vocational proficiency. Once they realized that the legislation on polytechnics guaranteed the status of the present teaching staff and took further and continuing education into account, their resistance crumbled.

It has been interesting to observe the change in the general attitude towards the reform during the past couple of years: the report submitted by Finland's educational authorities to the OECD in 1996 on the measures undertaken in the light of the recommendations made in the 1994 review showed that the country was now more or less unanimous about the need for the polytechnics.

One reason for this change of heart, apart from those already mentioned, is the success with which polytechnic graduates have found work, despite the continuing high unemployment rate.

For the present, at least, the polytechnics seem to be committed to a future as part of the non-university higher education sector; there is no great danger of academic drift in sight. On the other hand, it is only political realism to acknowledge the pressures on a region to have its own traditional type of university. Not all regional and local 'opinion

shapers' have fully realized the competitive edge that a well-run, high-standard polytechnic has as an alternative to a university.

In a country with a population as small as ours, the views adopted by the media exert considerable influence. The interest in educational issues shown by Finland's media in general—and the largest national newspaper in particular—has been of inestimable value to the makers of educational policy. The newspapers have given the public a forum, although only too often it is used to air views about details of minor interest to individuals. To encourage open discussion, the Ministry of Education holds regular meetings with the press so the minister and journalists can discuss educational issues.

Could we handle the process better?

Transparency is characteristic of government in the Nordic countries: all documents are public unless otherwise specified. Therefore it is only natural that considerable importance should be attached to the transparency of preparatory processes. The Development Plan for Higher Education and University Research is therefore drawn up together with actors in the sector. This requires us to seek new modes of communication, as action on the basis of the conventional written statement cannot bring up all of the issues that need to be addressed at an early stage of the process.

Now that targets have come to determine the allocation of funding to a greater extent than before, the transparency and range of the preparatory work are more important than ever. It is no simple matter to bring about a genuine dialogue, as not all parties feel they are on an equal footing with the ministry in discussions or negotiations. For this reason it is important to get the parties talking as soon as possible.

One thing that has often bothered me is the lack of opportunity to engage in meaningful conversation with researchers. There are many reasons for this, not least the different languages spoken by research and government and, to some extent, their different needs and interests. I am nevertheless convinced that we could make greater use of researchers in drawing up the guidelines of educational policy. Still, the policy cannot be formulated on their terms or those of other professionals in the sector alone: national priorities, the resources available and local pressures all play a decisive role. A powerful new force to be taken into account is internationalism, which sets certain constraints on the scope for action of national educational policy.

Thanks to the closer contacts between politicians and administrators in different countries, our policy makers have access to reports and information on solutions to educational issues found elsewhere. This interaction is extremely valuable and its importance cannot be stressed too highly—in the modern world one rarely comes up against a problem that someone has not attempted to solve in one way or another somewhere else. We are still unable to make the best possible use of other countries' efforts, but we have come a long way.

For my part I wish that researchers in different fields would play a more active role in policy reform issues and practical development work. In my experience, they only react to reforms that the government has already proposed or put into effect. Researchers would be able to bring a fresh viewpoint to issues that would not necessarily occur to decision makers encumbered by the machinery of government or caught up in the political crossfire.

HUNGARY:

PRIORITIES—PARTNERS—

IMPLEMENTATION

Benedek András

This article is about the typical features of the relationship among education, vocational training and labour. For almost two decades, I have been dealing with these issues as a researcher, as head of an institute, and then at the ministerial decision-making level.

Dynamic education

We are presently witnessing change at an incredible pace. The speed at which social and economic transformation is taking place constitutes a challenge even for countries enjoying favourable economic conditions. In this respect, Hungary is in a truly unique situation. As one of the countries of Central and Eastern Europe, it has found itself undergoing a historical transformation, and our generation (especially young people) is undergoing a change of values so radical that they cannot be either understood or effectively applied during our lifetime without the help of institutionalized education.

Stability is not the same thing as conservatism; yet lack of stability does not necessarily mean instability. In the last few years of this century, no educational programme can afford to ignore that development means change as well as dynamism in presenting such challenges to schools.

Original language: English

Benedek András (Hungary)

Deputy State Secretary, Ministry of Labour, since 1991. Engineering and teaching degrees from Budapest Polytechnical University. Degree in educational sociology from the Eötvös Lorand Faculty of Sciences, Budapest, and doctoral degree in systems analysis from the Academy of Sciences, Moscow. Director of vocational training, 1984–89 and director-general of the National Pedagogical Institute, 1989–90. He has been involved in numerous projects for UNESCO, ILO, the World Bank and PHARE. Member of the advisory forum of the European Vocational Training Fund and president of the Scientific Association for Organization and Management. Author of some 150 professional papers.

For centuries, education in Europe was based on the transmission of values that were (or were believed to be) stable, on the consolidation of an already homogeneous society and on the transfer of knowledge to new generations. While these traditional cornerstones of education undoubtedly still have an influence on our schools, they are also complemented by new elements that bring to the fore concerns such as the development of openness, sensitivity to innovation, preparation for change and the ability to adapt. In our age, openness is a requirement to be developed within every programme. Hungary may be a small country, but the openness of its economy is widely known, as over two-thirds of its national revenues derive from foreign trade and international co-operation. But the country is also open in terms of its thinking—this openness is necessary in order to prepare citizens for innovation and to participate in changes taking place in technical and social processes. In the light of this new focus, it is understandable that all of our educational programmes must take modernization into account and bear in mind this accelerating change brings with it unique opportunities for young people to become familiar with, experience and learn about new things.

In this respect, all of our new programmes have placed particular emphasis on the educational approach to modernization and technology transfer, as influenced by the expansion of international co-operation. This is connected with a large number of concrete aims, such as increasing the complexity of personal education/knowledge and, within that knowledge, deepening our familiarity with technical phenomena and technological processes. The practical application of these laws (anything that leads from abstract learning to real action, to a system of activities and to everyday life) may contribute significantly to improving the pertinence of the knowledge acquired at school and to establishing the usefulness of the values transferred.

Of course, the successful application of these aims in educational programmes does not depend solely on the content of education or on the methods applied. In addition to the basic didactic questions of *what* and *how*, the question of *who* teaches *whom* is equally important, i.e. the personality, professionalism and culture of the teacher are factors that are becoming increasingly important. So are the characteristics of those taught—factors connected with students' ambitions, motivations, situations within the system of institutions and opportunities for social and vocational mobility. In this respect, all experiments must face the fact that change also means confrontation with certain interests and norms.

In Hungary, as in other countries, innovative teachers and researchers are faced with new professional/educational challenges, in addition to communicating traditional educational values. New phenomena, teaching/learning techniques and information technology are stretching education in both its content and its depth. In addition to the transformation of methods, teacher proficiency and communication techniques are also undergoing considerable development. The world of the labour market has changed fundamentally over the last two decades. As a result, what society expects of education and vocational training has also changed radically. Mass unemployment has spread as a new form of social 'disease', presenting a primary political challenge—a hazard that many governments face constantly. Preparing students for work is not merely an educational slogan or mission formulated on humanitarian grounds. In this respect, there are events taking place in society that remind us of the huge responsibility borne by the school. The

success and effectiveness of education at the institutional level may quite often be measured in the way that schools respond to these events. In attempting to ensure equal social opportunities and to implement a success-oriented school system, administrators are faced with the dilemma that if they endeavour to make these functions accessible to all, then they either organize a school catering to the interests of the elite, in the strict sense of the word, or, alternatively, they have to implement a general programme and an overall openness towards the economy. Quite understandably, within the complexity of the education system narrow interests exist, but programmes at the national level must focus upon comprehensive values and the problems of the population as a whole.

The rise of vocational training

Over the last decade Hungary has witnessed a spectacular increase in the prestige of vocational training. The main reason for this is that the programmes aimed at transforming the structure of vocational training have been closely tied to the development of the internal content of vocational training programmes and with the priorities established by highly developed countries (members of the Organisation for Economic Co-operation and Development and the European Union). Thus, there has been a universal effort to ensure that an ever-increasing number of young people should obtain marketable vocational qualifications, and that the openness of vocational training should manifest itself not only through expanding the duration of education and training, but also through increasing co-operation between basic and adult education institutions so as to make their training programmes available to the whole of the active population. This has also manifested itself in the notion that developing the quality of the workforce and increasing the competitiveness of the economy can be achieved primarily by improving the pool of human knowledge and professional competence.

Naturally, these priorities may also be regarded as basic strategic principles on which to build programmes. Hungarian laws and regulations (especially for vocational training, where they had not existed before) were consolidated or renewed during the process of the huge transformation that the country has undergone in the last few years.

It is a fact that a large number of diverse—but not necessarily conflicting—interests, and the educational content that has evolved with the contribution of a large number of social partners and reflecting the power structures of society, are linked to a considerably more open school structure. Such a system will provide diverse opportunities for training, and various elements of educational programmes will be evident in everyday life. As a result, obtaining one's first vocational qualification is guaranteed by the Hungarian State. It may be funded through regular channels up to the age of 22 and can also be obtained by choosing different training lines within the school system.

However, is it possible for vocational training to be successful on its own if it is not integrated into general education and into the basic institutions of the school system? The answer to this question is undoubtedly negative, and thus the logical build-up, mutual dependency and global approach to basic training, as well as concrete efforts taking place in specializations, are extremely important. Can we look upon our own system of education without paying attention to and making efforts towards realizing opportunities for

international integration? Fortunately, it is possible to build on progressive Hungarian traditions in this regard as well. Hungarian education has maintained its openness even amidst a political atmosphere displaying extreme difficulties and tensions. Quite often, this was seen in the adoption of skills and the on-going development of modern teaching materials, primarily in the natural sciences. At the same time, co-operation in international programmes (especially in the Assistance for Economic Restructuring in the Countries of Central and Eastern Europe—PHARE—programme of the European Union) and in a number of bilateral programmes involving extremely intricate institutional co-operation, has become part of our everyday lives. The growing number of student exchanges, the strengthening of the international nature of teacher education, and the exchange programmes that have developed in higher education all indicate that national education is linked with international vocational systems in a number of ways. In many cases, this intricate web provides guidelines at both the national and local levels that are worth considering when developing the content of local educational programmes.

New priorities

In addition to openness, new priorities of the present day include the ability to adapt to our globalizing world and to acquire the knowledge enabling us to serve new purposes effectively. Naturally, the objectives of educational programmes can only lead to success if there is a well co-ordinated system in place. Therefore, partnerships are very important.

Old attitudes and social prejudices have often resulted in teachers being 'locked inside the school'. Although they have had everyday contact with their immediate social surroundings, and they have been able to transmit fundamental information to young people through the rigid system of the curriculum, this model has become quite outdated. Walls do exist in the school in the physical sense of the word, but the expansion and universal accessibility of information channels have resulted in our lives being so interwoven by formal and informal networks that educational programmes can no longer detach themselves from them either. Those involved with education are undergoing change in the narrow as well as in the broad sense of the word. In addition to the increase of interpersonal relationships, educational technologies and methodological packages, there is a continuous expansion of school partnerships. In addition to the expansion of informal linkages, formal systems of relationships are strengthening considerably. For instance, increased interest in educational issues in Hungary may be observed in the fact that school councils have been given a powerful mandate through legal regulations. Parents voice their views in the interests of their children, as well as express concerns about the curriculum and the success rate of the school.

The link between school and employment is not only theoretical. The direct effects of the economy are becoming more and more pressing, especially in the vocational training of young people. This effect influences concrete economic facts, for instance in the way that vocational education is financed. Naturally, the school needs financial help: funds are required to purchase new technologies and to build new laboratories and workshops. At the same time, the economy itself cannot be regarded as a homogeneous system. The division between employee's and employer's interests are markedly distinct in this system,

occasionally resulting in conflict. Social dialogue is an inevitable means of resolving such conflict; social partners often act in partnership for the sake of the school. Social partnerships are a significant guarantor of social harmony and a balanced development of the economy.

This is true in Hungary, too. We have quickly adopted the practices of highly developed countries. Why should this partnership not lead to success in the development of the school, to raising the quality of educational programmes and to improving linkages with the economy?

The concept of the global village is often associated with the communication systems that supply information. In this respect, a particularly important role is played by the media, especially those that put forward objective opinions and are capable of keeping the conscience of society alert. By concentrating on individual and genuine problems, they exert a constant pressure and act as an indicator for politicians. In this respect Eastern European countries are still at the beginning of the road. New legislation concerning the freedom of the press is only a few years old. New channels for the commercial transmission of news and social communication have not yet found their place. The importance of a free press and its responsibility in influencing public opinion are important in creating partnerships, as no successful educational programme can be implemented without first gaining public approval, just as the evaluation of educational programmes implies the way it is assessed by the general public.

In our increasingly complex world, those who pursue a deeper understanding of the internal relationships between educational reality and development programmes assume an enormous responsibility. It is these people who, stepping beyond analysis and evaluation, put forward estimations and predictions about the future, and then create structures that make the introduction of new educational programmes possible. Research into the micro-system and the analysis of linkages is now extremely common. As a result of increased expectations and dynamism, the introduction of educational programmes is not a question of a tentative change taking place over several generations but, rather, a rapidly increasing supply of competitive programmes. Pluralism, new techniques and the growth of schools, all evolving along the lines of diverse interests and different educational practices, constitute a supply of programmes which carries with it a qualitative risk and which, occasionally, increases social costs to unjustifiable levels. For example, this may be observed in the case of textbooks where there is a tension between parents' limited financial means and the educational programmes they can choose from.

Quite naturally, we must commend research which is rewarded with due international approval and which is linked to vast information networks, as well as to methods of documentation that make results readily accessible to the general public. These research results may be applied successfully in national and local programmes alike. Today, the more closed national systems survive professionally only because of linguistic and institutional peculiarities. Yet, one may also observe improvements in these systems as well, since their information systems have become increasingly comprehensive. One must think not only of the potential offered by the Internet, but also those systems that deal with education in the world, its literature, and the different scientific, technical, mathematical and linguistic issues involved. Items of information are increasingly accessible in real time,

offering opportunities for rapid dissemination. Up-to-date information is directly accessible to teachers, programme developers and researchers, providing them with an up-to-the-minute, state-of-the-art knowledge base.

Over the past few years Hungary has been proud to develop a number of successful educational programmes. The curriculum has moved away from central directives (developed by administrators) towards a system based on the national curriculum as a general framework. This constitutes a new model which is varied and responds to local demands. This is true for vocational training as well, where we have developed a vocational system which fits closely with the new employment structure and develops alongside it. Central programmes are no more than a standard framework for the vocational system. Implementation is important; implementation of educational programmes and strategies lasts considerably longer than the few years of initial work completed in development workshops.

Naturally, education is a global political issue to be discussed among the widest possible public. In this respect, the transformation of the political scene, governmental cycles linked to elections, and changes in the programmes formulated during them, can all be regarded as factors that have an immediate effect on the process of professional preparation underlying actual decisions.

The transformation of large systems is a particularly delicate issue, as the period during which strategies are formed, the subsequent development of programmes and their actual implementation may cover a period when several governments are in office. What is necessary is the successful resolution of tasks spreading over such cycles. Really successful development should be supported by realistic and long-term social and professional consensus. In this regard, we may speak about a favourable period for Hungarian vocational training in this decade. Since 1990, consensus concerning vocational training has been quite clearly observed in the Hungarian Parliament, as shown by the voting record, thus encouraging balanced development. Although agreement was not reached without considerable debate, it has allowed for the key tasks making possible the implementation of significant legal and institutional changes.

It is particularly important that, since 1996, a long-term development programme has been approved, which may serve as an adequate basis (with occasional review) for the continued implementation of the tasks that lie ahead of us.

THE RUSSIAN FEDERATION:

THE HUMANIZATION

OF EDUCATION

Vladimir Dmitrievich Shadrikov

Where we are now

The Russian Federation is a country in which the political, economic and social situation is changing fast. This fact is reflected in its education policy. But today, looking back at recent decades one can certainly state that major objectives are rooted deeper than the contemporary conditions. The objectives are determined by the intention and aspiration to materialize the humanistic nature of education: to offer every child an opportunity for self-realization, to bring out the child's creative and investigative abilities. For centuries, this very question has inspired prominent philosophers, psychologists and teachers. Still, today, it is the criterion that enables one to determine how to approach various educational policies.

I, as a psychologist engaged in educational policies and faced with the vicissitudes of life, have been quite certain for some considerable time that the educational process should clearly be personal and aimed at the individual. It is necessary to consider not only differences related to the level of an individual's intellectual development, but also to rely on the particular level of their abilities, intellect and talent. The point is not that you are more or less capable, but that everybody is *capable as an individual*. However, it should be noted here that this very qualitative difference is largely ignored. In society and in the

Original language: English

Vladimir Dmitrievich Shadrikov (Russian Federation)

Ph.D. First Deputy Minister of General and Vocational Education since 1996. From 1968 onwards he worked as a professor of psychology in Yaroslavl. In 1982, he was nominated Rector of the Ushinsky Pedagogical Institute in Yaroslavl; in 1985, Deputy Minister of Education of the USSR; in 1988, First Deputy Chairman of the State Committee for Education; in 1991, Deputy Chairman of the Higher Education Committee of the Ministry of Science, Higher Education and Technological Policy of the Russian Federation; in 1992, Deputy Chairman of the State Committee for Higher Education. In 1982 he was elected Associate Member of the Academy of Pedagogical Sciences of the USSR; in 1990, member of the Russian Academy of Education. He is the author of some 130 works.

evaluations provided by teachers and educationalists, the issue related to abilities has long been treated—and is still treated—primarily as a quantitative issue (related to one's degree of intellect).

Causes of dissatisfaction

The major drive of reform has been rooted in the ever-growing and profound dissatisfaction with the school and its social and political objectives. Different sections of society have placed the blame on different facets of the education system. The vast majority of the population was concerned that their children would not be able to cope with the educational curricula of compulsory secondary education. Educational authorities pursued rigid policies in compulsory secondary education, but did almost nothing to diversify the curricula or the choice of teaching and resource materials. Another segment of the population was unhappy about the dominant tendency towards equalizing the pupils and the teaching, without due regard to the abilities and interests of the individual, and restrictions affecting those learning in foreign languages. The existing schools providing regular instruction could not cater to anybody ready to pursue subjects and curricula in greater depth.

Teachers were dissatisfied with rigid restrictions and limitations imposed on the teaching process, the lack of academic freedom, the necessity to assess academic performance in a subjective, inadequate manner. A maxim was coined: 'We write "satisfactory" but know it's "bad",' i.e. even poor performance had to receive a positive assessment.

Schools acquired more social functions and tended to become a substitute for parents in terms of upbringing. There were schools with extended time which enabled children to stay after classes: they had their meals, did their homework and spent their free time there.

We should reiterate that different strata of society expressed dissatisfaction with the school, but the children themselves experienced more pressure and unhappiness because of stress and excessive learning loads, because they had no opportunity to express themselves, and because they had to endure an authoritative style of teaching which paid no attention to the child's interests.

The political leadership could not but notice society's dissatisfaction with school. For instance, in 1984 a political decision was made to modify the main guidelines in the restructuring of general and initial vocational education. The new guidelines permitted rather timid differentiation of the educational curricula and departure from standard textbooks in the vocational training of schoolchildren. A struggle took place in the high echelons of the Communist Party of the Soviet Union (CPSU) leadership concerning differentiation of educational institutions and the objectives of general education. It became so serious that, in 1986, during the meeting of the Moscow City Bureau of the CPSU, an attempt was made to block the opening and development of schools with more detailed curricula for specific subjects, particularly schools specialized in the teaching of foreign languages.

The ideology of social equality was still very clearly reflected in educational policies.

The Soviet school and its aftermath

Was the restructuring of general education based on relevant scientific research and development? While recognizing the significant role of the Academy of Pedagogical Sciences of the USSR in developing teaching and learning technologies, one should state that there was almost no research carried out on the philosophy of education, and research related to teaching theory was largely limited to the analysis and interpretation of the works of prominent teachers. Research pertaining to the analysis of the experience of education systems in capitalist countries was viewed from a politically subjective angle.

Research in educational science gave very little support to decision making on educational policy. One had to resort to one's own personal opinion and officially stated political landmarks.

However, it should be noted that some researchers did possess more comprehensive data which were available when specific decisions had to be taken. There were a lot of scientists and researchers striving to rethink the educational situation, ready to act as consultants or offer their own vision of the problems. It was necessary to look for these scientists and create conditions for them to work creatively.

However, one should note that, in spite of the political influences and pressures, the USSR created a unique education system which has not yet been studied as a phenomenon. The country managed to bring about a tremendous cultural revolution in a very short period of time, and the population of the country became one of the most educated in the world. These facts should not be ignored. Unfortunately, a lot of school reformers of the post-Soviet period have focused on the political pressures to which the education system was subjected, while disregarding other benefits. But the Soviet school has been and still is an achievement, not only for Russian culture but for the entire world. Even now, when the Russian education system has become open to the rest of the world, very few Western researchers have viewed it from this perspectives. Numerous projects and recommendations have been put forward to restructure it, but there are none that set out to draw attention to the existing values of the Russian education system. In this respect, Russian researchers and teachers are studying foreign systems primarily to identify their advantages, but here too they disregard the disadvantages.

The advantages and disadvantages of the Soviet school system are evident in its formal definition: integrated and universal, vocational, polytechnic, general.

Integrated means equal opportunities for everybody, irrespective of income, sex, age and nationality. Universal means respecting the integrity of the cultures of every nation, and asserting cultural diversity and versatility as a common value. Integrated also means mobility of pupils within the country provided by universal content of education in different schools located in different parts of the country. There is therefore consistency in all phases of education—integrated as a fundamental characteristic of the education system. Integrated means patriotism and loyalty to the country. Nevertheless, integrated means:

- there is one single ideology;
- it is common for one and all, which means that versatility and differentiation are sacrificed for such integrity; and

- the academic freedom of teachers is limited because it strives for the same educational standard.

At the same time, the officially proclaimed doctrine of a universal and integrated school imposed pseudo-versatile settings within which diversity was permitted. In the framework of the integrated and universal education system, three theoretical concepts were formulated for primary education (can we find any parallels elsewhere?); the integrated school system gave rise to various concepts for teaching mathematics; thousands of teachers who were called innovators were able to achieve their ambitions; such subjects as world history, world geography and world literature were broadly covered by the educational curricula. Up to 50% of class time was spent in studying world culture. This is, obviously, a highly significant indicator in any comparison of school curricula in different countries. The confrontation between integrity and diversity brought up solutions to many educational problems which are still a big challenge to schools in Europe, North America and in other countries.

Vocational means that the school system is based on understanding the value of productive labour, mainly in the sphere of material production. It suggests that the school encourages general vocational skills, and provides pre-employment training which can direct a pupil towards certain qualifications and an occupation if he/she is willing to achieve them (and sometimes even if he/she is not).

Vocational also means participation and involvement in socially useful work. A vocational school system suggests not only involvement in work but also a new educational dimension. It means developing sensory and motor skills and non-verbal intellect, as well as functional thinking. This is a step towards the formation of an all-around educated individual.

The vocational component of the school system offers a chance to realize individual abilities. This is an opportunity for self-realization for the majority of schoolchildren.

Vocational also means integrated. But under existing financial constraints and employment patterns based on the locality, this often means work which is of no interest to schoolchildren.

The vocational component in the school system, to a certain degree, exaggerates the opposition between intellectual and physical work, and no matter how paradoxical this might sound in a society with a dominant working-class ideology, it suggests a conflict between labour and art, a departure from the sublime formula of the ancient world which regarded skills in any craft or trade as an art: a potter, a gunsmith, a sculptor, an architect or a warrior could also be an artist.

Vocational school meant grafting a communist attitude to labour.

A polytechnic school suggests a system introducing basic occupations and technologies to children, giving them a vision of modern production and manufacturing. It means a system with well-developed vocational profiles enabling a pupil to foresee his/her individual educational trajectory and life and, in the long run, to ensure his/her well-being.

Towards individualization

It should clearly be stated that a lot of problems that general education is currently

facing everywhere in the world have not yet been resolved by educational experience and practice. It should suffice to cite attempts to balance integrity and diversity, basic integrated content and individual choice, diverse curricula and their comparability, and correlation between general and vocational education curricula. Such issues as cultivation of understanding and trust between nations, erosion and disintegration of traditional moral and ethical values, nationalism and racism in education, bringing young people up to live in a tolerant, democratic, multilingual and multicultural environment are demanding more and more urgent attention. These and many other issues were discussed during a regular conference of ministers of education of the European countries held in Kristiansand, Norway, in June 1997.

A lot of these issues had been successfully resolved by the Soviet school system. In this respect vocational and technical schools can be cited as a good example of institutions that provided: vocational qualifications and secondary education; vocational and general education based on vocational training centres; cultivation of understanding and trust between nations; equal opportunities and access to education, etc.

What is stated above is good evidence that Russia has a unique education system which is multilateral and systematic and, as a civilizing phenomenon, can be of interest for the rest of the world. Undertaking any restructuring of this system should imply a profound understanding of its core and fundamental features, otherwise a negative impact of any reforms would be more than predictable.

In my view, as already stated, one can highlight the major contradictions in school policies during the Soviet period: striving for equality in education and recognizing the need for an individual approach in education, and creating conditions which would allow a child to achieve his/her potential.

This struggle for equality in education led to the concept of a single standard textbook, universal educational curricula and, in many instances, to a standard educational technology. In the given circumstances all researchers' efforts were focused on selection of the content of school education and technological development of the teaching process. Research institutes of the Academy of Pedagogical Sciences of the USSR were deeply engaged in massive field research to assess mastery of the content of education in various schools all over the country, presenting the material in a textbook according to a specific, individual paragraph or subject matter. One can state with confidence that this very profound didactic development of the educational process enabled it to achieve a high performance and output. But there is no technology that can equalize individual differences in abilities. It can only upgrade the general level of education within which individual differences would be displayed. And that, certainly, was the case. In these circumstances, teachers had to concentrate their attention on pupils with low academic scores because there was an administrative mechanism to tackle poor performance: the 'teacher-should-teach-a-pupil' principle was dominant. Very often it was said that 'there are no bad pupils, only badly trained teachers'.

