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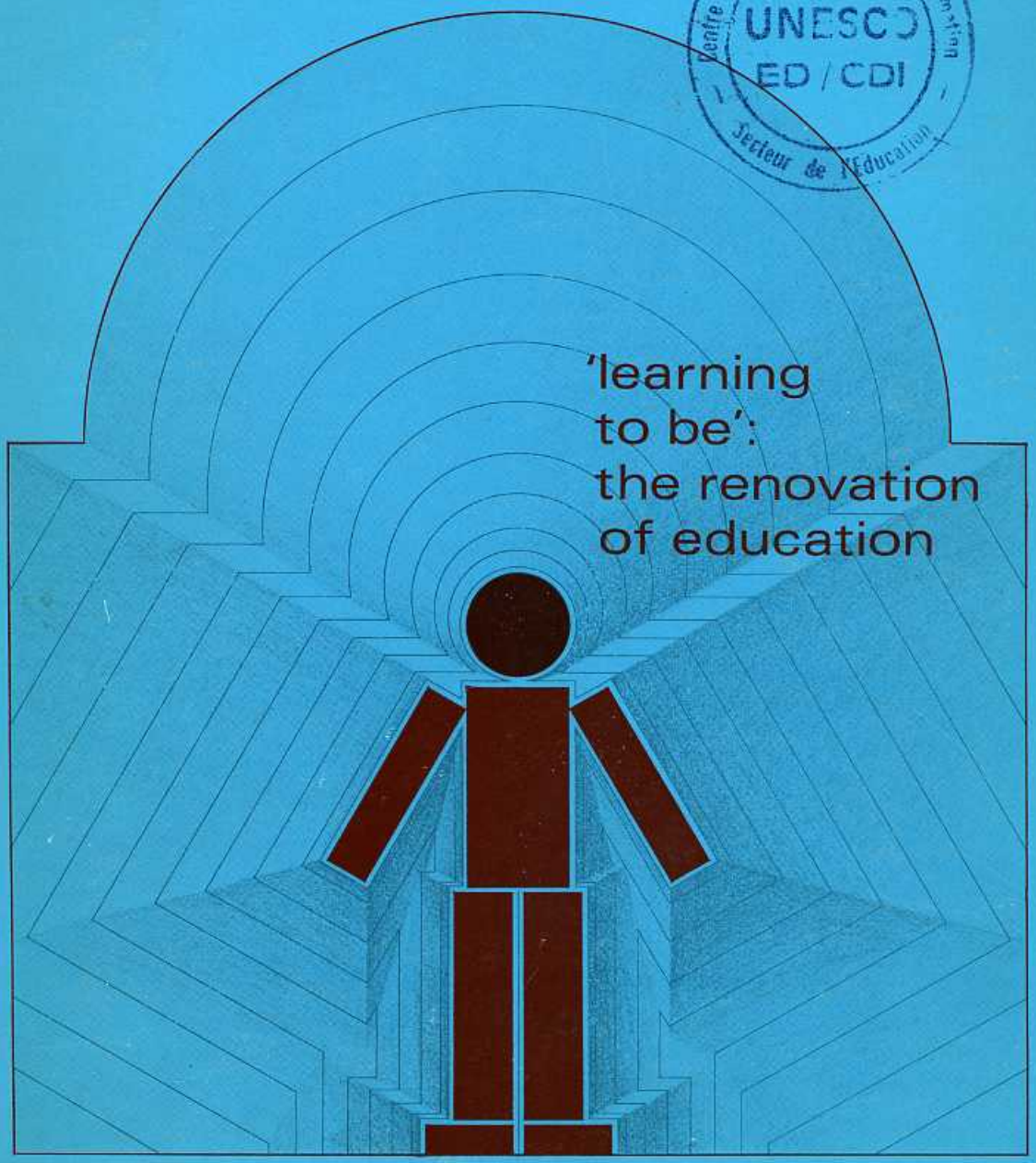
'learning to be': the renovation of education



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Contents

During the seventeenth General Conference of Unesco, delegates from Spain and Latin America stressed their interest in a Spanish version of *Prospects*.