It should be said that the commitment for everybody to meet the curricular requirements brought about a comprehensive system of teaching pupils exhibiting slow progress after school hours. This aroused interest in resource materials and methodological journals which published information on scientific research in the sphere of advanced teach-

ing technologies. Innovative teaching experiences became very popular. Publication of the teaching and methodological materials for each discipline, consisting of a textbook, teacher's guide and manual as well as other supplementary material, reference books, readers, books of mathematical problems, etc., was a major breakthrough in promoting general education.

Numerous extra-curricular subject courses catered to more gifted children as a compensation for the overall adjustment of the teaching process in favour of 'an average pupil' and allowed those children to blossom. A more radical response to this situation was the opening of schools and grades with advanced learning in specific subjects: mathematics, physics, chemistry, etc. A number of boarding schools were opened for gifted children within the major universities of the country (Moscow University, Novosibirsk University, Tbilisi University, etc). The system of specialized schools for gifted children accumulated unique experience in teaching this type of child, mainly in the content of education, teaching techniques and group work. This experience is, undoubtedly, valuable and important not only for the Russian system but also for the education systems internationally. It brought about a coherent system of school Olympiads in specific subjects, ranging from the school to the national level, which helped to discover talented young people. High performance by national teams in the International Subject Olympiads for a number of years has only emphasized the effectiveness of these activities.

However, all of the measures mentioned above could not offset the general tendency towards teaching based on universal and integrated curricula, which provided high-quality general secondary education, no matter how efficient and positive they proved to be.

It should also be pointed out that specialized schools mainly covered courses in mathematics, natural sciences and foreign languages. There were very few schools with a humanities profile. Ideological pressures and standardization were most noticeable here, and this was an impediment to teachers' and educationalists' initiatives.

More sweeping measures seemed to be called for. In 1986 there was a competition for a new generation of textbooks. It was expected that at least three new textbooks would be selected for each subject in the natural sciences and mathematics syllabuses. It was anticipated that the school system would depart from one standard textbook. In the same year, a draft version of the teaching plan was prepared and published in the *Teacher's gazette* where, for the first time, time for optional courses was envisaged. While drafting this teaching plan, the authors focused on the writing techniques of university teaching plans, which suggested a considerable degree of academic freedom.

In 1989, a basic teaching plan for the general education school was developed and introduced to start real and extensive differentiation at the school level and implement the regional principle concerning the content of education.

Along with declared academic freedoms, which stimulated teachers' creativity, and departure from the local-based principles of enrolment, there appeared tangible opportunities for real individualization of the teaching process.

A final move towards individualization of the teaching process in the Soviet school affected activities related to developing the minimal, basic requirements of the pupils' performance at each stage of education and instruments to assess pupils' achievements at a specific level. These activities aimed at creating a basis for academic freedom in teaching.

A teacher was free to choose any educational direction, any educational technique. The only requirement was for the pupil to achieve the results corresponding to the established criteria. By the end of 1990 the mission was accomplished, but we had not had time to introduce testing and basic requirements schemes into school practice.

The Russian school system has started a new life in a new social and political environment.

This overview of the development of the idea of individualization of the teaching process during the period of 1984–1991 should also state that these activities were very much influenced by the principle of social equality. The *humanism* of the new school was revealed in the ability of the individual to achieve self-realization and in the equal rights of the individual to pursue free development. Humanism recognized the value of every person as an individual and did not compare one person with another in society. Individualization was not transformed into individualism.

Here we may quote Alexander Blok, a famous Russian poet, who wrote in 1918 that, in the course of any transformation, one should not ignore 'social inequality' and not degrade the lofty content of these two short words by 'humanism', sentiments or political economy, or other rhetoric. The ability to recognize social inequality is a powerful, rational and bitter instrument.¹

Towards diversification

In terms of directions towards individualization of education, the period of school development from 1991 to 1997 in Russia has demonstrated consistency with the Soviet period. We have, however, witnessed great diversity and choice in textbook selection since the subject-based approach gave way to the principle of subject profiles. In senior grades, teaching became more optional and liberal, which helped develop social and cultural pluralism and intellectual identity. Regional variables in the content of education became more discernible. Higher educational institutions became associated with specific subjects and became more influential in terms of the diversity of educational curricula.

Diversity in the content of education is clearly proved by the statistical data related to textbook purchases (Table 1).

TABLE 1. Textbook procurement

Academic year	Number of titles/units	Total orders (millions of copies)	Specific order (thousands copies/unit)
1995/96	200	146	730
1996/97	282	160	567
1997/98	739	141	191

As we can judge from the table, while the volume of annual purchases remained relatively stable, the number of new titles has more than tripled in three years. Yet this rise mainly took place prior to the 1997/98 academic year. This proves that educational trends

are evolutionary and cumulative and that the achievements of the past decade have only now become distinct and noticeable.

Real diversification of secondary general education is also manifested by a growing number of lycées and gymnasia with specialized curricula. The numbers grew from 191 lycées in 1991 to 594 in 1997, and from 283 gymnasia to 952 in the same period. Even here we can trace some continuity with the past as these gymnasia and lycées were established largely on the basis of existing schools with specialized and detailed curricula.

However, an overview of the experience in educational development over the last six years clearly demonstrates a need for promoting the basic plan and legal regulations. This is mainly so that negative tendencies which have come to the surface today can be curtailed.

First of all, the basic plan needs very thorough theoretical development. On the one hand, the introduction of educational profiles instead of courses has helped to diversify education, but, on the other hand, since class hours designed for studying a specific educational profile are limited, since some pupils may include rather a lot of subjects/courses (up to ten or more) in each specific educational profile and there is no national educational standard, there is a great risk of disintegration of the common educational space. Academic mobility of schoolchildren will be threatened and consistency with university curricula will be limited.

It should be noted, in particular, that the legislation provides for extra educational services on a fee-paying basis. An innocent legal provision (why shouldn't a child learn a second foreign language if he/she is willing to and if the parents are ready to pay for it?) penetrated into the tissue of differentiated learning and, under existing financial constraints, has led to grave violations of the principle of social equality—the basis for a real humanistic and democratic school. In fact, it is beginning to force people to pay for general education.

The situation is aggravated by the significant income stratification of society which has occurred during this period. Well-off parents are striving to provide a good education for their children. Schools should react to this demand. But they are not able to do so. Therefore, we have a situation in which schools offering good education can—or are sometimes forced to—choose between an able child and a rich child and, thus, they try to find a balance by introducing extra fee-based educational services. According to the law, any child can study at any school. However, children living in the local neighbourhood are more welcome. Yet, not everyone can afford extra educational services and other financial commitments related to studying in exclusive municipal school. Children and their parents gradually become aware of the fact that they are not admitted or, alternatively, are forced to transfer to another school because they are poor. This is an extremely painful process for children. It has nothing to do with a 'humane' school. Society and the State will soon face the problem of correlating '*equal access to education*' with '*equal opportunities*'.

The above-stated analysis of a particular problem, which in our view is a priority issue related to ensuring self-realization for every child, reveals complicated links to be taken into account when making educational decisions. Interrelated processes in society which determine the objectives, values and activities of education should be a priority here. Technical work related to their implementation should be regarded as a secondary task,

although it may not be less complicated. Obviously, decision making should be based on: the key ideas which are discussed in society; background knowledge of a specific problem not only in the national but in foreign education systems; experience in handling this issue in different countries; research in social and political sciences; surveys and research by experts in decision making; and the vision and opinions of prominent members of society. It has already been stated that any issue requires a systematic approach. A major challenge that one can face in decision making in education is brought about by a lack of a comprehensive data and information on the issues under consideration, incomplete sociological surveys on education, lack of comprehensive and sound statistical data, and the search for experts and professionals performing sound scientific research in the area of interest.

Note

1. A. Blok, What should be done now? *Literary inheritance*, vol. 27–28, 1937.

ARGENTINA: PRIORITIES

IN THE EDUCATION SECTOR

AND HOW THEY ARE IDENTIFIED

Susana Beatriz Decibe

The early 1990s marked the start of a new phase in socio-economic development in Argentina. In 1983 the country's institutions were re-established on a democratic basis and from 1991 onwards, bringing about monetary stability and halting inflation made it possible to embark on a phase of sustained economic growth, interrupted only briefly by the effects of the financial crisis in Mexico in 1994.

This was the beginning of a period of structural reform which involved the privatization of telecommunications, petrochemical industries, electric power supplies, railways, banks and the pension system, and the partial privatization of the postal system and airport management. The administration of services which until then had been organized at the national level, such as secondary and non-university higher education, was decentralized to the provinces. This was the general climate of structural change in which educational reform began to develop.

In the early 1980s, the traditionally high quality of the Argentinian education system deteriorated considerably as a result of the financial crisis of the preceding decades and of policies which did not always take the educational needs of the population into account.

The return to democracy in 1984 encouraged public debate on the education crisis and made it possible to reach the consensus needed for co-ordinating the main strategies for change, two pre-requisites for initiating a process of change.

Original language: Spanish

Susana Beatriz Decibe (Argentina)

Minister of Culture and Education since 1996. Graduate and lecturer in sociology at the University of Buenos Aires. Master's degree in social sciences at the Latin American Faculty of Social Sciences. Adviser to the Offices of the President of the Education Commission of the Argentinian Parliament and of the Secretary of State for Educational Planning and Evaluation. Member of the Education Committee of the Organization of American States. Published works include: *Análisis comparativo de las teorías de M. Foucault y J. Habermas* [Comparative analysis of the theories of M. Foucault and J. Habermas] (1991) and *Flexibilidad laboral y sindicato: una aproximación a las opiniones sindicales* [Labour and union flexibility: a review of union views] (1990).

The public debate began with the National Education Congress and continued from 1986 to 1988. A debate in the Argentinian National Congress led to the Law on the Transfer of the Education Services (No. 24.049), the Federal Law on Education (No. 24.195) and the Law on Higher Education (No. 24.521), which made educational strategies into State policies.

The Federal Law on Education, which was passed in April 1993, was a milestone, marking the beginning of the process of structural change in Argentinian education—a process designed to overcome both existing and new problems.

Existing problems included a clear difference in the quality of the education provided depending on the socio-economic situation or the geographical location of the community served, the low rate of school enrolment at secondary level (40%) and the high drop-out rate at that same level, out-of-date educational content that was geared neither to the needs of the labour market nor to the requirements of full citizenship, obsolete teaching methods, a career system in which promotion was based only on seniority, and inadequate investment in infrastructures, maintenance and educational facilities.

The current reform process is also aimed at overcoming certain new problems such as lethargic and over-bureaucratic institutional methods and the low quality of education provided.

The new education policy established by the law requires the creation of facilities for consultation, sustained participation and consensus at the federal level. This function has basically been assigned to the Federal Council for Culture and Education, which is becoming the main implementing mechanism for the law. The Federal Council co-ordinates concrete policies on the basis of agreement between education officials from the provinces and from the local government of the city of Buenos Aires, puts them into practice, analyses the results and reformulates them within a framework of decentralization.

The Federal Law on Education is the first constitutional legislation in Argentina covering all of the authorities in the national education system. Its main provisions may be described as follows:

- It lays the structural basis for a new education system consisting of four levels: initial (pre-school) lasting three years; basic general education (nine years divided into three-year periods); multi-modular education (upper secondary school) lasting three years; and university and non-university higher education. Within this system, the different education cycles and levels can lead from one to another, according to the desired results, so as to follow the pupils through all stages of their development from early childhood to adolescence.
- It establishes guidelines for improving quality through:
 - (a) The renewal of educational content and the approval of common core subjects. The new system seeks to strengthen the nucleus of basic skills essential for full individual development: intellectual, meta-cognitive, practical, interactive and social, ethical, aesthetic, physical and emotional. It promotes training in skills through the acquisition of concepts, procedures, values and attitudes, linked with many fields of study in formal and informal education.
 - (b) Organizational changes.

Ministries: The traditional vertical bureaucratic structures are currently being

replaced by a project-based model through re-organization and by introducing new management methods in the ministries. The new management structures are designed to generate change rather than fulfil a solely administrative function.

Schools: school administration and management are now based on efficiency, results, school democracy, planning and redistribution of time and space, the primacy of the educational process, the professionalization of the teaching staff and greater autonomy in decision making.

- (c) Efforts to ensure that all teachers are trained continue with the establishment and development of the Federal Network for Continuous Teacher Training—supervised and financed by the State in co-ordination with the provinces—and with the reformulation of teacher training and its linkage with the universities.
- (d) The establishment and administration of the National System of Quality Assessment which carries out annual achievement assessments including information on schools, teachers, parents and pupils.
- It establishes the principle of equality as a priority, applying State-funded compensatory policies.
- It is setting up the Federal Network of Educational Information under the administration of the Ministry of National Education, with links in all of the provinces, through which basic information may be obtained for the purposes of supervision and decision making.

The dynamics of achievement and the different actors involved

Achieving these far-reaching changes is a complex process, given that educational reforms, especially those which involve structural changes, inevitably encounter resistance in that they disrupt established practice. Educational policy has thus been aimed at building up the required credibility and feasibility.

SOME STRATEGIES

- Professionalizing the political-technical staff in the National Ministry through a strategy of selection based exclusively on qualifications.
- Developing compensatory programmes through the Educational Social Programme. This action makes it possible to overcome educational inequalities and already covers 25% of all primary schools throughout the country, with programmes aimed at improving the learning process. These schools are provided with textbooks for each pupil, up-to-date teaching aids and class libraries. In addition, the teachers have received special training. These measures are reflected in a marked improvement in the level of the annual assessment of achievement.
- Developing and completing appropriate schedules for the design and approval of different aspects of the reform process by all those involved in it. Feasibility strategies have held the building-up of consensus to be the only sound basis for change:
 - by opening up the debate to the public at large, non-governmental organizations,

the churches, the world of work, young people, and specialists and academics in all disciplines;

- by regarding change as a process whose starting point is what it is possible to achieve in the immediate future, yet which never loses sight of the ultimate objective;
- by bringing in the necessary technical expertise to draw up policies and strategies; and
- by anticipating opposition and setting up tools to encourage communication, information and participation.

CONSENSUS AT THE FEDERAL LEVEL

Before being examined by the Federal Council, each proposal or document relating to the reform is circulated for the purposes of consultation and participation to various bodies representing teachers, specialists, civil servants and technicians in the provinces. Work on the definition of the common core contents for pre-school education, basic general education, multi-modular upper secondary education and teacher training has to be an open-ended, pluralistic and co-ordinated process, involving teachers and technical staff, complemented by consultations and input from various sectors of civil society, the academic community and social, political and religious organizations. It is around this common core that the provinces establish their own curricula.

CIRCULATION AND DISSEMINATION OF IDEAS RELATING TO THE REFORM

Access to information by the various political and technical bodies helps to achieve consensus. Strategies used include: lectures by international experts, visits to different countries to study innovative approaches, intensive seminars in the country and abroad, and the development of training programmes abroad for civil servants.

LINKS WITH THE RESEARCH COMMUNITY

Much still needs to be done to establish links between educational policy and the research community and information centres.

Traditionally, there has been little linkage between political requirements and academic output, and different time-frames have governed them. This hiatus between researchers and political decision makers makes the use of empirical research findings very problematical.

In general, little use is made of research findings, in part because they tend to be circulated among other researchers rather than among potential users, or because most research is not intended to assist decision makers.

In practical terms, the radical changes introduced in Argentina created a need for information and the development of systems and strategies for a wide variety of purposes, including the design of a new national education ministry performing tasks different from its traditional functions; new school management models; assessment systems; updating of curricula;

new technical/professional profiles to meet the demands of the new work processes; organization and management of teacher training and qualification; and the creation and administration of a nationwide educational information and statistics network.

With its former structure, the Ministry of Education had no chance of solving those problems: it managed little more than 20% of the educational supply for the whole country and did that badly; there were no reliable educational statistics; and the professional profile of many of its staff was ill-suited to their new functions.

We must recall that educational reform was only part of the transformation of the State as a whole. It might be said that the State was going through a phase of self-reconstruction, in other words, of recreating its institutions' capacity to implement public policies.

SUPPORT FROM RESEARCH

What research findings were available? Very few, largely descriptive, lacking practical orientation and tending to concentrate on the history of education and educational policies. In general, their focus was strongly ideological. Furthermore, no information was available on the cost of the system, its effectiveness nor the comparative assessment of learning achievements. The development of new teaching methods was rare in many disciplines. No practical work had been carried out on the demand for new professional experience and qualifications resulting from the substantial changes in working methods, both in the service sector and in industry and agriculture. Nor were there any studies on topics relating to the management of public policies.

All this occurred in a context in which very substantial advances had been made in the cognitive and social sciences relevant to education and management technologies, in a world context in which the education systems of many countries had undergone major reforms over the last twenty years.

HOW DID WE SOLVE THE PROBLEM?

The following solutions were developed:

- By associating researchers, academics, teachers, new types of engineers, economists, sociologists and systems analysts, *inter alia*, in the management of the Ministry of Education and by using new management and organizational systems and technologies.
- By making an in-depth investigation of other education systems and processes of change, for example in England, Portugal, Spain, Italy, France, Germany, the countries of South-East Asia, Israel, Chile, Colombia and certain states in the United States.
- By enlisting the technical assistance of specialists in a number of other countries for tasks such as educational standard-setting (common core content), the assessment system, the updating of technological education and training for new types of technical work.
- By using some of the management and organization methods of the private sector.
- By collecting information from within the country on successful educational initia-

tives both by provincial educational authorities and in schools where innovative approaches have been adopted.

In recent years it has been increasingly recognized that the quality of education and the efficiency of the education system depend on satisfactory links with research. These links should therefore be relevant, i.e. more closely geared to the requirements of the sector, and aimed at achieving greater impact on educational practice. Failure to establish such a link would mean jeopardizing the long-term sustainability of the changes undertaken.

One of the measures being taken to bridge the gap between research and educational practice consists in promoting the development of research not only at the university level, but also at the non-university teacher-training level.

Action is also being taken to identify, collect, collate and disseminate relevant research findings and to encourage certain lines of enquiry with a view to providing a steady flow of information to assist decision making in the sector.

LINKS WITH THE COMMUNICATION MEDIA

As regards relations with the communication media, this is the first time that there has been complete freedom of the press in Argentina. This means that all government activities, and in particular those involving education, are given regular coverage. Education specialists and civil servants working in the education sector make frequent use of the media to put their views across.

The media often raise education issues in the context of conflicts or high-profile events such as acts of violence, which are few and far between when one takes into account the size of the education system as a whole.

One area in which the media have shown considerable interest since 1993 is dissemination of the results of assessments of achievement. Moreover, articles on educational experiments, the use of new technologies or new educational contents and focuses are published in the weekly supplements of many newspapers.

RELATIONS WITH THE TEACHERS' UNIONS

It is difficult to make any general statement concerning relations with the teachers' unions. However, one outstanding feature is the agreement on the need to introduce substantive reform in schools. That consensus is masked to some extent by demands for higher salaries, which, in view of the decentralized and federal nature of the education system, have to be negotiated with the provincial authorities.

The fact that several provinces have difficulty in raising salaries to the levels demanded by the teachers' unions has given rise to conflicts which increase the problems foreseen during this stage of the reform process.

Demonstrating its political will to constantly seek consensus, the Federal Council for Culture and Education has set up a Federal Commission to monitor the implementation of the Federal Law, with the participation of the majority of the teachers' unions, and another to analyze the financial resources of the sector and ways of increasing them.

Lessons learned

THE TIME FACTOR

It has proved necessary to plan these strategies in such a way as to take both the short term and the long term into account. There is undoubtedly some tension between the two, especially as the time-frame for education does not coincide exactly with political time-frames. It was therefore decided to opt for a strategy of simultaneous action: to build up long-term possibilities on the basis of the indications and concrete results provided by action in the short term. While some teams are striving to achieve long-term objectives, those who are working on programmes which deal with current issues are producing immediate, tangible results which make the targeted changes easier to achieve.

A BROAD, PROGRESSIVE AND SUSTAINED STRATEGY

It is almost unheard of for strategies based on pilot projects to be put into general practice. We have therefore opted for a broad, progressive strategy which focuses on enabling everyone to take part and ensuring that the process, once begun, is sustained. This is never easy in a federal country where a wide variety of different situations can be found. The Federal Council of Education thus established, as a ground rule, that, from 1993 to 2000, each province would fix its own schedule for achieving the agreed changes. The final objective is the same but each province decides on its own timetable.

WHAT IS POSSIBLE AND WHAT IS PRACTICABLE

We have opted for co-ordination and consensus. In cases where there is no obvious agreement among those involved in the various aspects of the reform process, a considerable amount of energy is spent resolving tension and conflict, concentrating on the need to agree on emergency measures.

WEAKNESSES TO BE OVERCOME

It is important to create greater confidence among teachers. The financial problems encountered by some provinces in 1995 and 1996 led to salary adjustments and decreases throughout their public administration sectors, and teachers' salaries were no exception. Talk of giving priority to education, increasing professionalism among teachers and promoting respect for their work is incompatible with indiscriminate salary cuts. Unfortunately there is no clear agreement to protect provincial education budgets. This problem is now being addressed.

Progress in applying major administrative reforms is also necessary in many provinces, to give greater autonomy and more resources to the schools, leaving them free to carry out their day-to-day work without rigid bureaucratic supervision.

Finally, one of the most important lessons learned has been that people from many

different fields, not only academic but also ideological, were able to join forces to achieve a common goal. Given that education has traditionally been dominated by party politics, if not eroded and drained by successive dictatorships, the fact of having succeeded in creating a broad platform for discussion leading to mutual understanding and joint action by so many different groups is, in itself, an outstanding achievement in both institutional and social terms.

CHILE: GENERATING SOCIAL CONSENSUS FOR A LONG-TERM REFORM OF EDUCATION

*Ernesto Schiefelbein*¹

The political challenge for the new Minister

The Minister of Education in office in the early 1990s had managed to obtain an impressive increase in teachers' salaries. He had achieved this through a strong political position coupled with his status as a presidential candidate. The new administration, coming into power in 1994, was based on the same political coalition. However, the educational rhetoric of 1994 spoke about improving the quality of education, although the meaning of 'quality' was not defined. Improvements were promised through decentralization, higher salaries and teacher re-allocation. This policy was certain to clash with the powerful teachers' union, since the security of employment of teachers would inevitably be threatened. Furthermore, the government was still involved in bargaining with the teachers about the final terms of the above-mentioned salary increase. These terms were not clear and the union was getting ready to protest. Such a scenario did not appeal to aspiring politicians (and three of them had already refused the post of minister of education), so the job was offered to myself—a professional with a technical background and no party affiliation.

I accepted the post because I believed that social consensus could be reached on educational problems and on how they were to be overcome.

Original language: English

Ernesto Schiefelbein (Chile)

President of Santo Tomás University, Chile. Qualified in 1970 as Ed.D. in educational administration at Harvard University. Formerly Director of UNESCO's Regional Office for Education in Latin America and the Caribbean (OREALC) and Minister of Education for Chile. Between 1984 and 1987, worked as an educational planner at the World Bank, Washington DC, and was visiting professor at Harvard University. Has published numerous articles and books, of which the most recent are: *The state of education in Latin America and the Caribbean* (1992) and *Improving the quality of education in Latin America* (1993).

Even though the President-elect quickly endorsed the tentative governmental plan for education, political in-fighting over the appointment of the Vice-Minister of Education suggested that I would receive little political support. As an alternative, support was sought from public opinion and the international community.

Mapping the educational challenge

During the two-month preparatory period before taking office, wide-ranging reviews and consultations were held with all of the parties concerned. During this period, a reliable group of five personal advisors emerged: representatives of the three main political parties of the coalition, and members of the research community and of the private sector. Weekly meetings with this group proved invaluable.

As in most Latin American countries, the key issue in Chilean basic education was poor quality (UNESCO, 1992; Wolff et al., 1993). Some 40% of fourth-grade students were unable to understand simple written messages (Schiefelbein & Tedesco, 1995).

The traditional scenario of the teacher standing in front of the class and dictating the lesson to the pupils did not stimulate democratic attitudes, creative or participative skills and social cohesion. Indeed, it discouraged independent thinking and personal initiative.

Research findings from schools in poor urban and rural environments had shown that learning modules could generate children's interest and teacher commitment, leading to dramatic improvements in the quality of education (Schiefelbein & Vera, 1992; 1993). These research findings were going to play a key role in the subsequent public opinion campaign.

These facts and ideas were well received by the private sector, politicians and the mass media. However, most Chilean educational policy makers were unaware of them and they were also reluctant to look at foreign experience. The staff of the Ministry of Education believed that better education could only be achieved through massive teacher retraining, in spite of the research findings (Murnane & Levy, 1996).

The previous administration had not attempted to change the frontal teaching process, but had improved basic education by implementing the remedial project P-900 to upgrade slow learners (generated by frontal teaching) based on a well-evaluated experiment (Vaccaro et al., 1976) and launched locally designed education improvement projects (PME). Surveys carried out in 1993 showed that even in secondary education, 80% of teachers 'dictated' to their classes (Edwards et al., 1993), suggesting that, without student modules (showing how to create interesting learning environments) it would be almost impossible to generate the required change in the role of teachers.

This scenario on basic education eventually included the key elements of the ongoing bargaining process with teachers' unions and negotiations to finalize the project for secondary education in order to obtain a new loan from the World Bank in late 1994.

Quality was also the main problem in higher education. Research showed that 80% of the 20,000 university professors had less than a doctoral level of training (Altbach, 1996). Thus, upgrading the faculty became a first priority, given that rote learning prevailed here too (Boyer, Altbach & Whitelaw, 1994). To make matters worse, senior staff were continually leaving to work abroad where they could obtain salaries at least

three time higher than local ones. Legal, financial and administrative problems were also analyzed in order to shape the design of a comprehensive higher-education policy (Schiefelbein, 1995).

Selecting the overall strategy

In the two months before taking office, two alternative strategies emerged: (i) implementing a well-defined sequence of activities, incentives and laws to overcome identified problems; and (ii) sparking a grassroots reform movement by making people aware of the low quality of education.

The average length of appointment of a minister of education in Latin America was about one year. Because of this, and due to my past experience in the education sector, I selected the second strategy to reform the K-12 education system, but used the first for higher education.

It seemed essential to make all concerned aware of the problems of the system in order to obtain consensus on how to resolve them and to release the resources required to make changes. There were three main changes that needed to be implemented: (a) to increase the time available for learning and link it with teachers' salaries; (b) to provide computers; and (c) to generate incentives for good teaching through improved learning opportunities in basic and secondary education.

For higher education, agreements were reached on a package of investments with the presidents of universities, with research organizations and with the Ministry of Finance.

Appointments, decisions and initial problems

The proposals for a candidate to become Vice-Minister of Education had to take into account the distribution of ministerial jobs among political parties. This appointment was therefore delayed for forty days until the whole array of top government positions was clarified. Finally, an excellent education specialist from the main coalition party was appointed and joined the minister in accelerated, on-the-job training during the political and union battles that erupted when the new government took office in mid-March 1994. This appointment forced the resignation of the next two key jobs held by educators from the same coalition party, thus ending an internal power struggle.

Most senior staff positions in the ministry were reconfirmed in their jobs, while the remaining open positions were filled in order to keep the political equilibrium, provided that good levels of professional expertise were met (in one case, six candidates were rejected in a row, but the seventh was accepted and became an excellent manager). In all cases, specific agreements on activities to be achieved during the first semester were made. This task-oriented selection of top staff was instrumental in moving toward the expected targets, given that few of the staff could be really committed to the completely new set of priorities.

After a careful study of the draft law proposed to clarify the 1993 salary agreement with the teachers' unions, an agreement was reached, in late January 1994, with the previous minister of education to send the draft law to Congress. Our analysis detected

several aspects of the draft law that could be improved in order to facilitate future agreement with the teachers' union. However, a first political mistake was committed when there was no follow-up to the actual delivery of the project to Congress. The director of the Budget Office of the Ministry of Finance decided that a further commitment on the part of the new minister was required, and managed to block sending the draft law to Congress. By the time this obstruction was discovered, it was too late to submit it to Congress. Thus, instead of improving legislation already in Congress, I had to take full responsibility for discussing the whole draft law with the teachers' union. This brought education into the headlines of the mass media, where it remained for the rest of my tenure as Minister of Education.

The educational policy framework

A careful analysis of the Chilean education system and of the expectations of all groups concerned led me to think that Chile should first address functional illiteracy by improving basic education and, second, improve the quality of higher education.

It was among children from the lower socio-economic levels enrolled in municipal schools that functional illiteracy was concentrated—75% of them were not learning to read. Frontal teaching catered to 'average' pupils, condemning the below average to failure. Free school textbooks had been designed to provide all pupils with interesting learning experiences, but teachers had neither the time nor the training to exploit them, and the books were therefore used simply for copying (Edwards et al., 1993; OREALC, 1994). There was an assumption that higher-order skills could be developed through better learning processes, even if the content was outdated.

Children spend about 800 class hours per year in school. This was about half the time available for learning in North America, Europe and East Asia

At the outset, the rationale of four principal educational problems—frontal teaching, poor learning materials, insufficient learning time and lack of computers—was systematically presented as a politically neutral issue in all the press interviews and discussions held during the two-month preparation period. Special emphasis was given to the fact that teachers were able (and willing) to provide good education when suitable materials were available, as the three successful educational experiments had shown (Schiefelbein & Vera, 1993).

Particular attention was paid to transforming the policy framework for basic and secondary education into a rationale simple enough to be communicated to a wide audience, but solid enough to generate the desired changes. Many problems and intervening elements, therefore, were not explicitly taken into account: poverty; child labour; hunger and nutrition; transportation; the curriculum; pre-service teacher training; use of TV and radio; infrastructure; drug addiction; teenage pregnancy; transfer of poor students from private to State schools; the quality of testing; use of the computer network; management; or conflicts between central, regional, provincial and local administrations. However, it was expected that better quality of education would be linked with the solution of many of these problems (this linkage should have been better explained at some point).

On the other hand, the policy design for higher education and research was very specific. It included support for doctoral training: about 300 fellowships per year (including funds for the replacement of these teachers at university); larger research grants (US\$150,000 per grant versus US\$20,000 in the past); and infrastructure grants and funds for attending conferences. The cost of the whole package was an estimated US\$30 million per year (financed by multilateral international banks, if necessary) and represented a 60% increment with respect to traditional research fund levels. This policy was to be complemented by incentives for universities to select the best students from each secondary school, even if their entrance examination scores were below par.

There was a need for being accountable to the whole country through a serious review of the policy framework. This task was to be performed by an International Interagency Mission (IIM) and a national committee.

Working relationships with the key players

I was lucky to define the main strategy before officially taking office on 11 March 1994. Once in office, the fourteen-hour days of cabinet meetings, Congress hearings, staff meetings, press conferences, co-ordination meetings, etc., left little time for reflection—just enough to keep things moving in the right (or desirable) direction.

In political terms, even though the educational policy framework was presented as politically neutral, political parties and politicians wanted it to contain some specific advantages that could be used as ammunition in the next elections. Nevertheless, a large number of politicians were genuinely interested in solving Chile's educational problems. On the other hand, failure to attend to the demands of the more exacting politicians resulted in a low score in a newspaper poll among congressmen after six months in office.

The leaders of the teachers' union were interested in centralized salary negotiation that provided national coverage to their work; they did, however, support substantial aspects of the policy framework (Pavez, 1994). Teachers had support from many sources in bargaining on salaries and on full tenure (they did not want to be reallocated on the basis of school enrolments), but they joined the minister in visits to successful experiments and were members of the jury of the National Contest on Learning Guides. Teachers are important local figures in Chile, playing a key role in organizing political groups and field campaigns, and are, consequently, closely related with political parties. Therefore, they bargain with strong political backing, as well as receiving support from parents who consider them as model citizens. Annual confrontations and strikes are part of the tradition and play a role in the internal selection of union leaders. There is no mechanism for arbitration, so solutions tend to be negotiated with many actors, who may not be directly concerned by the outcomes (in fact, the children of most people seated at the bargaining table tend to attend private schools and are not affected by the negotiations).

The municipal mayors co-operated in the definition of feasible proposals, but could not have a seat at the bargaining table with the teachers' union. The mayors were highly interested in receiving enough subsidies (vouchers paid to municipalities per student-day attended) to erase deficits in the operation of the municipal schools, and they also needed flexibility in allocating teachers according to annual shifts in enrolments.

Representatives of the industry and business world fully endorsed the policy framework and were willing to support specific experiences, but were not able to motivate support from opposition congressmen. The national Association of Labour Unions (CUT) became aware of the problems affecting a substantial number of their children (economic changes hit hardest at the least educated), but declined a more active role given that the teachers' union represented some 20% of their members. Finally, parents were not organized and could not represent their point of view or the point of view of the students.

For higher education, a first draft of the policy design was prepared in early April by a small task force made up of the head of CONICYT (National Science Commission), the head of the Higher Education Division, the science adviser to the minister, and the minister. Each brought a special expertise to the effort. One was an engineer and had experience in the administration of grants on a competitive basis. The second was a lawyer with political savvy and a good understanding of the administrative workings of the Ministry of Finance. The third was a well-known (both nationally and internationally) active research biologist who was then president of the Chilean Academy of Sciences. The draft was discussed with the board of twenty-five university presidents and with a selected group of researchers. Between April and August, a consensus was reached and an advisory board within CONICYT was created in order to fine-tune the implementation of the policy design and prepare the items to be included in the budget draft that the Ministry of Finance was to send to the Congress in late September.

Contacts carried out during the first month in office expressed general support for the policy framework, and the strategies for a long-term bargaining process with teachers' unions were assessed with, and supported by, the whole Cabinet. The Secretary of the President would take care of the political dimension of the bargaining. The stage was set for the detailed evaluation to be carried out by the ten experts of the IIM.

Advice from the International Interagency Mission

The technical feasibility of the policy was endorsed through a careful review by the IIM group. The international experts representing five agencies—UNESCO, UNDP, UNICEF, World Bank and the InterAmerican Bank—produced a well-written report supporting the diagnosis and policy framework described earlier, and provided advice on aspects requiring further work (Tedesco et al., 1994). The mission 'fully subscribed focusing efforts on selected priorities', agreed on the need to move from frontal teaching to personalized learning, advised on the allocation of additional resources, highlighted the need for a social consensus, and suggested a serious effort on collecting and disseminating relevant information.

The mission also agreed on the need to strengthen the country's scientific and technical capacity by expanding academic education at the highest levels and recommended reviewing the links between universities and research institutions and industry.

The IIM report provided detailed comments on how to improve communication with teachers and with public opinion in general. The mission commented that the strategy selected (to spark a reform movement rather than to implement a specific project) required a systematic effort to ensure that all concerned and committed citizens under-

stood both the educational problems and the main causes, as well as the information on how they were to be overcome.

The mission suggested that the mass media campaign supporting the policy framework for basic and secondary education should be sharply focused. This was wise advice, given that full support from the main actors could not be ensured and that the group most likely to benefit was not organized.

Educating public opinion about research findings

The initial diffusion of ideas to the press was too technical. In late April, professional advice from the Communications Department of the government helped to build a 'public image' of the key ideas, and in May those ideas were circulating widely, with educational problems becoming a priority. During March and April, three activities had been implemented: (i) a leading national newspaper (reaching 15% of Chilean households) was publishing, once a week, a set of learning modules for students; (ii) another national newspaper published a monthly supplement with the main ideas of and news about the policy framework; and (iii) all available radio, TV and forum time was used to analyze the policy proposals, including problems, causes and effective solutions. Visits to traditional and experimental schools with reporters from the main mass media units allowed an increasing understanding of problems and solutions. Administrative red tape blocked a quick distribution of examples of the learning materials to all schools (it was eventually printed in late 1994 and distributed without instructions).

The head of the Communication Department carefully analyzed the education policy framework and on-going activities in order to select the key ideas that needed to be transformed into social messages. We eventually agreed on five key messages and then worked long hours to find brief labels for each one that conveyed social images easily decoded and understood by stakeholders and the general public in terms of how each was affected, what could be done and how to monitor progress.

As a result of this effort, the messages were ready for mass communication. The 'poor quality of education' was labelled 'functional illiteracy' and illustrated by the phrase '40% of children are not be able to understand simple written messages'. Traditional whole-class teaching with authoritarian transmission of information and rote learning was labelled as 'frontal teaching' and illustrated with 'bored students seated in rows'. The need to 'expand available learning time' at school was illustrated as 'to bridge the gap between the 800 hours per year in Chile and the 1,400 in Europe'. The need to change 'traditional textbooks' was illustrated through 'the need to provide guides to each student for a personal or group learning experience assisted by the teacher'. Finally, the need for 'better teacher salaries' was presented as 'salaries corresponding to the new professional role of the teacher, who will no longer only transmit information and will work longer hours'.

Long meetings with the editors of the four leading national newspapers, two weekly magazines, and the directors of the two main national TV networks paved the way for an updated view of the education sector. Personal two-hour meetings with these mass-media leaders usually ended with them saying: 'I did not realize the real magnitude of the educational problem'. Soon after each of these meetings, key reporters prepared articles and

special TV programmes. A one-hour TV programme at prime time, showing a traditional classroom with fourth-grade children seated in rows and barely understanding the lesson, followed by a similar classroom with children working in groups and who were able to read comprehensively, produced an impressive impact in one-third of all households. This communication effort, complemented by a campaign of thirty-second TV advertisements on parental care and early stimulation, carried out with the support of UNICEF and UNESCO, generated a 70% recall in an independent evaluation of a representative sample (CENECA, 1995).

In mid-May, representatives of the main educational stakeholders started to use the information available, and education became a higher priority on the national agenda. The time was ripe for bringing together a National Committee on Education, including all parties concerned, to generate a consensus on Chilean education for the next decade.

Building social consensus on Chile's educational policy

A nationally representative, carefully selected 'Presidential Committee on the Modernization of Chilean Education' (PCMCE) reached total agreement on defining the main problems affecting education, and on selecting the principal goals that should be pursued in the next decade. Thus, the quality of future Chilean education would depend on trying new approaches, agreeing to incentives, retraining the teaching force (and providing better training for future teachers), monitoring progress on a regular basis, and persevering in the face of adversity. The consensus document on problems and long-term goals, signed by all of the PCMCE members, met a basic requirement (in an area where policy changes have been associated with the one-year average tenure as minister of education) for developing a long-term improvement. This process took four months.

In late May, the search began for possible members and the structure of the PCMCE. Candidates were analyzed from several aspects: political affiliation, private/public interest; sex; consumers/producers; owners/workers; religion; researchers/practitioners; professional background; teachers/parents/students; and, last but not least, their ability to reach reasonable agreements. In fact, the list became too long and eventually the PCMCE was organized on two levels: a working group to prepare a draft report by mid-September, and the committee to work on a final document. A positive sign was that all those who were asked to participate accepted the invitation. I decided not to be a member of the PCMCE in order to make sure that the country would give legitimacy to a fully independent committee. Their work was to be completed in two months to ensure that the document would be ready before the minister could be replaced.

The selection of the chairman of the working group was carefully discussed at high political levels, because he/she might eventually become a minister of education. There were many excellent candidates. Former cabinet ministers were discarded in order to reduce political controversy, but three former ministers participated as full members of the PCMCE and were instrumental in reaching the required consensus. Finally, a former head of a similar committee appointed by the previous government (that had reached a reasonable compromise on the development of higher education) was appointed. The Vice-Minister of

Education organized an efficient task force to support the operations of the working group.

The PCMCE was given its portfolio by the President of the Republic in July 1994, and mass media provided full coverage. Meetings were held in the Presidential Palace, and progress was closely monitored by the press. The Minister of Education attended the initial working session and presented a detailed analysis of the state of Chilean education, the policy framework, the evaluation by the IIM, and the main social messages. Also, PCMCE members were provided with a solid set of reports and information. During the next two months (until the delivery of its report), the Minister of Education maintained weekly discussions with the chairman of the working group and reviewed in advance all drafts submitted to it.

The skill of the chairman of the working group and the impact of the social messages and information on public opinion produced a degree of agreement beyond all expectations: all members of the working group signed the draft presented to the PCMCE committee. Having reached, for the second time in my life, a social consensus on a reform of Chilean education—the first one as head of the Education Planning Office in 1965—I was ready to step down from office, and sent a letter of recognition to the mass media (Schiefelbein, 1994).

Education becomes first priority for the government

The increasing public awareness about Chile's educational problems, their impact on poverty and social development, and the available solutions, gradually raised the government's priority on education. The President closely followed the process through one-page weekly reports. After four months in office, education became the first priority of the government, and the political opposition welcomed that decision.

Education had been just one of twelve issues included in the campaign platform of the coalition that won the election of December 1993. However, the first presidential speech to the Congress in May 1994 presented education as one of the four challenges the country was facing. Finally, in July 1994, the Minister of Finance declared that education was the main governmental task and took a long-term decision to gradually increase support over the next eight years from 3.3 to 4.8% of GDP in public resources, and to create incentives for private activities to increase total resources from 4.9 to 8.0% of GDP in that same period.

Education was the main priority of the government for the first time in sixty years of Chilean history, and, for the very first time, a long-term precise commitment on the financing of education was made by the government. From this point of view, the strategy selected six months before had been the right one.

Budget discussions and changes of context

The careful discussion of the policy design with the President and the staff of the Ministry of Finance was instrumental in the commitment made in July 1994 for more funds for education than for other sectors. Specific programmes were developed for the 1995

draft budget: lengthening the daily schedule by two hours in the lower-achieving 20% of schools (and increasing it by the same percentage each year from 1996 to 1999); providing computers to those schools (one computer per ten students); raising salaries for teachers who were willing to work a weekly schedule closer to the average of forty hours per week; and, for higher education, improving research and reforming and expanding doctoral training.

The draft budget for 1995 took shape in frequent working sessions between the staff of the Ministry of Finance and the policy design task force headed by the Vice-Minister of Education. The project would have increased the total budget for education by over 10% on average for 1995, with the budget for higher education increasing by about 20% for 1995. However, there would have been almost no increase in payments per undergraduate university student, with most of the increment thus going for research and doctoral programmes, extended daily and annual schedules in basic education (with an impact on higher teacher salaries), as well as a 3% increment in subsidies for the best students graduating from high schools in deprived areas (experiments showed that the best students from deprived schools obtained low scores in entrance examinations, but were able to perform very well during the academic year).

Then, just two weeks before the budget project was to be sent to Congress, the political context changed. In the wake of a battle with the teachers' union over budget allocations linked to annual enrolment demands, as well as other political pressures, the President was forced to replace me with a leading figure from the main political party of the coalition. This change also forced the replacement of the Vice-Minister (in spite of his excellent performance) by a member of another coalition party in order to keep the political balance.

The new minister did not have enough time to defend the draft budget. During the final week before the draft was sent to Congress, budget increases for education were reduced from 10 to 7%. Most of the reductions were in the measures aimed at lengthening the daily schedule, provision of computers, incentives for good students graduating from high school with low entrance scores, and research and doctoral programmes.

The policy design remained, but with insufficient funding. The budget that was finally approved had the right 'headings', even if the money was insufficient to implement the objectives. In spite of the conflict with teachers that forced me out of office, the country was headed in the right direction, even though the pace was still slow.

Thirty months later

Even though it may be several years before it will be known whether or not the policy framework improved students' achievements, there are positive signals in: group work activities, extension of the daily schedule, teacher-training institutions, continuity of top staff in the ministry, the appointment of leading political figures as ministers of education, and increases in the State education budget.

An increasing number of schools are using group-learning activities. Over half of school-based projects are focused on better ways to teach reading and writing. Textbooks must be user-friendly and thought provoking (in accordance with the new calls for

tender). Good teachers are sharing their best methods through an annual nationwide contest. In 1996, the World Bank supervisory mission found group work activities in nearly half of the schools visited, while no group activities had been detected in the early 1990s. The CPEIP staff is monitoring experiments in some 200 schools in three regions, and has prepared excellent learning guides.

There are several signs that teacher-training institutions will prepare future teachers to use interesting, well-proven activities with their pupils, rather than 'frontal' teaching. A nationwide meeting of some thirty teacher-training institutions held in 1996 agreed to move in that direction. This decision will be supported through a fund enacted in the 1997 budget for innovative teacher-training projects (Chile, 1996). Furthermore, the head of the experiments in active learning received the national prize for education in 1997.

The government has been adamant about the high priority of education. The Minister of Education appointed in late-1994 is statesman and political leader, a former Minister of Planning and Development and a former Minister of Finance. The minister appointed in mid-1996 had been the Director of the Budget Office with whom the whole strategy had been discussed during 1994. Both ministers have confirmed all top staff appointments made in 1994 and explicitly maintained the policy framework. Also, the President of Chile sent a message to Congress in May 1996 to expand the schedule from five to seven hours per day. Last, but not least, teachers' salaries have increased some 20% in real terms in the 1994-97 period. Finally, even if the whole programme on doctoral training and research has been shelved, several universities, now aware of the problem, are making serious efforts to upgrade the training of their academic staff.

In summary, even if leaving office in September 1994 could be considered a personal failure, the evidence suggests that, in 1997, the country is still moving in the direction defined in 1994. The combination of a minister with technical background, being replaced by high-standing political figures with good managerial skills seems to be an efficient procedure, as happens in team sports when the coach makes the right substitution of players.

Lessons learned in this process and personal remarks

Even though the power of a minister of education is limited, the relevant information is available, and therefore it is possible to define (or continue) a long-term educational policy. But the selection of a feasible strategy and its implementation require skills beyond those of an educational planner.

My experience in office showed me that a minister has the power to bring people together and to be heard. But, at the same time, it is important to remember that the audience must be fully convinced (by objective data and sound rationale) in order to bring about changes, and there is no mechanical way of doing this. As a policy specialist, I was able to convince people to move the system in the direction agreed upon by the community of policy specialists, in spite of all the constraints and pressures. However, I was not able to persuade teachers' unions to be flexible about staff reallocation. More political talent and leverage would have been required to get the enthusiastic support

of civil servants, union leaders and congressmen, all of whom have a veto power in shaping educational policies.

Educational planners know little about the bargaining processes through which laws are enacted, how the press will react to statements, how to answer on-the-spot questions, or what union leaders' real expectations are in the bargaining process. It takes some time before you realize the true objectives of each of these actors, and those expectations must be understood before advocacy and persuasion (or bargaining) can become effective.

Given that the power of a minister resides within an advocacy role, the job becomes a time-consuming exercise and it may be difficult to launch a serious change without enough time (before taking office) to prepare the strategy in advance. Once in office, the minister's schedule must resolve the well-known tactical dilemma of shaping the right policies through small task forces, on the one hand, and, on the other, building up support for those policies by discussing them with all parties concerned.

Spending US\$1.5 billion according to complex legal norms was, in itself, a time-consuming process, and each signature exposed the minister to the risk of being charged with wrongdoing. In fact, to step down from the ministry without being accused of wrongdoing was, in itself, a major accomplishment (and a great relief!).

Since there are so many relevant actors, the mass media becomes a powerful tool to reach ministry officials in education and finance, civil servants, university leaders, scholars, scientists, writers, artists, the mass media, members of congress, political leaders, teachers' union leaders, the private sector, and foreign experts with international banks. The key messages should be carefully transformed into social images that people can understand and link to their personal day-to-day life. The mass media are now highly important and, even if a consensus were reached among the many players, additional support would still be needed from overall government policy and the national context. Even if the policy design is not implemented, just generating the basic information will produce change. Chile is now well aware of the poor quality of university faculty and the need to increase research activity.

Designing new policies requires the minister's personal involvement and continuous follow-up and attention. Top officials have a veto power, are often influenced by their political backing, and cannot be pressed too hard. In a best-case scenario, a minister is like a physician, knowing exactly what ails the patient and what to prescribe, but having to argue with the patient, the relatives and friends before the patient agrees to undergo the treatment.

In summary, a minister of education must make a number of decisions that always generate social reactions (sometimes from groups trying to manipulate the minister's power for their own benefit). Thus, it is one thing to know what social policy decisions should be made in a given political context and what will be the reactions, and another thing entirely to operate effectively within the political context itself. This second dimension of the job requires skills that only a few technically oriented professionals may be willing to master (or even willing to try). The president/coach must take the decision about the right minister/player—technically or politically oriented—to use at each stage of the game.

Note

1. I would like to acknowledge comments and suggestions on the draft of this document by: P. Cariola, H. Martinez, J.C. Tedesco, J. Hallak, N. McGinn, B. McMeekin and H. Fritzsche.

References

- Altbach, P., ed. 1996. *The international academic profession*. Preliminary edition, p. 279–304. Chestnut Hill, MA, Boston College Centre for International Higher Education.
- Boyer, E.; Altbach, P.; Whitelaw, M.J. 1994. *The academic profession: an international perspective*. Princeton, NJ, Carnegie Foundation.
- CENECA. 1995. *Informe final. Estudio de evaluación campaña parental* [Final report. Evaluation study of the parent campaign]. Santiago de Chile, Centro de Indagación y Expresión Cultural y Artística.
- Chile. Ministry of Education. 1996. *Programas de la reforma educacional sobre fortalecimiento de la formación inicial de docentes y perfeccionamiento fundamental de profesores* [Educational reform programmes on pre-service teacher training and basic in-service teacher training]. Santiago de Chile, División de Educación Superior.
- Edwards, V., et al. 1993. *Prácticas de trabajo y socialización en establecimientos de educación media* [Work and socialization activities in secondary schools]. Santiago de Chile, PIIE-UCT-ULS-MECE, Ministerio de Educación.
- Murnane, R.; Levy, F. 1996. What General Motors can teach U.S. schools about the proper role of markets in educational reform. *Phi delta Kappan* (Bloomington, IN), vol. 78, no. 2, p. 108–14.
- Pavez, J. 1994. Recuperar la voz desde las aulas [To hear the voice from the classroom]. *La Epoca* (Santiago de Chile), 18 March.
- OREALC. 1994. Characteristics of the teaching profession and quality of education in Latin America. *Bulletin 34* (Santiago de Chile), August.
- Schiefelbein, E. 1994. Cartas al Director, Ministro Agradece [Letters to the Director, the Minister accepts]. *La Epoca* (Santiago de Chile), 11 September.
- . 1995. Adventures of a minister of education: Chile in 1994. *International higher education* (Chestnut Hill, MA), no. 1, Spring.
- .; Farrell, J. 1982. *Eight years of their lives*. Ottawa, IDRC.
- .; Tedesco, J.C. 1995. *Una nueva oportunidad* [A new opportunity]. Buenos Aires, Santillana.
- .; Vera, R. 1992. *En busca de la escuela del siglo XXI* [Looking for the school of the twenty-first century]. Santiago de Chile, CPU/OREALC.
- .; —. 1993. Una experiencia exitosa de educación. *Revista educación* (Santiago), September.
- Tedesco, J.C. et al. 1994. Quality, pertinence and equity of the educational supply. Report of the interagency top-level mission in support of the Ministry of Education of Chile. *Bulletin 33* (Santiago de Chile, UNESCO/OREALC).
- UNESCO. 1992. *The state of education in Latin America and the Caribbean 1980–89*. Santiago de Chile, OREALC.
- Vaccaro, L.; Schiefelbein, E.; Yañez, C. 1976. Una experiencia de participación de la familia en el proceso educacional: descripción de diecisiete actividades realizadas por apoderados en una escuela básica gratuita [An experiment in involving the family in the educational process: a description of seventeen activities carried out by tutors in free basic schools]. PIIE (Santiago de Chile), September.
- Wolff, L.; Schiefelbein, E.; Valenzuela, J. 1993. *Improving the quality of education in Latin America*. Washington, DC, The World Bank.