Beginning with Volume III, Number 1, 1973, *Prospects* will appear also in Spanish in a co-edition Unesco/Santillana under the title *Perspectivas: Revista trimestral de educación*.

A Spanish version, conforming in all respects to the French and English ones, will therefore be available to readers in Spain and Latin America.

For the sake of continuity, Santillana also envisages the publication of a selection of articles which appeared in the four issues of 1972, to be published separately, as a special issue.

Our Spanish-speaking readers will find a subscription form at the end of this issue.

The seventeenth session of the Unesco General Conference

(17 October to 21 November 1972)

Unesco's General Conference ended after adopting the programme of the Organization for 1973 and 1974 and accepting the $119,954,000 budget foreseen for this biennium.

Presided by H.E. Toru Haguiwara of Japan, the seventeenth session of the General Conference saw the number of Unesco Member States increase from 129 to 131 with the admission of Bangladesh and the German Democratic Republic. The People's Republic of China was represented at the Conference for the first time.

The Organization 'having been in existence now for more than a quarter of a century', it is stated in the resolution adopted by the Conference at the end of the General Policy Debate, 'and having made considerable progress in the direction of universality—which will, it is to be hoped, soon be fully achieved—Unesco is called upon to strengthen its role by contributing, through intellectual co-operation and action to promote development, to the building up of a peaceful world, . . . to promoting human rights and fundamental liberties.'

To mention only that which relates to education and its context, in the next two years Unesco will intensify activities aimed at renovation and democratization; it will work for the recognition of the right of everyone to lifelong education going far beyond the framework of traditional schooling; it will assist the reform of institutional structures and of systems of teacher training and the renovation of educational programmes and methods so as to take account of society's needs and possibilities. Assistance given for this purpose to Third World countries will be considerably reinforced with the help of the United Nations Development Programme and of the World Bank.

The Second European Conference of Ministers of Education, foreseen for this year, will be devoted to problems of higher education. The thirty-fourth International Conference on Education in Geneva, also

this year, will discuss the relationships between education, training and employment, with particular reference to secondary education, its aims, structure and content.

One concern of the Conference was to reconcile the growth in international cultural exchanges with respect for the identity of each culture by safeguarding the cultural heritage under two aspects, national and universal.

Unesco will also continue its research and its experiments concerning information media in twentieth-century society, paying particular attention to the use of communication satellites for educational and cultural purposes. To this end, a declaration on the guidelines to be laid down in the use of broadcasting by satellites and approved new measures to promote books and reading throughout the world was adopted.

New measures will be undertaken favouring reading and book promotion throughout the world. Two other international conferences will take place: one in 1973, on the application and possible extension of Unesco-sponsored agreements for the free flow of educational, scientific and cultural information; the other, in 1974, on the planning of national infrastructures for libraries, archives and general documentation.

Unesco's contribution to peace and to the elimination of racism and colonialism was debated at considerable length and backed by specific resolutions.

In this issue and directly related to the General Conference, the Assistant Director-General for Education outlines the main trends and structures of the Organization's new education programme; furthermore, the 'Dossier' is devoted to a preliminary look at Learning to be, *the report of the International Commission on the Development of Education.*

Amadou-Mahtar M'Bow

Main lines and structure of Unesco's new education programme

Amadou-Mahtar M'Bow *(Senegal). Former Minister of Education, former Minister of Youth, Culture and Sports. Currently Assistant Director-General for Education of Unesco. Author of numerous monographs and textbooks.*

The education programme for 1973 and 1974, as approved by the General Conference at its seventeenth session, proceeds both from Unesco's general aims as defined in its Constitution, and from the need to contribute, within the framework of international co-operation, to a solution of the theoretical and practical problems raised by education in the world today, taking into account the diversity of cultures, the differences in levels of development and the variety of trends revealed by prospective studies of society.

Programme activities include regulatory action as well as the promotion of ethical standards, intellectual action, the promotion of ideas or co-operation for development. Attention has, however, been concentrated on a number of priority problems revolving around two imperatives, the right to education and the regeneration of education.