SENEGAL:

DEFINING AND IMPLEMENTING

PRIORITIES IN

THE EDUCATION SECTOR

Mamadou Ndoye

The definition and formulation of priorities for the education sector or, in more overall terms, for educational policy-making in Africa raise many questions which have yet to be analyzed. From the political standpoint, educational priorities are the outcome of national development choices made by the State at the cultural, economic and social levels—choices prompted by, and aimed at, the type of citizen and the blueprint for society which it is intended to promote. In practice, the process of defining priorities is far more complex, involving the often contradictory interplay of a host of national and international forces and factors operating within and outside the education system. The dynamics of implementing these priorities are all the more uncertain in that the crisis affecting education systems, hinging on the other crises which the State and society are undergoing, renders even more uncertain the identification of the sources of and mechanisms for determining education policies and, *a fortiori*, the measurement of their impact. For, we frequently observe astonishingly high coefficients of efficacy being assigned to forces and factors apparently negligible in a less fragile context

This is why the study of individual cases appears particularly profitable as an initial approach to the analysis of specific features in time and space. This may result in a

Original language: French

Mamadou Ndoye (Senegal)

Currently Minister with Special Responsibility for Basic Education and National Languages. He has had extensive experience both of teaching and research. After serving as inspector of education and head of the educational district of Dakar, he became researcher-trainer at the Institut national d'études et d'action pour le développement de l'éducation (INEADE), Dakar, in 1988. In 1993 he was appointed Minister with Special Responsibility for Literacy and the Promotion of National Languages. His many publications include: *Ajustement structurel et éducation scolaire* [Structural adjustment and schooling] (1991); *Problèmes de réforme de l'éducation en Afrique* [Educational reform problems in Africa] (1990); *Dette et éducation* [Debt and education] (1989).

process of learning in which the knowledge gained may serve as a basis for subsequent attempts at building models and typologies.

Defining education sector priorities in Senegal

In the Senegalese Government's current sectoral policy announcement, three priorities have been laid down:

- broadening access to basic education (elementary instruction and literacy) by giving special prominence to efforts to counter disparities between the sexes and between urban and rural environments—which in turn entails giving priority to the enrolment of girls and of children in rural areas;
- improving the quality of educational supply in order to enhance the efficiency of the system, while strengthening the relevance of courses within the framework of an educational reform geared to endogenous development requirements, and the need to promote an African socio-cultural identity; and
- strengthening national capacities for planning and managing the quantitative development of education at both central and decentralized levels.

In order to understand the process which led to these major choices, it will be helpful to go back in time to at least January-February 1981, the period when the *Etats généraux de l'éducation et de la formation* (States-General of Education and Training—EGEF) were organized. The 1980–81 academic year had been marked by a serious crisis punctuated by repeated strikes on the part of the teachers' union, which was demanding, in addition to its pay claims, a radical reform of the education system. Denouncing alike the élitist nature of the education system, the poor levels of performance and its exogenous orientation, the union's action focused on demands to build a new education system, one that was democratic, national and for the people.

In contrast to his predecessor, the new President of the Republic, who had just taken office in January 1981, opted, as one of his first acts following his appointment, to settle the crisis by setting up a forum for national dialogue in the form of the EGEF, to which he strongly committed the government. The outcome of this national debate was a set of conclusions, hammered out by consensus, which linked the different aspects of the diagnosis with specific demands and proposals for change, and that can be summed up in four points:

1. Less than half of the number of school-age children could, in fact, attend school due to the inadequate capacity to cater for them (lack of classes and teachers); it was therefore essential to earmark more budgetary and extrabudgetary resources for schooling, to reduce educational costs and to manage existing resources more efficiently, and to democratize access with the aim of achieving elementary schooling for all within a period of ten years.
2. The educational model which still prevailed was, essentially, a legacy of colonization: it had not resulted from society's internal development, but was imposed from outside. It was thus oriented to the outside world, unsuited to the realities, needs and aspirations of a country that had become independent and was searching for an endogenous form of development. The final structure of education must be achieved

through the reform of educational content that will foster knowledge and enhance the national heritage, promote African socio-cultural identity and develop large-scale endogenous capacity for production, invention and creation, one that is rooted in the people's creative genius.

3. Educational performance levels are disappointing when measured by the massive failure rates at school and in university examinations (for example, 80% of pupils fail to make the transition from primary to middle secondary level, and repetition and drop-out rates remain high). The deterioration of material and educational conditions (over-large classes, shortage of teaching materials, inadequate initial and in-service training of staff and a decline in supervisory staff provision), the loss of motivation among those concerned (teachers, pupils, parents) when confronted by the loss of meaning of academic instruction, and the lack of opportunities for diploma-holders have all in turn been blamed as the main factors in this poor level of achievement. The solutions advocated are targeted on: (i) the renewal of teaching methods so as to ensure that instruction is centred more effectively upon the learner; (ii) the redesigning of curricula in order to associate more closely instruction and productive processes on the one hand and, on the other, schooling and the local context; (iii) the improvement of the learning environment in terms of school textbooks and teaching aids that are locally produced; (iv) the lengthening and refocusing of teacher training so as to ensure that teachers can meet the new demands of their mission; and (v) the involvement of the local community as a source of mobilizing new resources for schools and schooling.
4. Educational management procedures are both ineffectual and inefficient in terms of cost-effectiveness choices, of co-ordination and synergy of the measures taken, of communication and participation (transparency and involvement of the actors), and of methods and techniques (rationality and optimal achievement). This is reflected in the poor use of the scarce equipment and resources (educational, institutional and human) that do exist, in duplication and in wastage, as well as in the failure to turn to account the resources that are available and can be mobilized locally. In order to correct this situation, it is essential to place the entire education and training system under the supervision of a single minister, to apportion the use of resources more effectively between the different levels and different categories of education (formal, non-formal), to develop a participatory approach that involves both actors and partners in the business of educational management, and to create a national fund for education which would centralize the financial and material contributions of all sectors of society, including that of businesses.

The 1981 EGEF forum thus constituted a key event, allowing the country's different sectors (the government, teachers' unions, academic institutions, parents, religious authorities, the private sector and various associations functioning in civil society) to make their voices heard, to consult one another and to reach a consensus in the spheres of critical analysis and forward thinking concerning education.

The EGEF laid down the main tasks of the National Commission of Educational Reform (*Commission nationale de réforme de l'éducation*—CNREF)—technically responsible for giving operational effect to the conclusions reached—which carried out its

mission from 1981 to 1984, when it submitted the outcomes of its work. Likewise, the current law governing national education voted by the National Assembly in 1991, which constitutes the frame of reference for educational policy-making (Law 91-22), derives from the dynamics and likely future trends identified by the EGEF and worked out in greater detail by the CNREF.

Furthermore, it may fairly be said that the EGEF constituted the contractual basis which links the State with civil society and binds together the different components thereof, in so far as government representation and the future of Senegalese education are concerned. That is why the other major events which followed it (National Symposium on Literacy and Non-formal Education in 1993, Symposium on Basic Education in 1995, Forum on the School Enrolment of Girls and EGEF evaluation session in 1996) extended the participatory approach (consultation and consensus between the State and civil society) in the matter of defining sub-sector priorities:

- acceleration of access to basic education by a 5% annual increase;
- increase in the rate of enrolment of girls;
- priority focus on girls and women in literacy training (15–35 age group);
- focusing of literacy programmes on disadvantaged regions (those with an illiteracy rate exceeding the national average);
- overhaul of basic education curricula in order to ensure the complementarity of formal and non-formal schooling; and
- introduction of national languages into formal schooling.

However, looking beyond these major national consultations and the political choices to which they lead, consideration should be given to the influence exerted by actors operating on another level in the priority-defining process.

The translation of general policies into plans of action, programmes and projects makes it necessary in particular to bring into play the technical dimension, and to take into account the partners involved in international and bilateral co-operation.

At the technical level, experts from the Ministries of Education, the Economy, Finance and Planning, as well as researchers and consultants, have been called upon to convert the priorities defined at the political level into operational terms.

In the light of their analysis of the education system's performance levels and potential, they assessed the feasibility of the options adopted, and frequently gave these a more realistic dimension in planning terms. For example, the general provision of ten-year schooling, a target called for by the EGEF and accepted by the government, was reflected in the current (eleventh) human resources development programme by an annual increase in the school enrolment of 1.4%—at which rate it would take forty years to achieve the target.

In relation to the desired qualitative breakthrough, the technical orientation of the reform has led to programmes and approaches that are geared essentially to new teaching methods:

- objective-based curricula in place of contents-based curricula;
- 'pupil-centred' methods of learning in place of the traditional 'teacher-centred' or 'didactic' methods; and
- initial training for teachers in new curricula and educational methods, with a responsive approach to technology and partnership with the local community.

The cultural, political and social goals of the reform have been accorded little place.

To a greater or lesser extent, these national technical measures have interacted with the action of partners engaged in the process of international and bilateral co-operation initiated both in political dialogue at the government level and in the technical work carried out by experts from the different ministries.

The statements of intent, or sectoral policy announcements, were negotiated bearing in mind the main trends prevailing on the international scene (priority to basic education, emphasis on the schooling of girls, focus on environmental and population issues, the fight against poverty) and which correspond to the choices made by funding sources in terms of criteria of eligibility. In view of the financial crisis which the government is currently experiencing, the level of the objectives to be attained is also determined by the resources available, a factor which is itself largely contingent upon the degree of commitment of the foreign-aid agencies to the education sector, and upon the possibilities offered by agreements concluded with these agencies under structural adjustment programmes. For example, Senegal, despite the assistance it has received, experienced a drop in its elementary-level enrolment rate from 58% to 54% between 1990 and 1994, due essentially to the fact that the control of the total wage bill in the macro-economic re-focusing operation made it impossible to recruit the number of teachers needed to maintain the enrolment rate, much less to increase it. The decision to introduce double-session classes and multiple-class teaching in order to offset the shortage of teachers resulted both from this constraint and from the need to take into account the sectoral adjustment measures.

As regards the priority accorded to quality, this has been reflected in a strategy to provide schools with textbooks and to support teacher training in the language of instruction (French) and in mathematics, using methods which reflect a significant foreign influence.

With regard to relevance, the two major projects which have been developed relate to environmental education and population education, whereas the schemes aimed at introducing national languages and productive work have remained at a standstill, due to lack of support.

All in all, it can be seen that the philosophies and interests which prevail in matters of co-operation do in fact influence government decision making, and continue at other levels to exert an even greater impact upon how plans, programmes and projects are formulated, including the implementation and evaluation of activities.

This may also account for the discrepancy between the official priorities proclaimed and those that are actually planned.

The dynamics of implementing measures in relation to the various actors

As soon as work began on putting into practice the national consensus reached on priorities concerning the development and renewal of the education system, it was beset by other problems.

Let us consider the first priority that has been assigned to broadening access to education.

As regards speeding up school enrolment at the primary level, all sectors are agreed

on the need rapidly to make a reality the right of everyone to education, on the objective itself and on the time-frame for achieving it. However, differences arise when it comes to identifying the resources required and ways and means of mobilizing them. The recruitment of educational volunteers is a particularly revealing instance of such contradictions.

Once we had established the impossibility of achieving the school enrolment objectives using the conventional model and with the resources available, we appealed in 1995 to the generosity of numerous unemployed young graduates and to their willingness to serve a cause of national development, namely education. The aim of the scheme was to recruit 1,200 educational volunteers a year for a two-year period of civic service, renewable once only, hence for a maximum of four years. Nearly 32,000 young candidates applied to sit the competitive recruitment examination; of these, 1,200 were effectively selected, trained and appointed in 1995, 1996 and 1997, making 3,600 in all, with a monthly grant which may be estimated at one-third of a teacher's average salary.

Whereas between 1990 and 1994 the school enrolment rate had dropped—as stated above—from 58 to 54%, the scheme enabled the decline to be checked in 1995, and the trend to be even reversed, with the enrolment rate rising from 54 to 57% (1995), then from 57 to 60% (1996) and to 63–64% (estimated) in 1997.

However, despite the generally warm welcome given to the scheme by public opinion, the teachers' unions were fiercely opposed to it. Their criticisms were based essentially on corporatist concerns, and were levelled at what was considered to be:

- an attack upon the dignity and merits of the teaching profession;
- an undermining of the employment situation in education;
- a lowering of the level of qualification of teaching staff;
- an exploitation of the 'distress' felt by unemployed young graduates; and
- a 'Sword of Damocles' suspended over the teachers' trade union movement in the event of strike action.

Several political parties supported the unions' positions through public statements, in particular when they proposed as an alternative solution to recruiting volunteers 'the reduction of the government's rate of expenditure', which, in their view, would release ample resources to appoint teachers in sufficient numbers.

After vain attempts to reach an agreement with the trade union organizations, we resorted to the arbitration of public opinion through a considerable number of discussions in the media which gave a full hearing to the unions, parents of schoolchildren and educational experts.

We also invited the partners within the education system to evaluate the scheme and to share results at the national and local levels. The different stages in the negotiations with the unions enabled the context justifying the scheme, the project's goals and its strategy to be further clarified, while the results were disseminated through an ongoing and constantly developing information campaign.

The following conclusions emerged:

- the volunteers' level of qualifications could not be questioned: the majority of them had obtained a higher academic standard than the average level of serving teachers (83% held the second-level *baccalauréat* or a higher diploma), they had passed more

or less the same length of time in training for the profession as graduates of teacher-training establishments, and had markedly better professional examination results (*certificat d'aptitude pédagogique*, or teacher-training certificate);

- the integration of the volunteers into the network had been successfully achieved, both at local community level and in the teaching teams; and
- the volunteers had contributed effectively to raising the school enrolment rate and to improving the quality of instruction (according to the testimony of school principals and school inspectors).

This whole process, and the results it yielded, served to attenuate the virulence of trade union criticisms and enabled the scheme to be pursued. At present, some unions support it, others maintain their opposition as a matter of principle, while all are concerned about what will become of the volunteers who have completed their service. The parents' associations, the media and the education system's administrators have all played a constructive role in the transformation of attitudes towards the project.

In more general terms, it may be noted that the teachers' trade union claims and union action exert a considerable impact upon the manner in which priorities are implemented, and sometimes compel the authorities to reconsider them. This depends largely upon their capacity to exert social pressure on the government, and in particular to paralyze the school and university system, as well as upon how public opinion perceives their specific arguments in support of their interests.

A second interesting example concerns the improvement of the quality and relevance of education.

In order to adopt an overall approach to the issue, we chose to tackle it through an overhaul of curricula. Opting for a broadly participatory process of formulation involving the other government ministries, the various actors and institutions in the education system and the grassroots communities, we entrusted responsibility for co-ordination to a resource person outside the Ministry of National Education.

The process was a particularly lengthy and difficult one as a result of disparities in the level of knowledge of the system and, above all, of differences of interest between groups and institutions. The negotiations conducted, and the powerful pressures brought to bear, made it possible to take the measure of certain obstacles:

- the scale of the conflicts which arose in regard to spheres of competence between the system's administrative structures when they are called upon to collaborate in order to undertake together a joint project (rivalry in claims for legitimacy or hierarchical authority; constant challenging of working bases and existing agreements; numerous preliminary, and paralyzing, formalities; manoeuvres designed to appropriate a particular element, etc.);
- the timid participation of researchers and research institutes, whose concerns and motivation appear remote from programmes and projects geared to action within the education system, both at the level of support in decision taking and at the operational level;
- the lack of interest shown by political parties in these processes and in the bodies engaged in reflection and policy formulation at this level which they regard, mistakenly, as purely technical; and
- the lack of understanding and solidarity of certain ministries, which do not properly

comprehend their role in the formulation and implementation of priorities in the education sector, or to which they have little wish to contribute.

Countless contacts and negotiations and frequent recourse to arbitration were needed in order to get the process moving again and, subsequently, to ensure follow-up in order to prevent the development of obstructive attitudes.

Moreover, in the dynamics of implementation, unexpected people may intervene and events occur which handicap efforts to reach priorities and carry out projects that are politically valid and technically well designed and set up. Protest strikes launched by secondary school pupils and university students exert powerful pressures which prevent the priority given to basic education through substantial budget allocations from being respected. Likewise, the strength of the social demand for education in towns and cities, and the means available to them in order to obtain satisfaction, weaken the priority given to rural areas.

This type of pressure, which pushes to the fore the interests of specific groups, usually exerts an impact on how day-to-day management issues are settled and consequently determines whether or not the priorities defined are attained.

Some lessons that have been learned

The first lesson is that it is not enough to work everything out carefully at the scientific and technical levels; the definition of education sector priorities must be seen as a lengthy, complex and contradictory process, for it assumes that, in order to secure the broad social and political acceptance and substantial support that are the *sine qua non* of success, there have been a whole range of consultations at different levels and with groups which have neither the same interests nor the same grasp and appreciation of the issues at stake. That is why it is advisable:

- to ensure, through a participatory approach bringing into play all those involved in the system as well as the various sectors of government and society, that the analysis of the context, the objectives, the priorities and the implementation strategy are broadly shared, so that the national policy ultimately defined is based sufficiently firmly on consensus to enjoy decisive political and grassroots support;
- to call in supporting expertise enabling all this to be translated into plans, programmes and projects that have sound foundations at the scientific and technical levels; and
- to engage in frank exchanges with the partners involved in international and bilateral co-operation, giving prominence to the national requirements and processes which need to be supported and to the key points relevant to such support.

In the dynamics of implementation, the time factor is paramount. Priorities are achieved over a period of time, and consequently require that options be maintained in the medium and/or long term so that their real impact can be measured. In other words, it is essential to avoid hesitation and backtracking at the political level as soon as obstacles and protests materialize, at the same time taking care to develop communications with all the influential sectors.

Despite pressures of all kinds, it is vital to ensure that the settlement of routine management issues is consistent with the priorities defined; otherwise, these will soon lose all substance in practice.

The understanding and support of the government, and in particular of the ministry responsible for finance and planning, must be constantly sought; this means that they should be involved in all stages of the work of preparation, implementation and evaluation.

The availability of research-centred facilities that are sufficiently well equipped to ensure good understanding and use of the basic data, both qualitative and quantitative, as well as systems for strategic planning and monitoring of how these evolve, constitute a key resource for decision taking and guidance in matters of priority formulation and implementation.

Finally, communication, considered in terms of receptivity, information and explanation, must be an ongoing process, based both on the mass media and on the other channels of communication and dialogue, such as meetings, seminars, symposia and conferences.

MOZAMBIQUE:

SOME CONSIDERATIONS

ON EDUCATIONAL RESEARCH,

POLICY FORMULATION AND

DECISION MAKING

Zeferino Martins

Introduction

Educational research is a matter of very recent interest in Mozambique. The first attempt to survey what was being done in educational research and where was made in 1991 by the National Institute for Education Development (INDE). More than one hundred researchers, planners, administrators, educators and professors representing national, international and foreign institutions participated in a seminar which aimed at disseminating research results and promoting exchanges between projects sponsored by various organizations (Martins, 1994). Approximately forty papers covering a wide range of topics (education and health, child survival, educational technology, bilingual education, school effectiveness, curriculum and teacher training, history of education, educational planning, socio-cultural studies, educational wastage and instructional problems in primary grades) were presented and discussed.¹

Original language: English

Zeferino Martins (Mozambique)

Deputy Minister of Education in Mozambique. B.Sc. in mathematics (University of Maputo) and M.A. in population studies (University of Legon, Ghana). He worked as a mathematics teacher for many years and wrote some textbooks. He was also a UNESCO consultant on population and family life education in Guinea-Bissau and Angola. Former Director of the National Institute for Education Development, and a lecturer in demography at the Pedagogical University of Maputo. Chairperson of the Mozambican Educational Research Group. His most recent publications include *Preparation, production and distribution of books in the Mozambican education system* (1992) and 'Mozambique: system of education' (with A. Nhavoto) in the *International encyclopaedia of education* (1994).

In Mozambique, INDE is by far the major producer of educational research. Research conducted at INDE is basic and applied. At the Ministry of Education, within the Planning Directorate, some operational research is conducted. There is also some research done by universities, such as the Pedagogical University² and Eduardo Mondlane University. Another source of research which cannot be neglected is the bulk of education sector studies extensively used by funding and technical assistance agencies for identifying and justifying their aid interventions in Mozambique. These are generally commissioned or conducted by external agencies. Although the contribution of private agencies in educational research is very limited, on an individual basis many researchers are being contracted for studies and consultancies—mainly by external agencies.

Since the development of educational research is recent in Mozambique, the application of its results to decision making is an even more recent practice. Palme considers that the weak autonomy of education as a social field probably partially explains the relatively weak impact of research results produced within the INDE capacity-building programme (Palme et al., 1996).

Priorities of the Mozambican Ministry of Education programme

There are three priorities³ concerning education in the Five-Year Government Plan (Mozambican Council of Ministers, 1995). First is *the expansion of the school network*. Having lost half of the school network during the war (1982–1992), there is an urgent need for school rehabilitation and reconstruction. Basic education is an area of high priority. The second priority is *the improvement of educational quality*. The government recognizes that while expansion is of the utmost importance, a number of strategic and cost-effective inputs have to be allocated for qualitative issues. The third priority is the issue of *capacity-building in strategic planning and management*, including educational research for policy formulation and decision making.

The first priority identified in the Five-Year Government Plan is a result of collective consciousness about the dramatic destruction caused by the war to the school network. Over 3,400 schools were either destroyed or closed down—approximately 58% of the lower primary school network—and over 1.3 million pupils were affected in the period between 1983 and 1991 (Nhavoto & Martins, 1994). School rehabilitation and construction is therefore a key priority in the plan.

There are several reasons why we prioritized the issue of improving the quality of education. First, the number of hours per pupil per year had decreased by 30% (from 850 to 595 hours) as a result of a dramatic increase in demand for education in the urban centres—a consequence of the large influx of people from rural areas. All lower primary schools in the major urban centres had to run three shifts instead of the two originally planned.

Secondly, parents (mainly in the major urban areas), religious groups and civil society at large, were complaining through the media that the quality of education was declining. Analysis and comparison showed that annual promotion rates were either declining or stationary. Martins (1992) showed that promotion rates were not only low—merely

7.7% of those pupils enrolling in grade 1 completed grade 5 without repeating—but varied widely between and within provinces and by sex.

Thirdly, there was the evidence produced by INDE research. An evaluation of primary school textbooks between 1990 and 1992, which included some classroom interaction studies, revealed that pupils spent the largest amount of their time listening to the teacher. Second in rank was the activity of waiting—waiting for the lesson to start, waiting for other pupils to complete exercises, waiting for the teacher to finish writing on the blackboard, etc. Third in rank was the activity of copying written materials. The conclusion drawn from this study is that there was extremely little room for active/creative pupil participation in the classroom (Palme, 1993; Hyltenstam & Stroud, 1993; Popov, Torcida & Januário, 1994). Other evidence derived from research that boosted the ministry's awareness about qualitative issues in basic education was the assessment study which showed that pupils do not master the desired learning competencies of the primary school curriculum and that the efficiency measured in terms of promotion rates was optimistic. In reality, pupils have less knowledge than what annual statistics reveal and lack basic skills in the core subjects of primary education (Popov, Torcida & Januário, 1994).

The third priority inscribed in the Government Plan is related to competence development and capacity-building in strategic planning and management. Though it is true that management capability should be increased at the central and local levels, there is an external dimension in the pressure exerted on us. This is a national problem and an issue of priority, but it is also increasingly a donor and multilateral concern. Their sector studies tend to start by considering, as noted by Samoff, that education in Africa (at all levels and in all forms) is in dire straits. Not only is there crisis, but national authorities seem to be unable to deal with it effectively (Samoff, 1996). Yet education systems nearly everywhere are managed poorly and administered inefficiently (*ibid.*). Internally this priority was identified and recommended by one of the eight technical commissions established in 1992 by the Ministry of Education to thoroughly diagnose the sector. More recently in the framework of the National Education Policy and the Strategic Plan for Education, many Mozambicans are operationalizing the sub-programme on capacity-building and competence development.

But the third priority also contains an element of capacity-building in educational research for policy formulation and decision making. This has been a result of dialogue between decision makers and indigenous researchers, through the Mozambican Educational Research Group (MERG),⁴ who acknowledged the fact that research is underfunded and that the meagre funds available are provided by foreign and international agencies. MERG also recognized that researchers work in isolation and research findings are rarely used for policy formulation (Martins, 1994; Nhavoto & Martins, 1994).

In sum, the different priorities are a result of situation analyses, research and consultation.

Examples of projects and programmes in the strategic planning of Mozambican education

As was mentioned before, the three broad priorities of the Ministry of Education gave

birth to several projects and programmes. These are detailed in the Mozambique Strategic Plan for Education—a rolling plan that basically consists of a matrix of objectives, implementation strategies and resources.⁵ In what follows I will try to give examples of educational programmes and projects, with particular emphasis on situations which influenced the decision-making process.

THE EDUCATION OF GIRLS

After the signature of the Rome Peace Agreement in 1992 between the Government of Mozambique and RENAMO (the Mozambique National Resistance, a guerrilla movement), consciousness on gender issues increased. Women's associations, which mushroomed dramatically, the media and civil society have influenced the government's decision to take affirmative action on the education of women and particularly that of the girl child.⁶ Additionally, for the donor community, gender sensitivity was an issue of great importance in educational projects.