Education itself is regarded as a comprehensive system which, to meet the current requirements of society, must enable the individual, whenever he so desires, to improve his knowledge and skills and to raise his cultural level. The gradual introduction of integrated systems of lifelong education, by means of which it is possible to make combined use of resources offered by schools, universities and other social institutions, the mass media in particular has therefore been regarded as absolutely essential. In this connexion, the General Conference thought that the concept of the right to education should itself in future be based on two major principles:

—the application of the right to education should no longer be limited, as has long been the case in many countries, only to access to an elementary education system, but it should henceforward be regarded as the right to lifelong education, comprising appropriate basic education, adequate vocational training and, for young and old,

the opportunity for further education and re-orientation, in accordance with the needs of society and with their individual desires, in a diversified system of continuing training which can at the same time broaden their cultural background;

—whilst the struggle against discrimination in education must be intensified, the process of democratization of education must not be seen solely in terms of access to education, but also and above all in terms of actual achievement.

The regeneration of education must therefore aim to ensure both the quantitative expansion necessary for democratization and the qualitative improvement whereby the efficiency and effectiveness of educational systems may be increased.

But regeneration, it has become clear, is a complex, long-term operation. Educational systems must evolve as societies change, but they must also retain a certain stability, without which the indispensable unity and continuity of the educational process will be jeopardized. One of the challenges which educators in all countries must face is that of meeting both these requirements. The regeneration of education has been considered from three angles: that of policies; that of the forms, content and methods of education; and that of the people engaged in educational activities at all levels.

By policy is meant that set of actions by means of which a State undertakes an exhaustive and systematic critical appraisal of its educational system in order to frame an education policy in keeping with its particular situation and its economic and social development requirements.

As the Director-General has pointed out, the role of the Organization is, when so requested, 'to find a place in the decision-making machinery and procedures through which the considered will of those who govern a country takes shape' in order to help to carry out a critical analysis of the situation, to identify the problems involved, to help to determine possible lines of action, taking into account the resources likely to be available, and to draw up a programme or plan of action integrated into the country's over-all plan or into its economic and social development schemes.

In any case, it is of course up to the governmental authorities to make those decisions, political in the highest degree, which lastingly commit the nation to certain future courses of action.

The qualitative changes which constitute the second main line of emphasis in regeneration of education aim to improve educational systems from within by recasting educational structures and insti-

tutions, by renewing or re-orienting curricula, by devising and disseminating new methods and by the rational use of educational techniques.

In this connexion, the new programme tries, in order to supplement the aid which can be given direct to Member States, to facilitate access by Member States to the rich store of experience, research, studies and ideas which the international community is constantly accumulating. The Organization will also endeavour to identify the major problems, to highlight significant trends, and to encourage outstanding innovations.

But education means people, pupils and teachers, students and lecturers. Curricula, methods and techniques are worth no more than those who apply them, and their value depends on the relationship between teacher and learner.

For ten years the Organization has been doing its utmost, in co-operation with the other agencies of the United Nations, to help in the training of the teaching staff required by the developing countries. This work is going to be expanded. Not only will the training of all the personnel who contribute to education—teachers, inspectors, administrators and other specialists—be continued, but the research component in training institutions will be strengthened and exchanges of experience and ideas will be encouraged.

The Education Sector's activities have been reorganized around these three main points—policies, qualitative changes, training of personnel. At the administrative level, remodelling the programme has entailed a new structure, designed in accordance with more clearly perceived aims and reflecting the over-all pattern of the programme.

The policy aspect and related activities (ministerial conferences, critical appraisal of educational systems, country programming) link up naturally with educational planning activities. If any policy is to come to grips with reality and itself become a living reality, it must be expressed through planning; in other words, the circumstances attending the proposed course of action, the ways of carrying it out, and the resources which must be employed to attain its objectives must all be defined in advance. This is where the programme of studies, research and training assigned to the International Institute for Educational Planning and the training courses for planners organized by the Regional Offices find their place among Unesco activities.

An essential aspect of the planning process is the rational allocation of financial resources. This is why, in the new structure as in the old, the problem of the financing of education remains linked with that of planning. What is new is that the Sector's various activities in this sphere—the programme of co-operation with the World Bank, liaison with other agencies, United Nations Development Programme, Unicef, World Food Programme, preparation of programmes financed from funds-in-trust—have been combined into a coherent whole.

Similarly, information on the sources of aid for education will be exhaustively analysed so that more help can be given to Member States in obtaining financial backing for their education projects.

Finally, in view of the acknowledged importance of the right to education as an objective and of the problems involved, especially in the specific case of action on behalf of disadvantaged groups (refugees, for example), the programme concerning equal access to education, which used to come under 'advancement of education', has now been incorporated into 'planning and financing of education'.

The planning and financing of education constitute the first major area of the programme; innovation, that is to say qualitative changes, is the second. Those activities which share the characteristic of being aimed at bringing about qualitative changes in the educational process and its various components and promoting international understanding and peace are grouped together around curriculum, structures and methods.

Looking at the question from this angle, there seemed no good reason for maintaining the traditional separation between formal education, on the one hand, and, on the other, out-of-school education, literacy teaching and adult education in particular—quite the contrary in fact. It has also been considered desirable that certain activities previously included in the science programme (pre-university science and technology education for rural development), which make an essential contribution to the evolution of the programme content of education, should be closely linked with the education programme, seen in this light.

The organization of this part of the programme therefore fits in well with that comprehensive view of educational action which Unesco has adopted and which aims at nothing less than the oneness of man.

A programme in which the overriding concern is the regeneration of education cannot be implemented without consideration being given to the scientific and technological aspects of school curricula, an

essential factor in bringing education into line with the requirements of the modern world.

Furthermore, it is becoming increasingly clear that one of the main reasons for the unsuitability of education in the developing countries is that it does not make due allowance for the fact that the population of those countries is very largely rural, whereas the education which they are offered frequently overlooks the rural world, its values and its problems, and tends to cut pupils off from their environment, thus accelerating the drift to the cities.

The establishment of the new Division of Education for Rural Development in the Education Sector brings together the activities which aim to adapt education more closely to the needs of rural environments and, at the same time, to intensify the role of education on behalf of rural development. The purpose is both preventive—to prevent education becoming cut off from the environment—and constructive—to contribute, through the dissemination of knowledge, to that adaptation of techniques and patterns of behaviour on which the development of rural regions and the improvement of the living standards of the rural population depend, without at the same time reducing the opportunities for children from rural areas to enter the various levels of education in accordance with their aptitudes and interests.

It has, naturally, been to this second area of the programme that we have attached the activities of the new Asian Centre of Educational Innovation for Development (ACEID) set up in pursuance of a recommendation of the Singapore Conference[1] and those of the Unesco Institute of Education, Hamburg, which are to give priority in the next few years to the renewal of the educational system in the context of lifelong education.

The qualitative improvement of curricula, structures and methods raises in particular the more general problem of harmonizing education with work and striking a balance between training and employment. The function of education is a social function in the highest degree, and the relationship between education and work, between training and employment, is of such great importance in the world today that it deserves thinking about. Is not the gap which exists in many cases between school and the working world due in part to the programme content, which gives education an academic bias resulting

1. Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia, Singapore, May-June 1971.

in deep-seated intellectualist prejudices? Ought we not to try to promote everywhere possible an integrated training, combining academic subjects, physical education and manual training?

Around the third main focal point in the programme, training, have been grouped, in addition to activities concerning teachers, the activities connected with training abroad in all the fields of the Organization's competence and also—an at first sight arbitrary but in fact well-justified link-up—activities relating to higher education.

Generally speaking, training takes place at the post-secondary level of education. It is an undoubted fact that education at this level has its own specific problems; it therefore seemed appropriate to create a specific area in the programme, where training in all its forms is closely linked with the problems of higher education.

Putting this third part of the programme under the heading of training is a way of indicating its specific purpose without in any way precluding activities relating to the innovative movement which is in fact characteristic of the programme as a whole.

Teacher training must certainly be based on research, studies and new thinking about curricula and methods. For this reason studies on innovations and assistance to experimental projects are essential aspects of the activities planned for higher education.

Finally it is also planned to apply new ideas in the programmes for training abroad.