Research showed that girls repeated and dropped out more than boys. For example, in Cabo Delgado, a northern province, only two out of a cohort of 1,000 girls completed grade 5 without repeating (Martins, 1992). In the predominantly rural northern province of Nampula, 52% of the girls repeated lower primary in 1990, compared to 39% of the boys. Drop-out rates are simply dramatic: while in grade 1 girls represented 43% of the total number of pupils, they represented only 22% in grade 5 (Palme, 1992).

In view of the need to guarantee that gender is taken into consideration in its programmes and projects, the Ministry of Education has established a Gender Unit within the National Directorate of Primary Education. In secondary schools, a fellowship programme to increase access for and retention of girls has been established and since then, the proportion of girls in upper secondary has been increasing.

Today the advantages of investing in the education of girls is part of the discourse of decision makers, and research on gender is part of the agenda of educational research institutions and universities.

TEXTBOOKS FOR ALL PRIMARY SCHOOL CHILDREN

During the 1996 and 1997 school years, the Ministry of Education decided to distribute free textbooks to pupils in grades 1 and 2, and through a lending system to pupils in grades 3 to 7. This meant providing books for over 1,700,000 pupils from grades 1 to 7. Why should a poor country such as Mozambique embark on such an enterprise?

First, by visiting schools in rural areas to which people were returning from neighbouring countries after the war, we noticed that they had almost nothing. They had lost all of their goods and were in the slow and difficult process of reconstructing their lives. It would be unfair to ask those families to pay for textbooks. Additionally it was in our own interest to have more children in school and we knew from past experience and research that many children in rural areas dropped out because their parents were unable to pay for textbooks. Yet poverty was also striking in urban settlements. We found that instead of charging those very few who could pay, it would be better to provide free textbooks to all pupils.

Secondly, research elsewhere has showed that textbooks are an important and cost-effective input for pupils' achievement (Heyneman, Jamison & Montenegro, 1984). Poor countries have to judiciously choose a limited number of cost-effective inputs to improve the quality of education.

Thirdly, the government has recognized that, at least in the first years of national reconstruction and rehabilitation, textbooks for primary schools should be given free to pupils. In the budget of the Ministry of Education there is a specific allocation for textbook provision. Donors and the World Bank also provide some funds for this scheme.

Opposition parties attack this programme because they anticipate its success and the results, they fear, might play in favour of the party in government (FRELIMO) in the 1999 multiparty general elections.

Nevertheless, pupils, parents, teachers, communities, educational officers at the district level and community leaders are happy with the system and I am sure that in the near future there will be an improvement in student achievement.

Relationships with different social actors

Education is one of those fields where everybody has a say; it is every citizen's concern. The politics and goals of education can be found in the laws of 1983 and 1992 (Mozambique. Assembleia da República, 1983; 1992).⁷ Although these goals were established under single party rule, their value is so universal that they are endorsed by other political parties and, in practice, differences tend to be more of degree than of substance (Nhavoto & Martins, 1994). In what follows I will try to elaborate on my relationships with the mass media, political parties, educational researchers and teacher unions. These are conflicting in some cases and collaborative in others.

Following the Rome Peace Accord in 1992, the multiparty elections of 1994 and the establishment of the new government in the same year created the conditions for the mushrooming of independent media in Mozambique. In my opinion, the media assumed that their 'independence' meant being able to openly criticize the government. Their task, as one of the editors of a radio station stated, is to report on the mistakes made by the government, and *in no way* could they be used for propaganda. This posture of the media, compounded by the fact that by virtue of its countless problems the education sector is vulnerable, makes the relationship of decision makers and the media one of distrust.

My relationship with political parties is obviously one of conflict and non-collaboration. Some political parties try to impede the implementation of the Five-Year Government Plan. For instance in Morrumbala,⁸ I was informed that a particular party was discouraging rural communities from participating in the construction of primary schools. The argument used was that the government had enough money to build schools or that foreign non-governmental organizations had given enough money to the District Directorate of Education and therefore the communities were being cheated (Martins, 1996).

As far as teacher unions are concerned, there is both criticism and collaboration. The fact that salaries are low in the public sector as a whole makes the situation less difficult.

The relatively weak membership of the Mozambique Teachers' Union and the recognition that teacher conditions are poor have meant that the Ministry of Education itself has become a sort of teachers' union.

My relationship with educational researchers may differ from other countries. While educational researchers in other countries are usually concentrated in faculties or departments of education in autonomous universities, in Mozambique the majority of educational researchers are working in an institute which is dependent on the Ministry of Education. The budget and to a large extent the research agenda are determined by the ministry. This situation minimizes conflicts. Nonetheless, the claims from researchers that research results are not being used in decision making continues, just as the Ministry of Education continues to claim that research results are not being disseminated in a timely and adequate manner.

The relationship with the government is two-sided: when it comes to objectives and strategies there is total agreement since the educational plan is part and parcel of the overall government plan. When it comes to funding there is no such easy agreement as we are competing with other sectors for a limited amount of resources.

Improving links between political decisions and technical inputs

Having been a director of a research institution, I tend to be more tolerant of the delays by educational research centres in their presentation of results that aim to support decision making. But I also feel that sometimes research institutions are left out of many day-to-day decisions. These are the inherent conflicts between the requirements of politics for timeliness, relevance and self-protection and the requirements of research for elegance, parsimony and objectivity.

I therefore recommend that directors of research centres and senior researchers should be given the opportunity to present the results of completed *and also ongoing* research to decision makers. The continuous interaction between educational researchers and decision makers is one of the ways through which research can have an indirect influence, by entering into our consciousness and shaping our discussions about policy alternatives.

My recent experience with the formulation of our Strategic Plan for Education, which we opened for discussion with teachers, provincial educational officers, religious organizations, trade and industrial associations, the Ministry of Planning and Finance, Central Bank officers, university professors and educational researchers, allows me to conclude that there is a lot to gain from the dialogue. Besides, I felt that all partners got a sense of ownership and shared responsibility, which is fundamental if the social sustainability of the Strategic Plan for Education is to be achieved.

Moreover, having a sound educational policy and strategic plan which had been blessed by the civil society provided us with a fundamental instrument for negotiations with both the government and donors. Besides, educational researchers, having participated in different phases of its preparation, will get value-added insights to reshape their research agendas.

In countries such as Mozambique which have recently moved from single to multi-party systems, the formerly State-controlled media tend to be positioned in opposition to the government. In this way the success stories of education are never told. Instead, problems of low teacher salaries and conditions are exacerbated. A small and efficient information unit within the ministry might help to present an improved and alternative image of the ministry's work. It could also diffuse research findings to an audience beyond the researchers themselves.

Notes

1. I believe that the 1990 World Conference on Education for All (Jomtien, Thailand) precipitated the efforts towards capacity-building and competence development in educational research. Of significance is the increasing demand for educational research to support and respond to transformations in the education system in Mozambique.
2. Recently, with technical support from the International Institute for Educational Planning (IIEP), this university introduced a masters degree course on educational planning. Many of the research themes students select for theses are relevant to education in Mozambique.
3. These three priorities are in turn made up of several other entries. The identification of these entries was undertaken by a steering committee in 1992 when the Ministry of Education began the process of assembling the elements of a revised plan for the long-term development of basic education, bringing together the initiatives of different social forces and establishing contacts with a wide representation of communities and society. We held conferences and seminars, during which policies, strategies and priorities were discussed. Technical commissions were appointed to reflect upon the options and produce recommendations on the following: structures and decentralization, training and capacity-building, teachers' conditions, production of educational materials, privatization, evaluation and examinations, non-formal education, and curriculum design and development. These commissions were made up of educationalists ranging from national directors to experts with a variety of specializations and functions as well as colleagues from other sectors.
4. MERG was created in 1991 during a seminar on educational research in Mozambique. It belongs to the Educational Research Network of Eastern and Southern Africa (ERNESA), a sub-regional organization registered in Gaborone, Botswana.
5. Many donors are supportive of the Strategic Plan for Education, though they advise us to exercise some caution with respect to programme's complexity and ambitiousness relative to capacity constraints.
6. The reality was staggering: girls represented 42% of all pupils in lower primary (grades 1–5) in 1994; 39% of upper primary (grades 6–7); 39% of lower secondary (grades 8–10); and 35% of upper secondary (grades 11–12). In the northern part of the country these percentages were only 38, 29, 25 and 23%, respectively.
7. It is stated that the education system must eradicate illiteracy in the adult population, establish a free, universal and compulsory seven-year education and train the cadres judged necessary for the country's socio-economic development (Mozambique. Assembleia da República, 1983; 1992). At the same time, equal access to education is to be given to all Mozambicans.
8. Morrumbala is one of the districts of the Zambézia province most affected by war. Out of the 344,289 displaced people from the whole Zambézia province who have returned from Malawi, 139,260 were from Morrumbala. This district (the most underdeveloped educationally) is in desperate need of primary schools.

Bibliography

- Heyneman, S.; Jamison, D.; Montenegro, X. 1984. Textbooks in the Philippines: evaluation of the pedagogical impact of a nationwide investment. *Educational evaluation policy analysis* (Washington, DC), vol. 6, no. 2, p. 139–50.
- Hyltenstam, K.; Stroud, C. 1993. *Final report and recommendations from the evaluation of teaching materials for lower primary education in Mozambique: language issues*. Maputo, INDE. (INDE research report series, no. 3.)
- Kilborn, W. 1993. *Final report and recommendations from the evaluation of teaching materials for lower primary education in Mozambique: mathematics*. Maputo, INDE. (INDE research report series, no. 4.)
- Martins, Z. 1992. *Analysing regional and gender disparities through promotion rates in primary education in Mozambique*. Maputo, INDE. (INDE research report series, no. 1.)
- . 1994. *Proceedings of the 1991 Seminar on Educational Research in Mozambique*. Maputo, INDE.
- . 1996. *Constatações de uma curta visita à Província da Zambézia, Distrito de Morrumbala* [Evidence of a short visit to Zambézia province, Morrumbala district]. Maputo, Ministry of Education. (mimeo.)
- Mozambican Council of Ministers. 1995. *National education policy and strategies for its implementation*. Maputo, Ministry of Education.
- Mozambique. Assembleia da República. 1983. Lei nº 4/83 e Linhas Gerais do Sistema Nacional de Educação [Law no. 4/83 and guidelines of the national education system]. *Boletim da República* (Maputo).
- . 1992. Lei nº 6/92 do Sistema Nacional de Educação. [Law no. 6/92 of the national education system]. *Boletim da República* (Maputo), no. 1, p. 19.
- Mozambique. Ministry of Education. 1993. *Documentos das Comissões Técnicas* [Documents of the Technical Commissions], vol. 1–8. Maputo, Ministry of Education. (mimeo.)
- Nhavoto, A.; Martins, Z. 1994. Mozambique: system of education. In: Husén, T.; Postlethwaite, T.N., eds. *International encyclopaedia of education*. 2nd ed., vol. 7, p. 3953–60. Oxford, UK, Pergamon.
- Palme, M. 1992. O significado da escola: repetência e desistência na escola primária Moçambicana [The meaning of school: repetition and dropout in Mozambique's primary schools]. *Cadernos de pesquisa do INDE* (Maputo), no. 2.
- . 1993. *Final report and recommendations from the evaluation of teaching materials for lower primary education in Mozambique: general issues*. Maputo, INDE. (INDE research report series, no. 2.)
- Palme, M., et al. 1996. *Evaluation of the INDE capacity building programme in Mozambique, 1992–1996*. Stockholm, Stockholm Institute of Education. (mimeo.)
- Popov, O.; Torcida, M.; Januário, F. 1994. *Quality and assessment in primary science teaching in Mozambique. Final report of the education assessment project*. Maputo, INDE. (INDE research report series, no. 5.)
- Samoff, J. 1996. *Analyses, agendas and priorities for education in Africa. A review of externally initiated, commissioned and supported studies of education in Africa, 1990–1994*. Paris, UNESCO. (Document of the Working Group on Education Sector Analysis.)

JORDAN:

THE DYNAMICS OF

EDUCATIONAL DECISION MAKING

Munther W. Masri

Introduction

Jordan is a small country with an area of less than 100,000 square kilometres, and a population of 4.5 million.

The school system in Jordan consists of three stages: pre-school education, basic education and secondary education. Pre-school education in kindergartens is provided almost exclusively by privately run institutions under the supervision of the Ministry of Education (MOE). Basic education, which is compulsory by law, is free in government schools and covers grades 1 to 10 for the 6–16 age group. Secondary education, on the other hand, is not compulsory but is free in government schools and covers grades 11 and 12 for the age group 16–18.

Despite the achievements in the quantitative aspects of the education system during the past two decades, it became apparent in the mid-1980s that a major effort was needed to develop and improve the qualitative aspects. A national conference on educational reform was held in September 1987, and a ten-year reform plan was formulated. The implementation of the plan started in 1988 and addressed all of the components of the education system, including curriculum and textbook development, educational technology, teacher education, school buildings, pre-school education, vocational education, evaluation and examinations, legislation, educational management, educational research and non-formal education.

Original language: English

Munther W. Masri (Jordan)

Minister of Education and Higher Education. B.Sc. and M.Sc. in electrical engineering; B.Sc. in mathematics and Ph.D. in technical education, all from British universities. Former president of the National Centre for Human Resources Development, secretary-general of the Ministry of Education, director-general of the Vocational Training Corporation, and director and chief engineer of an electrical enterprise. Author or co-author of more than thirty books on electrical technology, technical education and development.

After ten years, the educational reform plan can be said to have achieved many, but not all, of its objectives. As Secretary-General of the MOE from 1988 to 1995, the writer of this article participated in the launching and implementation of the plan, with all of its obstacles, frustrations, surprises and successes. As Minister of Education since February 1996, the writer has also been involved in the implementation of the reform plan at a different level of responsibility. The following are descriptions of the major educational issues that were identified and given priority during the past two years either as a continuation of the reform plan, or because such issues had not been sufficiently emphasized by the plan.

Capacity-building

Educational objectives cannot be realized successfully without the ability to efficiently run and administer the various activities of the education system. Between the ideals of objectives and the realities of application much can be lost due to the lack of potential and capacity to provide the necessary administrative structures. Educational reforms frequently fall short of even modest expectations because such reforms overestimate the capacity for implementation or do not sufficiently emphasize capacity-building to manage the various aspects involved, including hardware, software and human inputs.

Capacity-building is one of the components of educational reform in Jordan. Nevertheless, it is felt that the achievements related to capacity-building have not matched the achievements in other aspects of the reform plan. Education systems tend to be conservative, and a good proportion of teachers and educationists resist change. To minimize such resistance, efforts have been exerted to involve teachers, parents and the community at large in the dynamics of change at all stages.

During the past few years, several developments have been introduced and measures undertaken in support of capacity-building in the ministry. Such developments, which still need enhancement and follow-up, include the following.

- Entrusting the school with more authority and responsibilities, including authority over financial expenditure.
- Widening the base of decentralization, giving more autonomy to regional (local) directorates of education. Care is being taken to ensure that decentralization permeates all managerial levels, including upper (central or headquarters), middle (regional or local) and lower (school) levels of management.
- Updating many of the by-laws and regulations that provide the legislative umbrella for major educational activities.
- Introducing major structural changes, both quantitative and qualitative.
- Improving the system of in-service training of teachers and other MOE staff, in cooperation with universities.
- Enhancing the role of units responsible for administrative development and inspection.
- Improving the system of recruitment and selection for leadership posts at central, regional and school levels.
- Developing an educational management information system (EMIS) with the following main functions: (i) efficiently utilizing information at the central and regional

levels through the integration of headquarters computer facilities and field directorates in one network; (ii) creating a data clearinghouse at MOE headquarters as a support tool for managerial and decision-making purposes; (iii) eliminating data inconsistency and data redundancy in educational operations; (iv) improving performance at the central and local levels; (v) setting up a comprehensive computer infrastructure capable of assimilating new communication technologies and disseminating information on a national basis; and (vi) improving the economics of the education system. One of the major issues here is the emerging need for comprehensive in-service training programmes for different categories of personnel, ranging from specific sophisticated skills programmes to simple orientation and technological literacy programmes.

The economics of education

The economics of education has two main aspects: the first is concerned with securing the necessary material resources and funds from various public and non-public sources, and the second is concerned with optimizing the utilization of whatever material resources and funds are available in practice. Any reforms or developments in this field should target both aspects.

In Jordan, expenditure on education is relatively high as judged by world standards. This has reflected positively on the achievements of the education system. Nevertheless such achievements have been manifested thus far in the quantitative, rather than the qualitative, aspects of education. Until fairly recently, educational policies have emphasized the need for more funding and hence for more expenditure. The new policies emphasize the diversification of funding sources and the better utilization of available human and material resources, thereby requiring a raise in the efficiency and effectiveness of the whole education system. Gone are the days when education was considered exclusively as a social service. Education is looked upon as an investment that needs to be subjected to socio-economic feasibility criteria that takes into consideration priorities, cost-benefit indicators, efficiencies and selection from among various options and solutions, keeping in mind that the learner is the focus and target of all educational activities.

Steps that have already been initiated in the economics of education include the following.

- Raising the student/teacher ratio which currently stands at the low figure of 20:1. This will be tackled mainly through avoiding unnecessary fragmentation of schools. In most areas, schools of less than 200 students predominate. To avoid such fragmentation, new school mapping plans and designs take into consideration raising the average size and capacity of schools. Other measures to raise the student/teacher ratio include abiding by the officially approved teacher load, avoiding classes of less than twenty-five students, etc. It is hoped that by the year 2000, the student/teacher ratio can be raised by at least 10%.
- Raising the level of employer involvement in vocational education and training services. The main issue here is to utilize employers' premises and production sites for the implementation of some or most of the practical component of vocational and train-

ing programmes. Most of the practical component of two types of vocational education (nursing and hotel services) is already implemented in hospitals and hotels under special arrangements and agreements with the relevant employers. On the other hand, the apprenticeship system, which is common in Jordan for the preparation of skilled workers in industrially oriented occupations, is encouraged to expand at the expense of the school system whereby the school provides full facilities for practical training for the preparation of such workers.

- Universalization of the comprehensive secondary school. The comprehensive school has already been adopted in Jordan as the model for secondary education that caters for 16- to 18-year olds. The comprehensive concept involves two major elements: the first is curricular whereby all streams of education, whether academic or vocational, share a common core curriculum that covers more than one-third of the educational programme; and the second is structural whereby any one school contains as many academic and vocational streams of secondary education as possible, taking into consideration community needs. In addition to its social and educational benefits, the comprehensive school has the advantage of economizing in the costs related to instructional materials, teacher training, administration and utilization of facilities.
- Parents' contribution to schools. Education in Jordan is free in basic and secondary public schools which accommodate about 85% of the school population. Nevertheless, students pay a nominal contribution that ranges between US\$5 and \$10 annually, which is utilized by the school for some activities. Poor students are partially or totally exempt. The intention has been to raise such contributions by about 50%. Although such an increase can be affected through ministerial decree, resistance from parents and members of parliament has so far hindered efforts to go ahead. A campaign is needed to convince the public of the benefits of raising parents' contribution, with assurances that the umbrella of exemptions for the needy and the poor can even be widened and made more efficient.
- Educational technologies. Educational technologies vary greatly in effectiveness and cost. Modern technologies are frequently a financial burden on educational budgets. Computers, modern communication systems, special educational broadcasting and television services, simulations, etc. contrast sharply with simple traditional audio-visual aids. A rational approach to the economics of education in the field of educational technologies is under development in Jordan, taking into consideration such factors as options, educational priorities, cost-effective assessments, utilization factors, coverage potential, maintenance capabilities, and even the irrational pressures of commercialization. Learning resource centres and educational broadcasting and television studios, as well as a centre for the production of laboratory equipment, facilities for the production of audio-visual aids and maintenance depots have been established to enable the MOE to produce a good part of the needed educational technologies. Although substantial savings have already been realized, evaluation studies are periodically needed to assess the cost-effectiveness of the whole approach to the educational technology issue, including the degree of involvement of the MOE and the private sector in production activities.

Pre-school education

Following the Education Law of 1988, pre-school education in Jordan was recognized as a formal, albeit non-compulsory, educational cycle, spanning the age range 4–6. Nevertheless, because of other educational priorities, such recognition has only recently translated into plans for a major development in this field.

Pre-school education institutions (i.e. kindergartens) are almost exclusively owned and run by private agencies, both profit and non-profit providers, including philanthropic and voluntary organizations.

The development of pre-school education, which currently accommodates only about one-quarter of the relevant age group, is one of the priorities of the Jordanian education system. The relevance of early childhood development, the increasing activities of agencies involved into the 'rights of the child' and 'rights of women' movements, and the provisions of the education law referred to earlier, have all highlighted the need for a comprehensive plan to develop pre-school education. The following are the major components of such a plan.

- Raising the percentage of children in kindergarten to 35% in a period of five years.
- Availing non-profit organizations, especially non-governmental organizations working in underprivileged areas and providing free or subsidized services, with MOE support and incentives to enable them to expand and improve their activities. Such government support is already being provided by funding the salaries of teachers in the concerned institutions.
- Upgrading the criteria for licensing kindergartens. Such criteria usually define the specifications of the relevant facilities and services, including space, furniture, recreational facilities, etc.
- Improving the quality of kindergarten staff, including teachers and senior administrators, in conformity with the provisions of the 1988 Education Law which requires that such staff have university-level qualifications. In-service training is another activity that needs to be emphasized to upgrade the quality of kindergarten staff.
- Developing educational materials and teacher guides that cater to the educational and recreational activities of kindergartens.
- Improving the supervisory services provided by the MOE to kindergartens, by promoting the services of qualified and well-trained supervisors (inspectors).

It is the intention to draw up a national strategy for pre-school education in Jordan to define the framework and outline of the development of such education. To help draw up such a strategy, a comprehensive study has been undertaken with the objective of surveying and evaluating existing pre-school facilities and services. In addition to the MOE, UNICEF as well as private and voluntary agencies are involved in this effort. A national steering committee headed by the Minister of Education is supervising its progress.

Special education

Education for special groups had not, until fairly recently, been given enough attention by the Jordanian education system. This applies to the talented as well as to the slow learn-

ers and those with special needs. Most efforts and activities in this field have been undertaken by private, mainly voluntary and philanthropic, organizations. Only a fraction of the target groups receive the necessary services and have access to the needed facilities. Developments in this field are needed to cater for all of the relevant quantitative and qualitative dimensions. Here are the major areas to be tackled.

- The development of legislation that would provide the necessary legislative umbrella for the work of the concerned public and private agencies. One major law has already been enacted that activates and specifies the general principles incorporated in the Constitution and in the Education Law regarding the right of some groups to special education. The new law for the care of the handicapped defines the roles of the MOE and the Ministry of Social Development, and emphasizes the right of the handicapped to special educational, health and social services.
- The expansion of special services and facilities provided by the MOE in its schools, utilizing the integrated approach to accommodate learners with special needs. Some schools have already been provided with resource rooms and extra facilities to enable them to provide special services for both slow and talented learners.
- Strengthening the links and promoting co-ordination between the MOE on the one hand and other concerned government ministries (e.g. the Ministry of Social Development and the Ministry of Health) and non-governmental organizations on the other. The MOE already pays the salaries of teachers working in special education institutions for the handicapped and the talented, which are run by non-governmental organizations that provide free or subsidized services.
- The development of special curricula and teaching materials for those with special needs that would supplement or replace the ordinary ones.
- The review and development of relevant teacher-education programmes. This would include pre-service and in-service programmes for specialized teachers as well as special courses for mainstream teachers.

The above mentioned aspects and issues related to special education, as well as issues such as funding, material resources, planning functions and organizational structures would, when developed and institutionalized, form the basis for a national policy on special education to be established with the full co-operation of and partnership between the government and non-governmental organizations.

Non-formal (adult) education

Formal education at the basic, secondary and higher levels has achieved reasonable standards in Jordan. The achievements in the field of non-formal and adult education do not match the corresponding achievements in the field of formal education. Existing non-formal education facilities and services are mostly of a scattered nature and modest quality, and lack the necessary strategies and policies to develop a framework for development. Such facilities and services include academic studies provided by ordinary schools and colleges to adults to enable them move up the educational ladder, vocational training courses in a great variety of fields for the purpose of skill upgrading, administrative and managerial courses of varying duration and content offered by public and private institutions, a

wide spectrum of in-service training activities supported by or made available by employers to upgrade the capabilities of their staff, and literacy programmes for illiterate adults who constitute about 10% of the age group over 15 years old.

Non-formal education is presently one of the priorities of the Jordanian education system. The policies and strategies in this respect should mainly stem from the following assumptions:

- Non-formal and adult education is an integral part of the concept of continuous and life-long education;
- Non-formal and adult education is one of the essential requirements for sustainable development; and
- Non-formal and adult education should contribute to bridging the educational, and hence the socio-economic, gap between the various groups of society. Consequently, the relevant services and facilities should be designed to have a greater impact on underprivileged groups than on privileged ones. As a result, non-formal and adult education can significantly contribute to the promotion of social equity and democracy.

The major issues that should be dealt with by the relevant policies and strategies include funding resources and options, the roles of the private and public sectors, the type and extent of links and channels with formal education, legislation, accreditation criteria and teacher certification.

Because the private and voluntary sectors are the major providers of non-formal and adult education, such sectors should be full partners in policy preparation, as well as in any relevant organizational structures (boards, councils, etc.) that might be established to undertake such functions as planning, promotion, evaluation, etc.