The Department of Higher Education and the Training of Educational Personnel will, it is true, carry the heaviest operational load in the Sector in budgetary terms ($35,600,000 under the United Nations Development Programme). It will not, however, be an exclusively operational department; its schedule will include many intellectual activities carried out for their intrinsic value or in support of the operational programme. Conversely, the Department of Curriculum Structures and Methods of Education and the Department of Planning and Financing of Education—whose activities are more specifically intellectual—will also have a considerable operational load ($19 million and $9 million respectively for 1973–74).

It will be seen that the education programme as a whole provides a concrete illustration of the fundamental principle of the integration of intellectual and operational activities. This integration will be intensified both at Headquarters and in the Regional Offices. The latter will indeed have an increasingly important part to play in the execution of the programme. The strengthening of the Regional Offices is in line with the trend towards giving Unesco's activities a

more intimate bearing on the efforts of Member States, a trend to which reference has already been made. It is also in keeping with the recommendations of the previous General Conference concerning the decentralization of the Organization's activities.

It is with these same ends in view that it is planned to set up a Regional Office in Beirut for the Arab States, to take its place alongside the Santiago, Dakar and Bangkok Offices.

As in the past, the Education Sector and the Regional Offices will enjoy the support of the International Bureau of Education (IBE), Geneva. An attempt has also been made to improve the co-ordination of Headquarters activities with those of the International Institute for Educational Planning (IIEP), the International Bureau of Education and the Unesco Institute of Education, Hamburg. The Division of Methods, Materials and Techniques, which is responsible for the review *Prospects*, of which four issues appeared in the new format in 1972—has already been given responsibility for co-ordinating all the Sector's studies, wherever they are carried out.

During the preparation of the new programme, the work of the International Commission on the Development of Education was constantly kept in mind. It should be noted that the Draft Medium-Term Outline Plan and the Draft Programme and Budget were finished well before the Commission's report[1] came out. Furthermore, the Commission worked in complete independence, although staff members of the Organization were made available to provide secretarial services. The Commission's deliberations were therefore conducted in complete intellectual freedom. This means that neither the Draft Medium-Term Outline Plan nor the Draft Programme and Budget for the next biennium takes the report into account as such.

However, they correspond in many particulars, and it is good to see that in many cases similar interpretations have been put on the problems arising from the state of education in the world. Many recommendations made by the Commission are already covered by proposals in the Approved Programme. The dominant themes in the report—lifelong education, the need to bridge the gap between formal schooling and out-of-school activities—are also those which set the trend in the programme.

Of course the Commission's report, which is the outcome of entirely free reflection, opens up vistas which it would be impossible to reduce to the sort of proposals that can be made in documents

1. *Learning to be.* Paris, Unesco; London, Harrap, 1972.

which have to keep strictly within the bounds of the resources available to the Organization. Nevertheless, now that the General Conference has considered the report, the Secretariat will be able to draw upon the major conclusions arising from the discussion of the report in the Conference in order to make the Organization's activities more effective, in order to satisfy the needs of Member States more fully, while at the same time contributing to the strengthening of international co-operation with a view to the general progress of mankind and the maintenance of peace and understanding between all peoples.

Torsten Husèn

Resistance to educational innovation[1]

Torsten Husèn *(Sweden). Psychologist. Professor of Education. Director of the Institute of Educational Research, Stockholm. Author of many publications on education, psychology and pedagogy.*

The study of the innovative process and factors conducive to innovation is a fairly new undertaking, less than ten years old. I cannot remember that I ever heard the word 'innovation' being used in educational contexts until six or seven years ago. I take it that the term has been taken over by the educators from industrial technology as has the entire conception of research and development as part of the implementation of innovative change. Sometimes innovation is preached with a fervour as if it represented a value *per se*. People are oblivious to the self-evident fact that significant innovations and persisting changes in education ought to represent adequate responses to fundamental transformations in culture and society. Therefore, by far not all changes or innovations in education should be regarded as fitting responses to these transformations.

I need not spell out for what reasons it would be appropriate to talk about a 'great mutation', when we are trying to describe the rapid transformation that our societies are undergoing at present. The same applies to certain aspects of our educational systems, such as enrolments and organizations, whereas others are strikingly lagging behind. To put it briefly, what is needed today are strategies whereby applicable knowledge and techniques could be incorporated into the content and organization of curriculum, the methods and materials of instruction and the procedures by which the educational enterprise is administered. The more stable an organization or an institution is—and the school is certainly one of the more stable—and the more deeply entrenched it is in the social matrix, the more difficult it becomes to make it respond to external changes. The so-called social lag is a well-known, and sometimes frustrating, phenomenon in education.

1. This document forms part of the second series of studies prepared for the International Commission on the Development of Education, Unesco.

Educational change and socio-economic reforms

One might ask to what extent a certain lag between the development of society at large and the educational sub-system is unavoidable. Is there any reason to believe, as did the Swedish School Commission in an optimistic report which it submitted to the government in 1948 that the educational system can act 'as a propelling and progressive force in our society', a kind of optimism that was aired by many people who represented the 'new education' after the Second World War. There are ample reasons to believe that the schools are lagging behind because of the social mechanisms involved and that the problem faced by educational planners is to reduce the lag to a minimum. Professor C. E. Beeby[1] some years ago advanced a model of the growth of the primary school system as related to teacher education. During the first stage, called the 'dame school', teaching is relatively unorganized and to a large extent a play with meaningless symbols with memorization being the important thing. The next stage is characterized by rigid organization and methods with 'the one best way'. Examinations and inspections are heavily stressed and discipline is strict. Memorization has become even more important. The third stage is that of transition. The fourth one, finally, is characterized by emphasis on meaning and understanding, problem-solving and pupil activity. Discipline is more relaxed and positive. More stress is put on the emotional life of the children.

The main thesis that Professor Beeby advances is that, by and large, we cannot have a much better educational system than the societal context under which it is operating. Attempts that have been made in developing countries to introduce advanced educational technology have often failed because such approaches require not only a certain level of competence in the teachers but also a certain sociocultural level of parents to make the children responsive to the particular methods of instruction.

It would take me too far to pursue this problem further. I have, however, taken it up because I think that there is much evidence in support of the contention that education cannot serve as a substitute for social and economic reforms. The latter must to a large extent precede educational change. I think that we ought to be aware of the fact that we cannot change the basic pattern of a society or bring about

1. *Quality of Education in Developing Countries.* Cambridge, Mass., Harvard University Press, 1966.

an enhanced standard of living just by injecting more and better education. Education seems to have its proper place in an inherent sequence of cultural and social transformations. Sweden provides a case in point, how educational change has in the first place to be conceived within the framework of national priorities. An American, Professor Rolland Paulston, has recently conducted a study of the historical background of the Swedish School Reforms, particularly those pertaining to school structure. The basic issue in the Swedish reform debate since the end of the nineteenth century was the parallelism or duality of the system, which meant that rather early some children, as a rule from well-to-do homes, transferred from the early grades in the primary school to the secondary, university-preparing academic school. The Social Democratic party early declared its allegiance to a comprehensive system which covered the entire compulsory school period. The attempts to establish a six-year basic school for all children during the 1920's failed because sufficient political backing in the Parliament could not be secured. Even within the Social Democratic party a fraction of teachers were against the reform which was said to 'lower standards' in the secondary school. The legislation passed by the Swedish Riksdag in 1927 was a compromise between the dualistic and comprehensive camp in so far that a 'double transfer' from primary to academic secondary education was granted. When the Social Democrats came into political power at the beginning of the 1930's they took, for a long period, only a marginal interest in reforming education. Social and economic reforms aiming at full employment and social security were in the forefront. The unemployment among highly educated people led many radicals to a tacit acceptance of the dualistic or élitist system, provided that more lower-class students could be granted access to higher levels of education. During the so-called 'harvest-time' after 1945, the Social Democrats again brought the reform of education into focus and it became one of the major political targets. The country embarked on twenty-five years of educational change which was successively enacted by an almost unanimous parliament. The lesson to be learned from the Swedish experience is among other things that legislation and implementation of the welfare state to a large extent has to precede commitments to educational change: first full employment and decent standards of living and then education.