Examinations

The importance of examinations in education systems stems from the fact that they have great influence not only on what we teach, but also on how we teach. This applies to student evaluation techniques both at the school level as well as at the central level in the case of general national examinations. In Jordan, there is only one general national examination, taken after the end of secondary education (after grade 12), and it is a prerequisite for all types and levels of higher education. The development of the examination system has become one of the priorities of the education system in Jordan. The following are the major components of such development, initiated in 1996.

- Establishing a National Board for General Examinations, with membership including the MOE and other concerned government agencies as well as universities and the private sector. The responsibilities of the board include the approval of policies and strategies related to the 'General Secondary Education Certificate Examination' (GSECE). This is intended to be a first step towards moving general examinations from under the auspices of the MOE and placing them under a national umbrella.
- Enhancing the balanced approach to the abilities and skills that students should be tested for in the GSECE. Such abilities and skills range between higher order mental skills and simple cognitive skills. This would help to minimize the influence on evaluation outcomes of non-educational factors and the socio-economic background of students.

- Introducing a certain degree of flexibility to the general examination system, whereby the student within a certain academic or vocational stream is free to choose from a pool of subjects related to his stream, in addition to a few core subjects common to students of all streams. Such flexibility is new to the examination system in Jordan.
- Disengaging the GSECE from secondary education. Until recently, the GSECE was a prerequisite for ending secondary education successfully, even for employment purposes. Now the GSECE is a prerequisite only for entrance into higher education, while the secondary school certificate is sufficient for employment purposes.
- Eliminating all bottlenecks between vocational secondary education streams and higher education, without jeopardizing standards. The main objective is to link higher education to the actual abilities of the student and not to the type of secondary education acquired.

Although all developments in the examination system were the outcome of extensive studies, discussions and debates in which a wide spectrum of concerned groups and agencies were involved, some difficulties were encountered in its implementation. Students and parents were uneasy and apprehensive about the new developments, fearing that they were intended to regulate and rationalize entrance to universities. Extensive efforts were exerted to explain the rationale behind the changes and to dispel fears through the utilization of the mass media and the dissemination of written information to students and parents about the new system—emphasizing the fact that it is more democratic and of a higher standard. Furthermore, some ministry staff at the upper- and middle-management levels had reservations about some of the new developments, especially regarding the move to release general examinations from the exclusive authority of the MOE. Seminars, meetings, explanatory notes and legislative tools were utilized to pave the way for implementation.

Vocational education and training

Vocational education and training (VET) aims to prepare young people for employment at the basic occupational levels as skilled workers. VET starts after completion of basic education at the age of sixteen, and has been for some time one of the priorities of the education system. In the past few years, our motto has been ‘the vocationalization of general (academic) education and the liberalization of vocational education’. The driving force has been the democratization of the education system, some aspects of which include the elimination, as much as possible, of barriers among the different streams and types of general and vocational education, establishing horizontal and vertical channels among the various types and levels of education, and striking a balance between individual and community needs in VET programmes. Fortunately, most of the policies and measures undertaken during the past few years have enjoyed support from various sectors, including parents, educationists, economists and the media. The difficulties were mainly to be found in the ability of the education system to cope with the various requirements for implementation. The following are the major relevant policies and measures that are under implementation at present.

- Increasing the duration of basic compulsory education from nine to ten years, to cover the age range 6–16. Legislation has been adopted by parliament for this purpose.

- Introducing prevocational education (general vocational activities) as a compulsory subject in all grades of basic education. The relevant activities were derived from the fields of industry, business, agriculture, health and home economics.
- Raising the percentage of students admitted in vocational streams after completing basic education. The percentage currently stands now at 42% of the boys and 21% of the girls in secondary education. The plan is to raise these percentages to 50% and 30% respectively.
- Liberalizing VET programmes by incorporating a strong general education component including physical sciences, social sciences and humanities.
- Promoting the formal apprenticeship system for the preparation of skilled workers, whereby the trainee spends part of his/her time at school for general and specialized education as well as basic practical training, and the other part on the employer's premises for specialized practical training. Thousands of employers participate in the system as partners in the preparation of skilled workers. It is worthwhile noting that formal apprenticeship in Jordan is part of secondary education, and is referred to by the Education Law as 'applied secondary education'.
- Eliminating bottlenecks and providing horizontal and vertical channels between the various types and levels of education to allow access and promote educational mobility.
- Promoting the comprehensive school model in secondary education, by encouraging the transformation of existing specialized academic or vocational secondary schools into comprehensive secondary schools, and by adopting the comprehensive school model for all newly built schools.

EGYPT: A STRATEGY FOR EDUCATIONAL REFORM

Ahmed Fathy Sorour

Prologue

According to H.G. Wells, there is a race going on between education and catastrophe. Responsibility for education is a great risk and a heavy burden indeed. It requires hope and faith, objectivity and determination, arduous planning and effective execution, together with support and resources.

As a human endeavour, education is a multivariate process and a favourite subject for discussion in society at large. In Egypt, as in all countries, there is a great debate on what education is about, how it should be provided, how much should be allotted to it by public and private funds, how to integrate modernity and authenticity, and how much reform there should be without undermining traditions.

In the turmoil of such a debate, there exists a consensus that education can and should do something to win the race and avert catastrophe. To do this, there must be change.

Approaches to change

In his study on pathways to change in education, Adrian Verspoor cited four strategies for reform, namely:

1. *Progressive innovation.* This is a strategy aimed at implementing a number of successive changes, each rather modest in itself, whose cumulative effect over time results in a considerable change.

Original language: English

Ahmed Fathy Sorour (Egypt)

Ph.D. Speaker of the Egyptian People's Assembly since November 1990 and President of the Inter-Parliamentary Council since 1994. Chairman, Sector of Law at the Supreme Council of Egyptian Universities. Among the various posts he has held, some of which in the diplomatic service, he has been Assistant Attorney General, Dean of the Faculty of Law (Cairo University), and was Minister of Education of Egypt from 1986 to 1990. He has been active in the field of basic freedoms and human rights.

2. *Incremental expansion.* This is a strategy geared towards the implementation of ambitious innovations in a gradually increasing number of schools.
3. *Discrete change.* Here, a modest programme is implemented in a limited number of schools, but does not include broader policy or overall objectives.
4. *Permanent pilot.* This is a strategy in which the result of an ambitious comprehensive change programme has been found to be promising in its pilot phase, but has not managed to mobilize the support and resources necessary for broader application.

Although our strategy was not exactly like any of these four, it tallies with one or more of those dimensions. The strategy I adopted when I was Minister of Education can be described as a 'high certainty/high innovation strategy'. It was geared towards implementing ambitious, comprehensive changes in successive waves of radical innovations.

It is axiomatic that any strategy for reform is a function of many variables, most important among which, in my opinion, are the impact on the system, the limitations of available resources, and the determination and perseverance of the leadership. In our case, by the time I took over as Minister of Education (in November 1986), the overall image of the educational arena was depressing.

In spite of the fact that there had been reform efforts, those efforts ended in modest changes that acted as placebos, but never cured the agony. As portrayed by the mass media, the situation looked gloomy. President Mubarak called for a radical break with unsuccessful practices and a start to be made on a profound reform to cope with future needs.

Following a systems analysis approach, the initial step of our strategy was to diagnose the problems and impediments associated with the education system. Through national and local conferences, committees and research work published in journals and proceedings, it was found out that the system suffered from many ills, most serious among which were:

- The absence of a clear philosophy and national framework;
- The lack of adaptation to societal and market needs;
- Inadequacy of curricula and a low level of teacher preparation, especially concerning primary school-teachers;
- Drawbacks in fulfilling the constitutional right of all children to have access to basic education covering grades 1 to 9;
- Shortages in school buildings;
- The inadequacy of many existing buildings and in equipment; and
- Large numbers of illiterate people as a result of dropouts and a low level of basic educational performance.

Priorities for implementation

Before defining our priorities for reform, we had to base them on accepted and reliable principles to guide our work and which would act as the foundations for a strategic perspective. After consulting advisory committees, experienced advisors, and international and national experiences available in the educational literature, we adopted the following guidelines for our work:

1. Education is a national cause. Its development is a national project to which all sectors should contribute.

2. Democratic arenas, debates and the cross-fertilization of different opinions and ideas are the best means for reaching balanced decisions.
3. Educational reform is an integrated system in which all components must have both 'feed-forward' and feedback in the light of the whole situation.
4. Reform ought to be consistent and supportive to the economy of the nation rather than a burden on the shoulders of parents; hence, the benefit of the vast majority of the people—and not just critics in ivory towers—is the main factor to be considered when defining priorities.
5. Educational reform ought to invest in and adapt the forthright recommendations of researchers, field workers and global trends.
6. Teachers are the most influential agents for the success and sustainability of any educational reform.
7. Institutions, rather than individuals, are the places where crucial and sustainable decisions for viable change take place.
8. Educational performance and efficiency ought to be in harmony and compatible with the demands of the market-place for qualified manpower.

Developing a framework

In the light of the above guidelines, the following activities were undertaken so as to develop a national framework for reform.

1. *A consultative committee.* This committee (formed in December 1986) explored the various options for reform in pre-university education. It issued recommendations with regard to: the formulation of educational goals; democratization of education; improving the quality of technical and vocational education; and the impact of the educational experiments.
2. *Local conferences.* In each governate—all over Egypt—a conference was held to discuss anticipated changes required in order to reform education. Participants included senior officials and teachers representing all levels and types of education in the governate. Problems discussed included the condition and availability of school buildings, illiteracy, drop outs, and the need for more teachers in certain areas. A special effort was made with a view to ensuring the upholding of democratic ideals and to guaranteeing a strategy that would reflect the hopes, needs and aspirations of society at large.
3. *Intellectual reform.* A group of well-known intellectuals, scholars and leaders in different social, cultural and scientific areas were invited to a one-day seminar. The function of the seminar was to highlight various problems and to identify the perceptions of these influential figures regarding the intellectual climate of the existing educational milieu, the problem of authenticity and modernity, democratization of education, the financing of education and the role of far-sighted people in updating the curricula. There were discussions concerning the development of the intellectual abilities of young people to prepare them for a futuristic climate of science and technology. This affected teacher competence and professional development. Issues of genuineness, social structure, national unity, cost, efficiency and accountability were also considered.

A national conference

A national conference was held to expedite the process of developing an integrated strategy. The conference was presided by the Egyptian President. All sectors of society were represented, including leaders of political parties, former ministers of education, teachers' syndicates, the Supreme Council of Universities, and senior officials from the Ministry of Education and teacher-training colleges. Recommendations of previous conferences were presented, as well as invited and contributed papers. The conference ended with specific recommendations which were presented in a 'Strategy for educational reform in Egypt'.

A five-year plan was drawn up based on the recommended strategy. The plan focused on: (a) the general framework of the strategy; (b) implementation of projects for the Ministry of Education; and (c) implementation of projects for higher education.

With respect to pre-university education, the priorities were specified in the following way:

1. Democratization of education;
2. Modernizing general education;
3. Expansion and updating of technical/vocational education; and
4. Improving capabilities of teachers' pre-service and in-service preparation.

Each of these priorities was detailed in more specific tasks to be undertaken as described below.

DEMOCRATIZATION

The tasks involved in giving priority to democratization were detailed as follows:

- All Egyptian 6-year old children ought to be enrolled in compulsory elementary schools and must be retained there to continue basic education up to the end of the preparatory (junior high) stage. Vocational curricula ought to be available for those who are unable to continue the regular curricula of the 'general' preparatory school.
- To provide the school buildings required to accommodate all children and decrease class over-crowding.
- To diminish the number of school shifts which may reduce the school day for many children to about three hours.
- To educate illiterate adults and cut off the origins of illiteracy by ensuring proper and suitable alternatives for low achievers and non-motivated children so as to prevent dropping out.
- To combat private tutoring and encourage remedial classes, before or after the regular schedule.
- To search for more resources to finance education.

GENERAL EDUCATION

- To expand access of 4- to 6-year old children to kindergarten.
- To establish new machinery, with a qualified staff for curriculum development

capable of updating content and producing attractive textbooks for students, accompanied by suitable teacher guides.

- To initiate computer literacy programmes in schools.
- To improve the mode of student evaluation.
- To strengthen the role of the General Certificate for Secondary Education (GCS).
- To alternate the forms of education beyond the elementary stage.

TECHNICAL EDUCATION

- To update technical education programmes.
- To increase the number of five-year technical schools, adding new technical specializations.
- To link technical education with relevant establishments in industry, agriculture and business.
- To maintain a balance in the flow of students moving from basic education to the secondary stage by orienting them towards industrial education, in accordance with the needs of the country which already has a surplus of university graduates.

PROFESSIONAL TRAINING OF TEACHERS

- To improve teacher preparation for all stages, especially for elementary and kindergarten teachers.
- To raise the standards of in-service training and to link teacher promotion to those who have undergone further training and professional development.

Analysis

Priorities were usually formulated by ad hoc committees which filtered the recommendations arriving from different sources. These in turn were submitted—as proposals—to the Supreme Council of Pre-University Education, which supported and endorsed those likely to have an immediate and real effect on the needs of ordinary citizens, those adhering to the idea of equality of opportunities, and those which permitted the flow of students to be channelled into suitable alternative forms of education.

Relationships with different social actors

During my ministerial term, and amid a spectrum of drastic changes and innovations that were taking place, there were a lot of interactions, problems and conflicts. Interactions were very intense with almost every sector in the arena. I had to draw attention, convince, consult, raise funds, ask for donations to build and equip the schools, negotiate with international and foreign agents to obtain scholarships and technical assistance, etc. Meanwhile, there were problems of budgeting, recruiting teachers for specific subjects and extra-curricular activities, and trying to launch computer-literacy programmes for the

first time in our schools. I have to admit that I was interested in making education a cause not only of every sector but of every citizen. Thus, I was always happy to learn about the flow of favourable and unfavourable comments regarding that strategy. There were conflicts with those who used to benefit from past privileges, especially private textbook publishers and language schools, and illicit practices such as the subjective evaluation of students' classwork, home tutoring, cheating, the domination of foreign certificates competing with the Egyptian GCS for university entrance, not to mention the hidden curriculum and particular pressure groups.

The mass media coverage of education at that time amounted to four volumes comprising 1,307 press articles that had been written about my educational policy, including interviews, commentaries, critiques, legal acts, mandates, complaints—and also praise. The most debatable issue related to the re-organization of the basic stage to a 5–3 year system instead of a 6–3 system. The proposal originally came from the People's Assembly, which I accepted and put into action as a way of tackling a miserable situation where some classrooms with only forty desks were accommodating 120 children for a three-hour school-day. This surgical type of solution was accompanied by steps to increase the teaching hours and the number of school weeks from twenty-five to thirty-two per year, so as to have time to cover the same prescribed syllabi in the former six years of the elementary cycle. Before decreeing this amendment, the issue was discussed with the teachers' union, deans of teacher-training schools, the Supreme Council of Universities, the National Research Centre, representatives of political parties, and the education committee of the ruling party. The majority were in favour of this act as an effective solution to securing access of all 6-year old children to schooling, and to avoid dropping out, thus blocking the main source of illiteracy.

What is striking—but which may not be altogether very surprising—is that some of the advisors and committee members who appeared to support this act while I was in office, subsequently changed their opinion and attacked it after I left.

It was my considered policy that the Educational Research Centre ought to act as the 'think tank' for the ministry. Thus, I used to send my proposals to be discussed in the centre so as to get a sort of 'feed-forward'. When such a proposal had been applied in practice, I would again ask the centre to provide me with evaluative data as a 'feedback'. The MOE senior administrators are represented in the main councils in which proposed reforms are filtered before decision making. I also initiated a supreme council for testing and evaluation. In this council, the examination of papers for the Egyptian GCS are thoroughly discussed and, in the light of scoring samples of each test paper, the council can suggest modifications concerning the distribution of scores to each question. In this council senior administrators of the of the testing department, examiners, senior media editors, parents' association, educators and university seniors are represented. Once in a while, I used to be invited by 'opponent' political parties to answer their questions or inquiries concerning some innovations. Whether they accepted my rationale or not usually depended on their political predisposition. I also initiated a 'People Service Office' in the ministry. Different persons and personalities, especially members of parliament, used to deal with it for public service related to schooling.

Lessons learned

One learns a lot by being in charge of a ministry which serves about 13 million students, about three-quarters of a million teachers and which deals with tens (one might say tons) of acute problems. Lessons we have learned include the following.

- Nothing improves education better than more education.
- Piecemeal reforms are not worthwhile; in many cases they serve as a deceptive placebo leaving the real problems to fester.
- Reform requires courage, perseverance, sweat and tears.
- Teachers are the most important factor in making any reform work, as long as they understand and assimilate it, are convinced by it and—most importantly—benefit from it.
- There are some people, regardless of their position, who are ‘yes’ people—sycophants. They follow the easiest and simplest route to placate their master. These people should be identified from the beginning and be considered as unreliable in the decision-making process.
- Stability is needed in structure, curricula and administrative rules and regulations. Thus, reform should be institutionalized and any change should be tested for a certain number of years, regardless of the minister who is or who will be in charge. This stability is particularly important for curricula and textbooks.
- Democracy starts in the school. It must be ensured through the teaching/learning environment and the climate of interactions, through flexibility in the hierarchy of authority, through decentralization in its broad and healthy practices (decentralization does not mean simply moving authority from the ministry to the local education board). More freedom and opportunity for appropriate decision making ought to be given to schools, principals, teachers or students’ associations. This responsibility should be associated with accountability.
- Eradication of illiteracy is not an easy or simple task. It requires a national effort in favour of comprehensive socio-economic development. Imperative needs should be studied. Most fundamental for the individual is to earn one’s living and guarantee one’s safety. Unless illiterates find that literacy helps them by satisfying these basic and real needs, all such efforts will go astray.
- Any meaningful reform must start with the remote and disadvantaged areas, and follow a grassroots approach, beginning with elementary education.
- Technical education is very important for developing countries. It must be promoted through collaboration among the ministries of education, industry, agriculture and commerce.
- Reward and recognition are far better for sustaining the reform movement than penalties.

Finally, a minister of education should not expect or plan that a full-scale reform shall be implemented only during the time when he/she is in office. If there is a sincere will that education will win the race against catastrophe, we should think of reform as a long-term process and development as a continuous undertaking.

References

- Coombs, P. 1985. *The world crisis in education: the view from the eighties*. Oxford, UK, Oxford University Press.
- Ebid, W. 1996. *The national project for education*. Garden City, Cairo, Suad El-Sabah Printing House.
- Haviland, T., ed. 1988. *Take care Mr. Baker*. London, Fourth Estate Limited.
- Sorour, A.F. 1990. *Reform of education in Egypt*. Cairo, Egyptian Ministry of Education.
- Verspoor, A. 1989. *Pathways to change*. Washington, DC, World Bank. (World Bank discussion papers.)
- Warnock, M. 1988. *A common policy for education*. Oxford, UK, Oxford University Press.

ASIA: THE IMPACT OF EDUCATIONAL RESEARCH ON DECISION MAKING

Victor Ordoñez and Rupert Maclean

Introduction

In both developed and developing countries in Asia and the Pacific region, governments and others involved with educational decision making are exploring innovative solutions, including the re-engineering of their education systems, to address various key concerns. These concerns include: the most cost-effective ways to expand access to education; ways of improving equity, especially for women; increasing the relevance of education; upgrading the quality of education while at the same time maintaining the quantitative expansion of education systems to cope with an increasing demand for their services; and ways to enhance both the internal efficiency of education systems to ensure that limited resources are put to the best use, and external efficiencies to ensure that the products generated by the content and processes of an education system best satisfy economic and social requirements.

Educational research has the potential to play an important role in policy formulation and decision making¹ aimed at improving education and schooling, since it 'is the tool which enables policy makers to determine national educational needs, to assess new

Original language: English

Victor Ordoñez (Philippines)

Director of UNESCO's Principal Regional Office for Asia and the Pacific (PROAP), Bangkok, since August 1995, prior to which he was Principal Director of the Basic Education Division at UNESCO Headquarters in Paris. Before joining UNESCO in 1990, Mr. Ordoñez was Deputy Minister and Under Secretary of the Philippine Ministry of Education, Culture and Sports.

Rupert Maclean (Australia)

Chief of the Asia-Pacific Centre of Educational Innovation for Development (ACEID), UNESCO PROAP, Bangkok. Before joining UNESCO in 1992, he was a university academic involved with conducting policy-orientated educational research; and was a member of the Australian Government's Social Policy Committee, dealing with education, health and social security issues.

approaches to resolving issues, and to evaluate the effectiveness of policies and strategies' (Asian Development Bank, 1996, p. i). Yet decision makers remain sceptical about the value of research in policy formulation and implementation.

Despite the important (some would say essential) potential contribution of educational research to decision making, many researchers complain that educational decision makers pay insufficient attention to research findings. Policy makers and implementers, on the other hand, argue that much of the available educational research is unintelligible and lacking in relevance for educational decision-making purposes. Examples where educational research could usefully inform decision makers include monitoring the health of educational systems, investigating options for reform and change, evaluating intended and unintended outcomes of interventions, and the provision of assessment strategies which focus on student learning rather than rank ordering which ignores the quality of learning.

Much has been written (see Husén & Kogan, 1984; Brown, 1994; Hallinan, 1996; McGaw, 1996) which analyzes the relationship among educational decision making, research and educational information. Some of this literature presents the views of researchers and others who express a concern about the marginal attention given to research in policy formulation and educational decision making. Many (see Shavelson, 1988; Anderson & Biddle, 1991; Harlen, 1996) provide suggestions as to what needs to be done to increase the impact of research in this area.

Agencies such as the Asian Development Bank (1996), the Organisation for Economic Co-operation and Development (1994; 1995; 1996) and UNESCO (Australian Council for Educational Research & Asia-Pacific Centre of Educational Innovation for Development, 1996; International Bureau of Education & National Institute for Educational Research of Japan, 1995) have also contributed to the debate on this topic, vigorously seeking pathways to improve the flow of information between the producers and consumers of educational research, and providing case studies to illustrate where this communication has been successful.

It is also clear from the literature that due to radical and widespread changes occurring in the use of information technologies, much more information is now more readily available for policy makers to use as an input to the decision-making process. In some ways this makes the decision-making process more difficult than it was when information inputs were more restricted.

Relatively little literature exists which presents the opinions of decision makers—the consumers of research—regarding the impact of educational research on the decision-making process. The purpose of this article is to help correct this situation by presenting, in the form of a case study, the views of a small group of senior educational decision makers from countries in the Asia-Pacific region on the possible link between educational research and improved educational practice, and on what they believe can realistically be done to improve the usefulness and influence of educational research on decision making in education. The extent to which the views expressed here are more widely applicable to other decision makers in the Asia-Pacific region remains to be tested.

As governments are the main providers of school education in the region, in this article the emphasis is on decision makers working in or for government, rather than those in private enterprise.

Different types of research: different levels of decision making

When considering the relationship between research and decision making in education, it is important to recognize that there are many different types of educational research. These range from reviews of the research literature which present an overview of the research done by others on a particular matter (such as on the influence of socio-economic status or gender on educational outcomes) to sophisticated and detailed research studies which examine a particular question in great depth (such as the impact of particular teaching methods on the development of convergent vs. divergent thinking in a group of students).

Sometimes a particular body of research (such as that linking socio-economic background to educational outcomes) has had a profound and far-reaching influence on public opinion and decision makers alike, so that the findings become part of the 'taken for granted' reality as to how education and schooling systems function. In such cases it is not generally possible to say that a particular research study influenced a particular policy, but the influence of research on policy and practice in a more general sense is there for all to see.

Educational research may serve many different functions, besides informing those who make educational decisions. Some academic research in universities, for example, may be undertaken for no other reason than that it reflects the particular interests and inquisitiveness of the researcher or researchers involved.

In addition, educational researchers work in very different types of work settings, such as universities, research units in government departments and in independent or semi-independent research units. With the growing popularity of 'action research' and the notion of 'the teacher as researcher', educational practitioners in schools and teacher-training institutions are also undertaking research, as an input to help improve their educational practice. When this occurs the producers and consumers of research may in fact be one and the same entity.

The motivations of these different groups of researchers can vary considerably. For instance, independent researchers in universities tend to be much more critical in their approach to research than those working as part of government research units.

Just as there are many different types of research and researchers, so there are many different types (and levels) of decision makers. Decision makers include ministers of education and other politicians who make policy decisions that may influence a whole education system, as well as high-ranking civil servants who themselves assert a great deal of decision-making influence when implementing the policy decisions of their political masters. In addition, moves towards greater decentralization of education, the forging of home-school links and the development of genuine 'partnerships in education' has had important implications for the decision-making process, with an increasing proportion of decisions now being made at the community, school and classroom levels where, for example, the decisions of classroom teachers on matters such as teaching methodologies can have a profound influence on the educational outcomes of a particular group of children in a particular setting.

Opinions of decision makers on educational research

The data presented below was drawn from two main sources: first, the opinions of high-ranking educational decision makers and administrators from nineteen countries in the Asia-Pacific region whose views were recently surveyed, through open-ended questions, by the authors when these officials attended a meeting in Bangkok organized by UNESCO PROAP;² and, second, the views of the authors of this article, both of whom have experience as educational decision makers and researchers.

The decision makers were surveyed as a group and also interviewed individually; the respondents were invited to present their views on a range of matters. These are discussed under five main headings: (1) the influence of educational research on establishing priorities for the educational sector in their country; (2) expectations regarding research and decision making in education; (3) evidence regarding the overall impact of educational research on the decision-making process in their country; (4) views on who should determine the research questions to be answered and who should do the research; and (5) specific suggestions on how the relationship between researchers and decision makers can be improved.

Despite the diverse nature of the countries surveyed with regard to such matters as their level of economic development, the features of their education systems, socio-cultural characteristics and the like, there was a surprisingly high level of agreement amongst them regarding the views expressed. Respondents were assured that their responses would be treated anonymously, with no individual respondent or country being identified in the write up of the material collected without their prior approval.