Resistance to change

I pointed out that educational reforms, irrespective of whether they aim to bring the educational system in line with social and cultural transformations, are often running against well-established and deeply entrenched institutional forces. In a society where education increasingly tends to become the democratic substitute for inherited wealth and privileged background and where demands for equality of opportunity become vociferous, change tends to be regarded as a threat to the prerogatives of the establishment and is therefore strongly resisted. *These forces are primarily operating at the political level.* But resistance to change within the educational system itself can be even stronger because of the more pronounced vested interests in *status quo* that the representatives of the system have. In 1958, when about one-fourth of the school districts in Sweden had introduced the nine-year comprehensive school on a trial basis, the Swedish Radio Corporation sponsored a public opinion poll pertaining to the changing school situation. The poll showed that between one-half and two-thirds of the public preferred the comprehensive system, about one-fourth was against it, and the rest were undecided. Thus, at a period when the overwhelming majority of the secondary school teachers, who were accustomed to an élitist system with pronounced selective features, rejected the blueprint for the educational system which was laid down in the 1950 Education Act, the majority of the electorate was in favour of it. In the Riksdag the backing of the reform was even more overwhelming. No votes had to be taken on major points in the education bills.

Causes of resistance to change

One is certainly justified to ask, why time-honoured practices prevail in spite of the fact that they are running contrary to basic notions of how children develop and learn. Why do instructional approaches frequently violate accepted psychological principles and findings of learning and differential psychology taught in the basic courses in general and/or educational psychology? For instance, grouping practices, for which there is no scientific support, are widely employed. Homogeneous grouping in terms of one criterion is far from perfectly correlated with grouping according to another criterion.

We can advance at least two major explanations which account for

the sometimes frustrating experience that researchers repeatedly make, namely that their findings, even those which are highly conclusive, have a very small, if any, impact upon what is happening in the classroom.

Educational practices *are* indeed deeply entrenched, because they have prevailed for decades, not to say centuries. Even minor changes, for instance in the emphasis on different topics in teaching a given subject, might take quite a time. The teaching role is tied to heavy anchors. When we conducted a survey of the teaching of mother tongue in the upper section of the primary school at the end of the 1950's, we concluded that the curriculum that had been issued by the Government in 1919 had been universally implemented!

Secondly and equally important, is the explanation that the major strategy in bringing about change and innovation has been to do things *to*, or at best *for*, the teachers and not *with* them.

Another frame of reference for innovative actions

Innovative and creative change has to be introduced by voluntary action and not by expert preaching or governmental decrees, irrespective of whether the system is centralized or not. Much of the resistance to change stems from the approach, whereby the experts or the administrators tell the teachers that they have so far been wrong, and that 'we', the experts, researchers or administrators are right, and that they, the teachers, therefore should follow our advice.

Why should we not try to build into our innovative strategies procedures which are strongly supported by findings from our own research? We need among other things proper positive reinforcement agents which will reward innovative behaviour. So far innovative behaviour has often been negatively reinforced. The teachers who try new practices have been punished by increased workload and disapproval on the part of their colleagues. Even the most ardent initial enthusiasm has often been extinguished under such pressures. On the contrary, the educational system in various ways reinforces static attitudes and practices. I need not spell out the major forces which tend to keep the system in equilibrium. Learning is supposed to occur only when the teacher gives something to the children. Work is regulated by a fixed timetable. The learning tasks are chopped up into standard assignments. Extra assignments are often given as punishments. Administrative procedures within and outside the classroom are authoritarian.

The core of the matter then, is to help the teachers to organize the system in such a way as to reinforce innovative attitudes, creative participation and willingness to subject time-honoured practices to critical scrutiny. We need to subject the factors which affect teaching behaviour to scrupulous analysis in order to identify the pedagogic behaviours to be encouraged and those to be eliminated.

The simple conclusion drawn from what has so far been said is that the problem of introducing educational innovations has to be tackled mainly at the local level. We would have to work *with* the teachers, try to teach them to think creatively, and thus innovatively. The implication of this is among other things that the administrative apparatus should be geared to support an innovative climate. A rigid and power-seeking bureaucracy easily develops into a cement-cover that bars innovative efforts instead of providing the service needed in order to support the teachers in the field.