RESEARCH AND EDUCATIONAL PRIORITIES

The chasm between academic research and administrators' need for information upon which to base policy and to set priority has been discussed in many places. But partly because the academic community seems satisfied with the discovery of its own knowledge and is more comfortable talking amongst its peers than with the rough and tumble world of government and politics, it has never developed the skills and aggressiveness needed to capture the attention of bureaucrats and meaningfully channel their attention and priorities. As a result, media blasts and politicians' inquiries and outbursts focus the administrators' attention to the issues that are the most spoken about, whether or not they are the most fundamental.

Decision makers expressed their concern that many educational decisions are made without enough attention being given to research. This occurs because politicians often make decisions on the basis of prior experience and hunches, not on the basis of research. One of the biggest weaknesses in most education systems is that there is no culture amongst politicians of basing decision making on research. Research is important to help achieve some continuity over time between successive governments, but this often does not happen—one difficulty being that many political parties and ministers want to push their pet theories and ideas, generally based on political ideology rather than hard data (unless the data is in accord with the ideology).

There are other reasons why researchers and academic institutions often do not play that significant of a role in influencing policy changes and day-to-day decisions in the ministry. When looking at how priorities are set and how energy is focused, there are many other players on the scene competing more effectively than research for their share of attention. These include legislators, national and local government leaders, parent and teacher associations, the media and decision makers at lower levels within the bureaucracy itself.

To explain the context of this reality, it must be remembered that senior administrators are more than mere armchair thinkers analyzing situations and evolving policy. More often than not, especially in developing countries, the time for policy analysis and re-formulation is a luxury, as the time and energy of administrators is more than taken up by a perpetual series of crises and urgent problems to be solved (teacher or student strikes, budget deficiencies, requests from politicians, conflicts within the bureaucracy, etc.). When not tackling crises, administrators spend the rest of their available time seeing to it that the system does not break down but keeps running reasonably well. This means endless meetings with curriculum developers, superintendents, textbook publishers, public works officials and so on.

If researchers are to be influential in changing this situation, they need to identify and address those matters which inhibit the use of their research by decision makers. Only in this way are they likely to become more influential in the educational decision-making process. In those areas where the views of decision makers are justified, researchers will need to change their approaches, while in other areas it may be a matter of researchers better communicating with the decision makers to convince them that it is in their own interest pay closer attention to research in the decision-making process.

EXPECTATIONS OF RESEARCH

The role of research as a tool for administrators is twofold. More commonly it is used to investigate a particular issue (for example school dropouts) to analyze the seriousness of the problem and possibly its underlying causes, and then secondly to test the validity of alternative policy measures to address the issue. Most project-related research is of this type.

But in a more fundamental sense, there is a priority role for research that the administrators more desperately need: it is the role of scanning the entire sector, providing a calibrated topography of the range of issues and suggesting means according to which they can be prioritized. This type of research does not point to better ways of doing the things we do, but of better things we ought to be doing in the first place. We have found this to be true in several ministries of education we have worked with since joining UNESCO. All too often a minister or senior official is motivated by a single cause or major idea, often an opportunity to make a visible impact, and then devotes most of his or her effort to this. Often it is the right priority but other priorities, often vital, are overlooked—and if it is not the right priority in the first place, the entire system suffers.

While administrators must therefore make special efforts to make sure these two types of research are available and usable, there is an equivalent responsibility on the part of the research community to base its agenda more closely on the expressed concerns of

the policy makers, which are in turn reflective of the media, legislators and society at large. To the extent that its research is at least implicitly mandated by decision makers, it will be guaranteed a fair hearing and used for actual policy-making.

Making decisions often requires speed, and research frequently takes too long to give an adequate answer. In addition, the decision maker is in a more complex situation regarding the wide range of variables to consider and accommodate, while the researcher is generally more autonomous and 'can be his own person'. These are but two of many differences between the culture of the researcher and that of the decision maker.

It was widely felt by those surveyed that if educational research is to be taken more seriously by decision makers it is necessary for them to be convinced that available research will make their job easier and that it will provide guidance that makes the decision making easier and more reliable. In other words, the yardstick by which research will be judged is highly practical in nature.

Some respondents felt it is reasonable that researchers accept some academic, political and practical constraints when engaged in policy-orientated projects. They must also be able to adopt a policy-minded mode of thought over the customary research-minded approach. In accepting policy-orientated research projects, researchers can shape policy rather than merely comment on it after the fact.

The view was expressed by the interviewees that researchers need to present their findings in the form that is most likely to be used by decision makers. It was felt that the most important dictate in this regard is to present decision makers with the bare minimum of information necessary for the task: the material should be simple, short and succinct. The key is to provide findings that are understandable by someone who is very busy. At the same time, more detailed information should also be available in order that the assistants to the decision maker can check the accuracy of what is being proposed.

IMPACT OF RESEARCH

Respondents felt that there is, in fact, a greater impact of research on decision making than is commonly recognized because this impact is often not identifiable in a cause-effect sense. An example was given of the work of Basil Bernstein and others on the impact of restricted and elaborated language codes in classrooms, and their effects on the definition and distribution of success and failure in schools in ways which favour middle to upper socio-economic groups. Such research has had a profound impact on public opinion and on the views of decision makers regarding education and schooling, but in ways that are not readily apparent or easily identifiable.

There was a consensus that the extent to which research is used depends on the level of decision making involved, since research is used differently at various levels of decision making. Many decisions are made on a political basis, so research is not used. However, with regard to specific policies in areas such as assessment research, research is more likely to be used as an input to the decision-making process. So whether or not research is used by decision makers depends in part on the type of decision to be made.

Although research has little direct impact on policy decisions taken at the political level, it was felt that it has an important impact on decision makers at the lower levels, such

as with regard to evaluation at the school level. As education systems become more decentralized, educational research becomes increasingly important in many countries since there was general agreement that the lower the level in the decision-making hierarchy, the greater the likelihood of educational research's impact on the decision-making process.

A respondent noted that although decision makers in the civil service generally realize the importance of research to the decision-making process, a problem occurs when their political masters want action to be taken which flies in the face of available evidence. Although this puts the civil service decision maker in an uncomfortable position, the bottom line is that they must do what the politician wants, regardless of what the research evidence may say.

Another difficulty is that educational reforms are often introduced but not given time to take root and be evaluated; further change from politicians occurs before adequate evaluation and research on the outcomes has taken place.

There is thus a need to convince politicians, decision makers and the general public that educational decisions should be based on research, not just on political ideology or intuition, and that it is in their interests to do this, since if this approach is adopted, decisions are more likely to meet with success.

However, even when policies are developed according to political ideology, the researcher can still be of assistance in finding those decision-making pathways that are likely to succeed and be effective.

It was noted that in some countries with centralized bureaucracies the relationship between educational research and decision making is close, since a committee under the State educational commission is responsible for the planning and management of educational research. Decision makers themselves help to determine and identify the research questions examined, and therefore have a clear stake in the process and outcomes. In addition, educational researchers provide advice to decision makers on how to gain information on the various topics examined. It was felt that all countries could benefit by encouraging such a dialogue.

DETERMINING RESEARCH QUESTIONS

The fact that many ministries of education establish their own research branch to undertake policy-orientated research and to monitor educational outcomes was quoted as an indication that government decision makers recognize the value of research, but that they find that most of the research generated by outside bodies does not meet their needs in terms of policy orientation and is not generally presented in a form that is readily usable. One way in which ministries of education seek to determine the research agenda is by funding particular studies in areas of special interest.

It was also noted that members of the research community and decision makers respond to different pressures in their educational endeavours, which results in a serious communication gap. It was felt that one of the big differences in perspective between researchers and decision makers is that while researchers value neutrality in their research, many decision makers have a clear orientation which they want to have justified or reinforced by researchers. Thus there are quite different expectations between the two groups. The challenge is to find an effective solution to this problem.

In practice, many decision makers find that the only time they are pushed into a more systematic analysis is when they have to initiate or evaluate a sector study or sub-sector study as a prerequisite to a major capital investment, often connected to a loan or a grant from an external source. Because the funding sources have to justify the projects to their principals in a coherent and defensible fashion, they feel the need to urge the national decision makers to generate the needed research information and analysis to justify major interventions.

In reality, therefore, the only research that some top-level decision makers consistently look at is that which is mandated by and associated with externally supported, large-scale projects. It seems ironic that this occurs in countries where there are many colleges, universities and centres of research.

There was much discussion about the merits and demerits of an in-house research arm within the bureaucracy of an education ministry itself, whether housed in the planning office of the minister, or a quasi-autonomous educational research institute with its own governance mechanism. In either case, such a body becomes effective to the extent that it co-opts other academic institutions to participate in its task, rather than trying to do everything in-house and thus be suspected of producing findings *ex post facto* to justify decisions that have already been made at higher levels.

It was also felt that too much research is being conducted by too many institutions, with there being a need for more focus and concentration. Governments in many countries are becoming more actively involved in the allocation of funds for research and so, through controlling the purse-strings, they have an important impact on setting the research agenda and priorities.

IMPROVING THE RESEARCH/DECISION-MAKING RELATIONSHIP

The decision makers interviewed felt that too few researchers in academic institutions are concerned with the linkage between their research and the 'real world'. One of the ways in which governments try to overcome this difficulty is to provide funding for research projects which they regard as being particularly important or relevant.

The view was expressed that a lack of resources makes it difficult to conduct research on all issues that are deemed to be important. In addition, outside research is often not in a form that is readily accessible and usable by the decision maker. There needs to be a closer dialogue between decision makers and researchers to try and ensure they are thinking along the same lines.

There is also a need to develop closer partnerships between both decision makers and researchers, involving groups such as teachers and the local community.

It was also felt that in order to inform policy the research conducted must be useful, accessible, of high quality, relevant and timely. The decision makers complained that researchers do not give them the answers they need, when they need them. Political agendas have their own time-frame and the need for advice may not be able to wait for properly collected evidence.

Respondents agreed with the views of some (Shaeffer & Nkinyangi, 1983; Bray in Asian Development Bank, 1996) who argue that since research is at least in part a cultural

phenomenon tied to ideology and communication patterns, there are some important ways in which the environments for research and policy-making are different in Asia from those in other parts of the world. They agreed that, in Asia, critical enquiry and challenges to basic assumptions are likely to be regarded as generally unacceptable and offensive by senior policy makers, particularly if such research leads to social disharmony and a loss of face by the decision maker involved.

This is generally very different from the situation in the West, where criticism is generally encouraged and officials are not expected to take such views personally. In addition, respondents noted that male decision makers in Asia find it particularly difficult to be challenged by researchers who are female, or by those who are younger or of lower rank than themselves. There is a need to address this question, if research is to contribute to decision making.

It would appear that the debates on research and policy point to a need to locate more explicitly the proper niche of researcher/policy maker dialogues in the context of the larger picture of managing a large bureaucracy in the Asia-Pacific region.

Summary and conclusions

There is no doubt that educational research has the potential to make an important contribution to policy formulation and analysis. However, currently there appears to be a strong feeling amongst many educational decision makers and administrators in the Asia-Pacific region that educational research has a long way to go before it reaches its potential.

In order to improve the current situation, there is a need for all of the parties concerned to examine critically the current relationship between research and policy-making with a view to identifying constructive and realistic ways in which policy makers and educational researchers can work together most effectively in this regard.

Participants at the UNESCO meeting were in agreement as to what can best be done by researchers to improve their relationship with policy makers, and to increase the likelihood that their research findings would be taken into account by educational authorities. In their view it is essential that researchers do more to ensure that:

- their research is conducted on topics that are of interest to decision makers;
 - that researchers clearly specify the policy implications of their findings;
 - that the research is of high quality, with a rigorous methodology;
 - that the claims made in the research are realistic, in terms of data collected and methodology adopted; and
 - that the research findings are expressed precisely, concisely and in concrete form.
- They also felt that decision makers should be more open-minded with regard to the contribution of research to improving educational practice, rather than being quick to dismiss it as largely irrelevant, frequently the case today.

Although it is not easy to resolve the long-standing differences that exist between researchers and decision makers in the areas referred to in this article, there was agreement amongst those surveyed that all parties need to work together more constructively to ensure that available research and decision-making resources are harnessed most effectively to help improve the quality and relevance of education in the Asia-Pacific region.

Notes

1. This paper is about the relationship between research and all forms of administrators, whether they be policy makers or decision makers. These terms are therefore used interchangeably in this article.
2. Regional Seminar on Identifying Issues and Priorities on Education Management, Policy and Information 1997–2001, organized by UNESCO PROAP, Bangkok, Thailand, 7–9 May 1997. The countries attending this seminar were: Bangladesh, Cambodia, China, India, Indonesia, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand, Uzbekistan and Viet Nam.

References

- Anderson, D.S.; Biddle, B.J., eds. 1991. *Knowledge for policy: improving education through research*. London, The Falmer Press.
- Asian Development Bank. 1996. *Case studies in education research and policy*. Manila, ADB.
- Australian Council for Educational Research; Asia-Pacific Centre of Educational Innovation for Development. 1996. *Educational research in the Asia-Pacific region: report on the UNESCO-ACEID/ACER Asia-Pacific regional seminar, 1–5 May 1995*. Melbourne, ACER.
- Brown, S. 1994. Research in education: what influence on policy and practice? *Knowledge and policy: the international journal of knowledge transfer* (New Brunswick, NJ), vol. 7, no. 4, p. 94–107.
- Hallinan, M.T. 1996. Bridging the gap between research and practice. *Sociology of education* (Washington, DC), no. 69, p. 131–4.
- Harlen, W. 1996. *Educational research and educational reform*. (Paper presented at an International Conference to Celebrate the 50th Anniversary of the National Foundation for Educational Research (NFER), December, UK.)
- Husén, T.; Kogan, M. 1984. *Educational research and policy: how do they relate?* Oxford, Pergamon Press.
- International Bureau of Education; National Institute for Educational Research of Japan. 1995. *Educational reform and educational research: new challenges in linking research, information and decision making*. Geneva, IBE.
- McGaw, B. 1996. Linking educational research with policy and practice. *ACER newsletter* (Hawthorn, Australia), no. 85, Autumn.
- Organisation for Economic Co-operation and Development. 1994. *Education research and reform: an international perspective*. Paris, OECD, Centre for Educational Research and Innovation.
- . 1995. *Educational research and development: trends, issues and challenges*. Paris, OECD, Centre for Educational Research and Innovation.
- . 1996. *Knowledge bases for education policies*. Paris, OECD, Centre for Educational Research and Innovation.
- Shaeffer, S.; Nkinyangi, J., eds. 1983. *Educational research environments in the developing world*. Ottawa, International Development Research Centre.
- Shavelson, R.J. 1988. Contributions of educational research to policy and practice: constructing, challenging, changing cognition. *Educational researcher* (Washington, DC), vol. 17, no. 7, October, p. 4–22.

INDEX

Volume XXVII, 1997

- No. 1, 1997, p. 3–179
 No. 2, 1997, p. 183–339
 No. 3, 1997, p. 343–485
 No. 4, 1997, p. 489–654

- AGUERRONDO, I. Could good quality education be provided more cheaply?, 311
- ALLIAUD, A.; DAVINI, M.C. Who chooses to be a teacher in Argentina's primary schools today?, 151
- ANDRÁS, B. Hungary: priorities—partners—implementation, 571
- BEYER, L.E. William Heard Kilpatrick (1871–1965), 469
- BHOLA, H.S. Adult education policy projections in the Delors Report, 207
- BRUMMELHUIS, A. TEN; PLOMP, T.; PELGRUM, W.J. New approaches for teaching, learning and using information and communication technologies in education, 427
- BRUNSCHWIG GRAF, M. Switzerland: in a changing world, schools, too, are gradually changing, 541
- BURNETT, N.; PATRINOS, H.A. Education and the changing world economy: the imperative of reform, 223
- CAMARGO ABELLO, M. Are the seeds of violence sown in schools?, 447
- CAMPS, V. Education for democracy, 493
- CARTON, M.; TAWIL, S. Introduction to the open file, 19
- COMELIAU, C. The challenges of globalization, 29
- DAVINI, M.C.; ALLIAUD, A. Who chooses to be a teacher in Argentina's primary schools today? 151
- DECIBE, S.B. Argentina: priorities in the education sector and how they are identified, 587
- DELACÔTE, G. Enhanced reality, 265
- DOMÈNECH I MIRA, J. Joseph Calasanz (1557–1648), 327
- GARDNER, H. Fostering diversity through personalized education: implications of a new understanding of human intelligence, 347
- HADDAD, W.D. Globalization of the economy: the implications for education and skill formation, 35
- HEINONEN, O.-P. Finland: restructuring higher education, 559
- HEYNEMAN, S.P. Economic growth and the international trade in educational reform, 501
- HUGHES, P. Education and work: dialogue between two worlds, 7
- HUSÉN, T. An agenda for the education of world citizens, 201
- KHIVILON, E. Introduction to the open file, 367
- KINELEV, V.G. Education and civilization, 371
- LÉVY, P. Education and training: new technologies and collective intelligence, 249
- LOUIS, F. Networking and the use of information technologies in the French education system, 285
- MALLAMPALLY, P. Transnational corporations and human resource development, 55
- MARCHESI, A. Spain: the decision-making process in educational reform, 549
- MACLEAN, R.; ORDOÑEZ, V. Asia: the impact of educational research on decision-making, 645
- MASRI, M.W. Jordan: the dynamics of educational decision making, 627

- MARTINS, Z. Mozambique: some considerations on educational research, policy formulation and decision making, 619
- MCGINN, N.F. The impact of globalization on national education systems, 41
- MCGINN, N.F. Toward an alternative strategy for international assistance to education, 231
- MITRI, T. Interreligious and intercultural dialogue in the Mediterranean area during a period of globalization, 123
- MONROY HENAO, B.; OCHOA, M.L. Can networks help to modernize schooling? The Tolima Rural Research Network (Colombia), 275
- MOTSOALEDI, P.A. The penetration of new technologies into developing countries: cultural hegemony or mutual exchange?, 385
- MOURA CASTRO, C. DE. Latin America: the battle between borrowing and creating, 109
- NDOYE, M. Globalization, endogenous development and education in Africa, 79
- NDOYE, M. Senegal: defining and implementing priorities in the education sector, 609
- OCHOA, M.L.; MONROY HENAO, B. Can networks help to modernize schooling? The Tolima Rural Research Network (Colombia), 275
- ORDÓÑEZ, V.; MACLEAN, R. Asia: the impact of educational research on decision making, 645
- PATRINOS, H.A.; BURNETT, N. Education and the changing world economy: the imperative of reform, 223
- PELGRUM, W.J.; PLOMP, T.; BRUMMELHUIS, A. TEN. New approaches for teaching, learning and using information and communication technologies in education, 427
- POELCHAU, H.-W. New information technologies: international co-operation from the German point of view, 393
- PLOMP, T.; BRUMMELHUIS, A. TEN; PELGRUM, W.J. New approaches for teaching, learning and using information and communication technologies in education, 427
- POWER, C.N. Learning: a means or an end? A look at the Delors Report and its implications for educational renewal, 187
- RHARADE, A. Educational reform in Kenya, 163
- SENDOV, B. Towards global wisdom in the era of digitalization and communication, 415
- SCHIEFELBEIN, E. Chile: generating social consensus for a long-term reform of education, 595
- SHADRIKOV, V.D. The Russian Federation: the humanization of education, 577
- SOROUR, A.F. Egypt: a strategy for educational reform, 637
- TAWIL, S.; CARTON, M. Introduction to the open file, 19
- TEDESCO, J.C. Educational change from the perspective of decision makers, 533
- TILAK, J.B.G. The effects of adjustment on education: a review of Asian experience, 85
- VALENTE, J.A. The role of computers in education: achievement *and* comprehension, 403
- YAGHI, H.M. Computer education in Lebanon: status and comparison with some other countries, 297
- YOGEV, A. School-based in-service teacher education in developing versus industrialized countries: comparative policy perspectives, 131.

To place your subscription to
PROSPECTS:
the quarterly review of comparative education

Complete the order form below and send it by fax or post to:

Jean De Lannoy, UNESCO Subscriptions Service, Avenue du Roi, 202, 1190 Brussels, Belgium.

Tel.: (32) 2-538.43.08; Fax: (32) 2-538.08.41. E-mail: jean.de.lannoy@infoboard.be

Internet: <http://www.jean-de-lannoy.be>

YES, I would like to subscribe to *Prospects*, UNESCO's quarterly review of comparative education.

Language edition:

☐ English edition

☐ French edition

☐ Spanish edition

Annual subscription rates:

☐ Individuals or institutions in developed countries, **180 French francs** (single issue: 60FF)

☐ Individuals or institutions in developing countries, **90 French francs** (single issue: 90FF)

I enclose payment in the form of:

☐ a cheque in French francs, drawn on a bank with branches in France, made out to 'DE LANNOY—UNESCO Subscriptions';

☐ Visa/Eurocard/Mastercard/Diners/American Express credit card:

No.: Expiry date:

☐ UNESCO coupons.

Name:

.....

Address:

.....

.....

(Please type or print clearly)

Signature: Date:

Further information and enquiries about other language versions of *Prospects*:

International Bureau of Education, PUB, P.O. Box 199, 1211 Geneva 20, Switzerland.

E-mail: j.fox@ibe.unesco.org; Internet: <http://www.unicc.org/ibe>

Further information on UNESCO publications from: UNESCO Publishing, 1, rue Miollis, 75732 Paris Cedex 15, France. Tel.: (33) 1-45.68.10.00; Fax.: (33) 1-45.68.57.41;

Internet: <http://www.unesco.org/publishing>

National distributors of UNESCO publications

AUSTRALIA: Hunter Publications, 58A Gipps Street, Collingwood, Victoria 3066, (P. O. Box 404, Abbotsford, Victoria 3066), tel.: (61-3) 9417 53 61, fax: (61-3) 9419 71 54; e-mail: jpdavies@ozemail.com.au.

Gray International Booksellers, 3/12 Sir Thomas Mitchell Road, Bondi Beach, New South Wales 2026, tel./fax: (61-2) 30 41 16.

For scientific maps and atlases: **Australian Mineral Foundation Inc.**, 63 Conyngham Street, Glenside, South Australia 5065, tel.: (61-8) 379 04 44, fax: (61-8) 379 46 34.

AUSTRIA: Gerold & Co., Graben 31, A-1011 Vienne, tel.: (+43) 1533 5014, fax: (+43) 15 33 5014-12; e-mail: buch@gerold.telecom.at.

BAHRAIN: United Schools International, P. O. Box 726, Bahrain, tel.: (973) 23 25 76, fax: (973) 27 22 52.

BANGLADESH: Karim International, G. P. O. Box 2141, 64/1 Monipuri Para, Tejgaon, Farmgate, Dhaka 1215, tel.: 32 97 05, fax: (880-2) 81 61 69.

BARBADOS: University of the West Indies Bookshop, Cave Hill Campus, P. O. Box 64, Bridgetown, tel.: 424 54 76, fax: (809) 425 13 27.

BELGIUM: Jean De Lannoy, Avenue du Roi 202 Koningslaan, 1190 Bruxelles, tel.: 538 43 08, fax: (32-2) 538 08 41; e-mail:

jean.de.lannoy@infoboard.be; Internet: <http://www.jean-de-lannoy.be>

BOTSWANA: Botswana Book Centre, P. O. Box 91, Gaborone.

BRAZIL: Fundação Getúlio Vargas, Editora, Divisao de Vendas, Praia de Botafogo 190 - 6º andar, 22.253-900 Rio de Janeiro (RJ), tel.: (21) 536 9195, fax: (55-21) 536 9155. **Books International Livros Comércio Exterior Ltda.**, Rua Pamplona, 724 conj - 67, Cerqueira Cezar, 01405-001 São Paulo, SP, tel.: (55-11) 283 5840 & 288 0692, fax: (55-11) 287 1331; e-mail: booksint@mandic.com.br.

BULGARIA: Hemus, 7, Levsky Street, 1000 Sofia, tel.: (359-2) 87 0365, **Kantora Literatura**, Boulevard Rousky 6, Sofia.

CAMEROON: Commission nationale de la République du Cameroun pour l'UNESCO, Boîte postale 1600, Yaoundé. **Librairie des Éditions Clé**, Boîte postale 1501, Yaoundé.

CANADA: Renouf Publishing Company Limited, 5369 Canotek Road, Unit 1, Orttawa, Ontario K1J 9J3, tel.: (613) 745 2665, fax: (613) 745 7660, Internet: <http://fox.nstrn.ca/renouf/>. **Bookshops:** 711/2 Sparks Street, Ottawa, Ontario tel.: (613) 238 89 85, fax: (613) 238 60 41 and 12 Adelaide Street West, Toronto, M5H 1L6, tel.: (416) 363 31 71, fax: (416) 363 59 63; **Les Éditions La Liberté Inc.**, 3020, Chemin Sainte-Foy, Sainte Foy, (Québec) G1X 3V6, tel./fax: (418) 658 3763; e-mail: liberte@mediom.qc.ca;

CHINA: China National Publications Import and Export Corporation, P. O. Box 88, 16 Gongti East Road, Beijing, 100704, tel.: 506 6688, fax: (861) 506 3101.

CROATIA: Mladost, Likica 30/11, Zagreb.

CYPRUS: 'MAM', Archbishop Makarios 3rd Avenue, P. O. Box 1722, Nicosia.

CZECH REPUBLIC: SNTL, Spalena 51, 113-02 Prague 1; **Artia Pegas Press Limited**, Palac Metro, Narodni trida 25, 110-00 Prague 1; **Intes-Praha**, Slavy Hornika 1021, 15006 Prague 5, tel.: (422) 522 449, fax: (422) 522 443.

DENMARK: Munksgaard Book and Subscription Service, Norre Sogade 35, P. O. Box 2148, DK-1016, København K, tel.: (+45) 33 12 85 70, fax: (+45) 33 12 93 87; e-mail: subscription.service@mail.munksgaard.dk.

EGYPT: UNESCO Publications Centre, 1 Talaat Harb Street, Cairo, fax: (202) 392 25 66; **Al-Ahram Distribution Agency**, Marketing Dept., Al-Ahram New Building, Galaa Street, Cairo, tel.: 578 60 69, fax: (20-2) 578 60 23, 578 68 33; **Al-Ahram Bookshops:** Opera Square, Cairo.

Al-Bustan Center, Bab El-Look, Cairo; **The Middle East Observer**, 41 Sherif St., Cairo, tel.: (20-2) 3939-732, 3926-919, fax: (20-2) 3939-732, 3606-804, e-mail: fouda@soficom.com.eg.

ETHIOPIA: Ethiopian National Agency for UNESCO, P. O. Box 2996, Addis Ababa.

FINLAND: Akateeminen Kirjakauppa, Pl 23 (Stockmannsvägen 1H) 00371 Helsinki, tel.: (+358) 0 12141, fax: (+358) 0 1214450. **Suomalainen Kirjakauppa Oy**, Koivuvaarankuja 2, 01640 Vantaa, tel.: (+358) 0 852 751, fax: (+358) 0 852 7900.

FRANCE: Librairie de l'UNESCO, 7, place de Fontenoy, 75352 Paris 07 SP, tél.: 01 45 68 22 22 et 1, rue Miollis, Paris 75732 Cedex 15, tél.: 01 45 68 28 48;

GERMANY: UNO-Verlag Vertriebs- und Verlags GmbH, Dag-Hammarskjöld-Haus, Poppeldorfer Allee 55, D-53115 Bonn 1, tel.: (0228) 94 90 20, fax: (0228) 21 74 92, Internet: www.uno-verlag.de. **S. Karger GmbH**, Abt. Buchhandlung, Lörracher Strasse 16A, D-W 7800 Freiburg, tel.: (0761) 45 20 70, fax: (0761) 452 07 14; *For scientific maps:* **Internationales Landkartenhaus GeoCenter**, Schockenriedstr. 44, Postfach 800830, D-70565 Stuttgart, tel.: (0711) 788 93 40, fax: (0711) 788 93 54.

GHANA: The University Bookshop of Legon, P. O. Box 1, Legon.

GREECE: G. C. Eleftheroudakis S.A., 17, Panepistimiou Str., 105 64 Athens, tel.: (301) 331 4180/3, fax: (301) 323 98 21; e-mail: elebooks@netor.gr; Internet: www.netor.gr/elebooks/; **H. Kauffmann Bookshop**, 28, rue du Stade, Athens, tel.: (3) 322 21 60, (3) 325 53 21, (3) 323 25 45. **Greek National**

Commission for l'UNESCO, 3, Akadimias Street, Athens. **John Mihalopoulos & Son S.A.**, 75 Hermou Street, P.O. Box 73, Thessalonique, tel.: (031) 27 96 95 and (031) 26 37 86, fax: (031) 26 85 62. **HONG KONG: Swindon Book Co. Ltd.**, 13-15 Lock Road, Tsim Sha Tsui, Kowloon, tel.: 2366 8001, 2366 8555, fax: (852) 2739 4975. **HUNGARY: Librottrade Ltd.**, Bookimport, Pesti út. 237, H-1173, Budapest, tel.: (36-1) 257 77 77, tel./fax: (36-1) 257 74 72.

ICELAND: Bokabud, Mals & Menningar, Laugavegi 18, 101 Reykjavik, tel.: (354-1) 552 4242, fax: (354-1) 562 35 23.

INDIA: UNESCO Regional Office, 8, Poorvi Marg, Vasant Vihar, New Delhi 110057, tel.: (91-11) 611 00 37, (91-11) 611 00 38, fax: (91-11) 687 33 51 or (91-11) 6872724; **Oxford Book & Stationery Co.**, Scindia House, New Delhi 110001, tel.: (91-11) 331 58 96, 331 53 08, fax: (91-11) 332 26 39; **The Bookpoint (India) Limited**, 3-6-272, Himaynagar, Hyderabad 500 029, AP, tel.: 23 21 38, fax: (91-40) 24 03 93; **The Bookpoint (India) Limited**, Kamani Marg, Ballard Estate, Bombay 400 038, Maharashtra, tel.: 261 19 72; **Allied Publishers Limited**, 751 Mount Road, Madras 600 002, tel.: 852 3938, 852 3984 and 852 3958, fax: (91-44) 852 0649.

INDONESIA: PT Bhartara Niaga Media, Jalan. Oto Iskandardinata III/29, Jakarta 13340, tel./fax: (62-21) 81 91 858.

IRAN, ISLAMIC REPUBLIC OF: Iranian National Commission for UNESCO, Shahid Eslamieh Bldg, 1188 Enghelab Avenue, P.O. Box 11365-4498, Tehran 13158, tel.: (98-21) 640 83 55, fax: (98-21) 646 83 67.

IRELAND: Educational Company of Ireland Ltd, P. O. Box 43A, Ballymount Road, Walkinstown, Dublin 12, tel.: (353) 1 450 0611, fax: (353) 1 450 0993; **TDC Publishers**, 12 North Frederick Street, Dublin 1, tel.: (353-1) 74 48 35, 72 62 21, fax: (353-1) 74 84 16.

ISRAEL: R.O.Y. International, 17, Shimon Hatarssi Street (postal address: P.O. Box 13056), Tel Aviv 61130, tel.: (972-3) 546 1 423, fax: (972-3) 546 1442, e-mail: royil@Netvision.net.il; **Steimatzky Ltd.**, 11 Hakishon Street, P.O. Box 1444, Bnei Brak 51114, tel.: (972-3) 579 4579, fax: (972-3) 579 4567; **Neighbouring territories and countries:**

INDEX Information Services, P. O. Box 19502, Jerusalem, tel.: (972-2) 627 16 34, fax: (972-2) 627 12 19.

ITALY: LICOSA (Libreria Commissionaria Sansoni S.p.A.), via Duca di Calabria, 1/1, 50125 Firenze, tel.: (39-55) 64 54 15, fax: (39-55) 64 12 57, e-mail: licosa@ftbcc.it; Internet: <http://www.ftbcc.it/licosa>; and Via Bartolini 29, 20155 Milano, tel.: 2/382 65 083-32 72513; **FAO Shop**, viale delle Terme di Caracalla, 00100 Roma, tel.: 52 25 57 27, fax: (39-6) 5225 33 60, e-mail: publications-sales@fao.org; Internet: <http://www.fao.org>

JAPAN: Eastern Book Service Inc., 3-13 Hongo 3-chome, Bunkyo-ku, Tokyo 113, tel.: (81-3) 3818-0861, fax: (81-3) 3818-0864, e-mail: orders@svt-ebs.co.jp.

JORDAN: Jordan Distribution Agency, P. O. Box 375, Amman, tel.: (962-6) 63 01 91, fax: (962-6) 63 51 52; **Jordan Book Centre Co. Ltd**, P. O. Box 301,

Al-Jubeiha, Amman, tel.: (962-6) 67 68 82, 60 68 82, fax: (962-6) 60 20 16.

KENYA: Africa Book Services Ltd., Quran House, Mfangano Street, P. O. Box 45245, Nairobi, tel.: 223641, 330272; **Inter-Africa Book Distributors Ltd**, Kencom House, 1st Floor, Moi Avenue, P. O. Box 73580, Nairobi, tel. (254) 212 764 and 211 183, fax: (254) 213 025.

KUWAIT: The Kuwait Bookshop Co. Ltd, Al Muthanna Complex, Fahed El-Salem Street, P. O. Box 2942, Safat 13030, Kuwait, tel.: (965) 242 42 66, 242 42 89, fax: (965) 242 05 58.

LEBANON: Librairies Antoine S.A.L., B. P. 11-656, Beirut, tél.: (961) 1 48 10 72/8 et (961) 1 48 35 13, fax: (961) 1 49 26 25.

LESOTHO: Mazenod Book Centre, P. O. Box 39, Mazenod 160.

MALAWI: Malawi Book Service, Head Office, P. O. Box 30044, Chichiri, Blantyre 3.

MALAYSIA: University of Malaya Co-operative Bookshop, P. O. Box 1127, Jalan Pantai Bahru, 59700 Kuala Lumpur, fax: (603) 755 44 24;

Mawaddah Enterprise Sdr. Brd., 75, Jalan Kapitan Tam Yeong, Seremban 7000, N. Sembilan, tel.: (606) 71 10 62, fax: (606) 73 30 62.

MALTA: L. Sapienza & Sons Ltd., 26 Republic Street, Valletta.

MAURITIUS: Nalanda Co. Ltd., 30 Bourbon Street, Port-Louis.

NETHERLANDS: Roodvelt Import b. v., Brouwersgracht 288, 1013 HG Amsterdam, tel.: (31-20) 622 80 35, fax: (31-20) 625 54 93, e-mail: roodbook@euronet.nl; **De Lindeboom Inor Publikaties**, M. A. de Ruyterstraat 20 a, Postbus 202, 7480 AE Haaksbergen, tel.: (53) 574 00 04, fax: (53) 572 92 96. **Kooyker Booksellers**, P. O. Box 24, 2300 AA Leiden, tel.: (31-715) 16 05 60, fax: (31-715) 14 44 39.

For scientific maps: **Rudolf Müller**, P. O. Box 9016, NL-1006 AA Amsterdam & Overtoon 487, 1054 LG Amsterdam, tel.: 616 59 55, fax: (20) 683 86 51.

NEW ZEALAND: GP Legislation Services, Bowen State Building, 34 Bowen Street, P. O. Box 12418, Wellington, tel.: 496 56 55, fax: (644) 496 56 98; **Bennetts Government Bookshop** Auckland, Level One, Whitcoulls Corner Store, Queen St, P. O. Box 5513, Wellesley St, tel. (9) 356 5402, fax (9) 356 5409 & Hamilton, Whitcoulls, Centreplace, Bryce St, P. O. Box 928, tel. (7) 839 6305, fax (7) 834 3520; **Bennetts Bookshop**, Palmerston North, 38-42 Broadway Ave, P.O. Box 138, tel. (6) 358 3009, fax (6) 358 2836; **Bennetts University Bookshop**, Palmerston North, Massey University, tel. (6) 354 6020, fax (6) 354 6716; **Bennetts Government Bookshop**, Wellington, Bowen House, Cnr Lambton Quay and Bowen St, P. O.Box 5334, tel. (4) 499 3433, fax (4) 499 3375; **Bennetts Government Bookshop Whitcoulls**, Dunedin, 143 George St, P. O. Box 1104, tel. (3) 4377 8294, fax (3) 477 7869 and 111 Cashel St. Private Bag, Christchurch, tel. (3) 379 7142, fax (3) 377 2529.

NIGERIA: UNESCO Office, 9 Bankole Oki Road, Off. Mobolaji Johnson Avenue, Ikoyi, P. O. Box 2823, Lagos, tel.: 68 30 87, 68 40 37, fax: (234-1) 269 37 58.

NORWAY: NIC Info A/S, P. O. Box 6512, Etterstad, N-0606 Oslo, tel.: (47) 22 97 45 00, fax:

(47) 22 97 45 45; **Akademika A/S**, P. O. Box 84, Blindern 0314, Oslo, tel.: 22 85 30 30, fax: (47) 22 85 30 53, e-mail: ebryn@sio.uio.no, Internet: <http://www.akademika.no>.

PAKISTAN: Mirza Book Agency, 65 Shahrah Quaid-E-Azam, P. O. Box 729, Lahore 54000, tel.: 66839, telex: 4886 ubplk; **UNESCO Publications Centre**, Regional Office for Book Development in Asia and the Pacific, P. O. Box 2034A, Islamabad, tel.: 82 20 71/9, fax: (92-51) 21 39 59 or 82 27 96.

PHILIPPINES: International Booksource Center, Inc., Rm 719, Cityland 10, Condo Tower 2, H.V. de la Costa corner Valero, Makati City, tel.: (632) 817 17 41, fax: (632) 817 96 76.

POLAND: ORPAN-Import, Palac Kultury, 00-901 Warszawa; **Ars Polona-Ruch**, Krakowskie Przedmiescie 7, 00-068 Warszawa; **A. B. E. Marketing**, Plac Grzybowski 10/31A, 00-104 Warszawa, tel.: (482) 638 25 60, fax: (482) 666 88 60.

PORTUGAL: Livraria Portugal, rua do Carmo 70-74, 1200 Lisboa, tel.: 347 49 82/5, fax: (351) 347 02 64 (postal address: Apartado 2681, 1117 Lisboa Codex).

QATAR: UNESCO Regional Office, P. O. Box 3945, Doha, tel.: 86 77 07/08, fax: (974) 86 76 44.

REPUBLIC OF KOREA: Korean National Commission for UNESCO, P.O. Box Central 64, Seoul, tel.: 776 39 50/47 54, fax: (822) 568 74 54; *Bookshop*: Sung Won Building, 10th Floor, 141, SamSung-Dong, KangNam-Ku, 135-090 Seoul.

RUSSIAN FEDERATION: Mezhdunarodnaja Kniga, Ul. Dimitrova 39, Moskva 113095.

SEYCHELLES: National Bookshop, P. O. Box 48, Mahé.

SINGAPORE: Select Books Pte Ltd., 19 Tanglin Road No. 3-15, Tanglin Shopping Centre, Singapore 247909, tel.: 732 15 15, fax: (65) 736 08 55, e-mail add: selectbk@cyberway.com.sg.

SLOVAKIA: Alfa Verlag, Hurbanovo nam. 6, 893-31 Bratislava.

SLOVENIA: Cancarjeva Založba, Kopitarjeva 2, P.O. Box 201-IV, 61001 Ljubljana.

SOUTH AFRICA: David Philip Publishers (Pty) Ltd, Cape Town Head Office, P. O. Box 23408, Claremont 7735 (208, Werdmuller Centre, Newry Street, Claremont 7700), tel.: (021) 64 41 36/7/8, fax: (021) 64 33 58, e-mail: dpp@iafrica.com; **Praesidium Books (South Africa)**, 801, 4th Street, Wynberg 2090, Johannesburg, tel.: (011) 887 59 94, fax: (011) 887 81 38, e-mail: pbooks@iafrica.com.

SRI LANKA: Lake House Bookshop, 100 Sir Chittampalam Gardiner Mawata, P. O. Box 244, Colombo 2, fax: (94-1) 43 21 04.

SYRIAN ARAB REPUBLIC: Librairie Sayegh, Immeuble Diab, rue du Parlement, B.P. 704, Damas.

THAILAND: UNESCO Regional Office, Prakanong Post Office, Box 967, Bangkok 10110, tel.: 391 08 80, fax: (662) 391 08 66. **Suksapan Panit**, Mansion 9, Rajdamnern Avenue, Bangkok 14, tel.: 281 65 53, 282 78 22, fax: (662) 281 49 47; **Nibondh & Co. Ltd.**, 40-42 Charoen Krung Road, Siyaeg Phaya Sri, P.O. Box 402, Bangkok GPO, tel.:

221 26 11, fax: 224 68 89; **Suksit Siam Company**, 113-115 Fuang Nakhon Road, opp. Wat Rajbopith, Bangkok 10200, (P. O. Box 2 Maharthai, Bangkok 10206), tel.: (662) 225 95 31/2, fax: (662) 222 51 88.

TRINIDAD AND TOBAGO: Trinidad and Tobago National Commission for UNESCO, Ministry of Education, 8 Elizabeth Street, St Clair, Port of Spain, tel./fax: (1809) 622 09 39; **Systematics Studies Limited**, 9 Watts Street, Curepe, Tel.: (1809) 645 3475, fax: (1809) 662 5654, e-mail: tobe@trinidad.net.

TURKEY: Haset Kitapevi A. S., Istiklâl Caddesi n°. 469, Posta Kutusu 219, Beyoglu, Istanbul; **Dunia Infotel Basın Yayın Habereslesme San.**, Istiklâl Cad. N° 469, 80050 Beyoglu, Istanbul, tel.: (212) 251 91 96, fax: (90-212) 251 91 97.

UNITED ARAB EMIRATES: Al Mutanabbi Bookshop, P. O. Box 71946, Abu Dhabi, tel.: 32 59 20, 34 03 19, fax: (971-2) 31 77 06.

UNITED KINGDOM: (ex HMSO) The Stationery Office Books, Publications Centre, 51 Nine Elms Lane, London SW8 5DR, (P. O. Box 276, London SW8 5DT), tel. (44) 171 873 9090/0011, fax orders: (44) 171 873 8200, Internet:

<http://www.thesoinfo.gov.uk>. **The Stationery Office Bookshops**: London: 49 High Holborn, WC1V 6HB, tel.: 0171-873 0011 (*counter service only*); Edinburgh: 71 Lothian Road, EH3 9AZ, tel.: 0131-479 314; Belfast: 16 Arthur Street, BT1 4GD, tel.: 0123-223 8451; Manchester: 9-21 Princess Street, M60 8AS, tel.: 0161-834 7201; Birmingham: 68-69 Bull Street, B4 6AD, tel.: 0121-236 9696; Bristol: 33 Wine Street, BS1 2BQ, tel.: 0117-926 4306; The Friary Cardiff, CF1 4AA, tel.: 01222 395548; *For scientific maps: GeoPubs (Geoscience Publications Services)*, 43 Lammas Way, Amptill, MK45 2TR, tel.: 01525-640 58 14, fax: (44) 1525-640 53 76.

UNITED REPUBLIC OF TANZANIA: Dar es Salaam Bookshop, P. O. Box 9030, Dar es Salaam.

UNITED STATES OF AMERICA: Bernan Associates (ex UNIPUB), 4611-F Assembly Drive, Lanham, MD 20706-4391, tel.: 1 800-274-4447, fax: (301) 459-0056; **United Nations Bookshop**, General Assembly Building, New York, NY 10017, tel.: (212) 963 76 80, fax: (1-212) 963 4910, e-mail: bookshop@un.org.

ZAMBIA: National Educational Distribution Co. of Zambia Ltd, P. O. Box 2664, Lusaka.

ZIMBABWE: Textbook Sales (Pvt) Ltd, 67 Union Avenue, Harare; **Grassroots Books (Pvt) Ltd**, Box A267, Harare.

UNESCO BOOK COUPONS

Can be used to purchase all books and periodicals of an educational, scientific or cultural character. For full information, please write to: UNESCO Coupon Office, UNESCO, 7, place de Fontenoy, 75352 Paris 07 SP (France).

Commonwealth Universities Yearbook 1997-98



International directory providing authoritative information on over 600 internationally recognised universities in the Commonwealth countries of Africa and Asia, Australasia and the South Pacific, Canada and the Caribbean, the United Kingdom, Cyprus and Malta.

The **Commonwealth Universities Yearbook** is the leading reference source for locating academics and administrators in the 35 countries/regions of the Commonwealth that have universities. In a clear and consistent format, 250,000 staff records set out the personal names, status and degrees of principal officers, teaching and research staff, directors of special centres, deans of faculties, administrative contact officers and heads of associated university campuses/colleges. Entries for individual institutions are arranged alphabetically by country and a series of specially commissioned articles provides up-to-date overviews of the university systems in many countries.

Special features in this fully revised 1997-98 edition include: departmental direct line telephone and fax numbers, university e-mail address structures (enabling the user to construct individual staff members' addresses) and WWW site references.

ISBN: 0 85143 160 7 73rd edition 2,600 pages
2 volumes £140 (including surface mail) £160 (airmail)

Association of Commonwealth Universities, John Foster House,
36 Gordon Square, London, England WC1H 0PF
Tel: +44 (0) 171-387 8572 Fax: +44 (0) 171-387 2655
E-mail: acusales@acu.ac.uk (enquiries only)

Higher Education

*The International Journal of Higher
Education and Educational Planning*

Coordinating Editor:

Noel J. Entwistle

*Centre for Research on Learning & Instruction, University of
Edinburgh, UK*

Editors:

Gary Rhoades

*Center for the Study of Higher Education, University of
Arizona, Tucson, USA*

Ulrich Teichler

Gesamthochschule Kassel, Germany

Grant Harman

*Dept. of Administrative, Higher & Adult Education Studies,
University of New England, Armidale, NSW, Australia*

Over the decades since its foundation, *Higher Education* has followed education in universities, technical colleges, polytechnics, adult educational institutes, specialist institutions and many other research institutes throughout the world. Contributions have been published from authors in many different countries, with an appropriately strong representation from North America. Articles have tackled the problems of teachers as well as of students, of planners as well as administrators, and have reviewed long-standing systems as well as new ideas for the future. Each country may have its own education system, but it is clear that the critical issues in higher education are shared by teachers and researchers alike, throughout the world. *Higher Education* offers the opportunity for an exchange of research results, experience and insights, and provides a regular forum for discussion between experts. *Higher Education* publishes authoritative reviews, comparative studies, and analyses of specific problems. Each issue contains an extensive book review section.

Subscription Information:

ISSN 0018-1560

1998, Volumes 35-36 (8 issues)

Subscription Rate: NLG 930.00/USD 477.00, including postage and handling.

P.O. Box 322, 3300 AH Dordrecht, The Netherlands
P.O. Box 358, Accord Station, Hingham, MA 02018-0358, U.S.A.

HIGHER
EDUCATION

Subscription
Price 1998
NLG 930.00/USD 477.00

<http://www.wkap.nl>

Kluwer
academic
publishers



PROSPECTS CORRESPONDENTS

ARGENTINA

Mr Daniel Filmus
Latin American Faculty of Social Sciences
(FLACSO)

AUSTRALIA

Professor Phillip Hughes
Australian National University, Canberra

AUSTRALIA

Dr Phillip Jones
University of Sydney

BELGIUM

Professor Gilbert De Landsheere
University of Liège

BOLIVIA

Mr Luis Enrique López
Programa de Formación en Educación
Intercultural Bilingüe para la Región
Andina, Cochabamba

BOTSWANA

Ms Lydia Nyati-Ramahobo
University of Botswana

BRAZIL

Mr Walter E. García
UNESCO Brasilia Office

BRAZIL

Mr Jorge Wertheim
UNESCO Brasilia Office

CENTRAL AFRICAN REPUBLIC

Mr Abel Koulaninga
Secretary-General of the Central African
National Commission for UNESCO

CHILE

Mr Ernesto Schiefelbein
Universidad Santo Tomás

CHINA

Dr Zhou Nanzhao
China National Institute for Educational
Research

COLOMBIA

Mr Rodrigo Parra Sandoval
Fundación FES

COSTA RICA

Mrs Yolanda Rojas
University of Costa Rica

EGYPT

Professor Dr Abdel-Fattah Galal
Intitute of Educational Research and
Studies, Cairo University

FRANCE

Mr Gérard Wormser
Centre national de documentation
pédagogique

GERMANY

Professor Wolfgang Mitter
Deutsches Institut für internationale
pädagogische Forschung

HUNGARY

Dr Tamas Kozma
Hungarian Institute for Educational Research

JAPAN

Professor Akihiro Chiba
International Christian University

MALTA

Dr Ronald Sultana
Faculty of Education, University of Malta
Universidad de Malta

MEXICO

Dr María de Ibarrola
Patronato del Sindicato Nacional de
Trabajadores de la Educación para la
Cultura del Maestro Mexicano A.C.

MOZAMBIQUE

Mr Luis Tiburcio
UNESCO Maputo Office

POLAND

Professor Andrzej Janowski
Polish Commission for UNESCO

REPUBLIC OF KOREA

Dr Kyung-Chul Huh
Korean Educational Development Institute

ROMANIA

Dr César Birzea
Institute for Educational Sciences

SPAIN

Mr Alejandro Tiana Ferrer
Faculty of Education, University of Madrid

SWEDEN

Professor Torsten Husén
Stockholm University

SWITZERLAND

Mr Michel Carton
Graduate Institute of Development Studies

THAILAND

Mr Vichai Tunsiri
Standing Committee on Education,
House of Representatives

TRINIDAD AND TOBAGO

Mr Lawrence Carrington
University of the West Indies

UNITED KINGDOM

Mr Raymond Ryba
University of Manchester

UNITED STATES OF AMERICA

Mr Wadi Haddad
The World Bank

UNITED STATES OF AMERICA

Mr Fernando Reimers
The World Bank

Editorial

Juan Carlos Tedesco

VIEWPOINTS/CONTROVERSIES

Education for democracy

Victoria Camps

Economic growth and the international trade
in educational reform

Stephen P. Heyneman

OPEN FILE: EDUCATIONAL REFORM: THE DECISION MAKER'S APPROACH

Educational change from the perspective
of decision makers

Juan Carlos Tedesco

Switzerland: in a changing world, schools, too,
are gradually changing

Martine Brunschwig Graf

Spain: the decision-making process in
educational reform

Álvaro Marchesi

Finland: restructuring higher education

Olli-Pekka Heinonen

Hungary: priorities—partners—implementation

Benedek András

The Russian Federation: the humanization
of education

Vladimir D. Shadrikov

Argentina: priorities in the education sector
and how they are identified

Susana Beatriz Decibe

Chile: generating social consensus for
a long-term reform of education

Ernesto Schiefelbein

Senegal: defining and implementing priorities
in the education sector

Mamadou Ndoeye

Mozambique: some considerations on educational research,
policy formulation and decision making

Zeferino Martins

Jordan: the dynamics of educational
decision making

Munther W. Masri

Egypt: a strategy for educational reform

Ahmed Fathy Sorour

Asia: the impact of educational research
on decision making

*Victor Ordoñez and
Rupert Maclean*

Index to volume XXVII

ISSN 0033-1538

Vol. XXVII, no. 4, December 1997