Educational innovations certainly do not come about automatically. They have to be invented, planned, initiated, and implemented in a way that will make educational practices more adequately geared to the changing objectives of instruction and make them more consistent with the changing standards of instruction. A major problem then becomes: to what extent should these changes occur by arrangements taken within the hierarchy of public office or how much should they depend on actions taken by private groups and enterprises? The main question is how the aims of innovation should most easily be achieved and how a sufficient degree of flexibility could be built into the innovative process. In countries with strongly centralized national systems change is put into motion from the national centre through the channels of bureaucracy. I can see no possibility in relying on private initiative when changing organizational structure, financing or administrative procedures. The changes in school structure in most European countries provide cases in point. Such types of innovation must be backed by legal force and administrative decrees which follow suit on legislation passed by the national parliament. But when it comes to changes in methods of instruction, no law force or decree in the world can secure a more adequate instruction with regard to content and method. No central or local inspector will have any effective impact. Real influence at the grass-roots level would have to depend on voluntary participation. No formal authority can impose co-operation.

A bureaucracy can achieve substantial changes in the organizational framework of an educational system, but is, by its very nature, alien to creative changes pertaining to learning itself. Innovation of this type cannot occur within a bureaucratic setting, where there is accountability up the line and supervision by those who occupy positions higher up and where the individuals at the bottom are referred to the top for decisions and where there is explication, formalization and uniform application of standards of work. But the introduction of new ways of learning in the classroom requires *lateral* instead of *vertical* delegation, *voluntary* instead of *imposed* actions. Co-operation and general agreement will work instead of close supervision.

The thesis advanced about grass-roots changes is based on an optimistic conception of the human being. But the educational enterprise has long enough been run according to a motivational theory which says that students learn because they want to avoid unpleasurable consequences. This is one of all the conceptions that run contrary to what psychology says about how human beings react. My belief is that there are energies and creative elements *within* the individual that are essential and should be brought to bear on the innovative process. An open and continuous dialogue between the teacher, the student, and the expert can elicit these energies.

Jerome S. Bruner
David R. Olson

Learning through experience and learning through media[1]

This paper is concerned broadly with the consequences of two types of experience which may be designated as direct experience and mediated experience, their partial equivalence and substitutability, and their differing potential roles in the intellectual development and acculturation of children. Our analysis will begin with the problem of the nature of direct experience and its effect on development. A clearer conception of the processes involved in direct experience will permit us better to examine the manner and extent to which mediate experience may complement, elaborate and substitute for that direct experience.

Much of a child's experience is formalized through schooling. Whether for reasons of economy or effectiveness, schools have settled upon learning out of context through media which are primarily symbolic. Schooling generally reflects the naïve psychology which has been made explicit by Fritz Heider (Baldwin, 1967).[2] The general assumption of such a naïve psychology is that the effects of experience can be considered as knowledge, that knowledge is conscious, and that knowledge can be translated into words. Symmetrically, words can be translated into knowledge, hence, one can learn, that is acquire knowledge, from being told.

Because learning is cognitive, it is possible, according to naïve theory, to substitute instruction for learning through experience. Thus, we can tell children what to do and how to do it, and instil wise and proper behaviour without the actual necessity of rewarding and punishing them. It is a common belief among naïve educators, how-

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ever, that verbal instruction is not nearly as effective as actual reward or punishment. Thus, socializing agents do not limit their instruction to verbal teaching, but actively arrange rewards and punishments for good and bad behaviour, respectively (Baldwin, p. 33).

Congruent with this is the belief that what differentiates child from adult is also knowledge and that the chief mission of school is to impart it by the formal mode of pedagogy.

The assumptions that knowledge was central to the educational enterprise and that it was independent of both the form of experience from which it derived and the goals for which it was used had several important and persisting effects on educational thought. First it led to a certain blindness to the effects of the *medium* of instruction as opposed to the content, a blindness that McLuhan (1964) has diagnosed well and it led secondly, to a de-emphasis of and a restricted conception of the nature and development of *ability*. As the effects of experience were increasingly equated to the accumulation of knowledge, experience was considered less and less often as the source of ability. Since knowledge was all, ability could be taken for granted —simply one *had* abilities that could be used to acquire knowledge. Abilities were, then, projected rather directly into the mind in the form of genetic traits (Jensen, 1969). Culture and experience were both ignored as possible candidates to account for their development. The effect of this strange turn has been to downgrade the task of cultivating abilities in students, often thereby making schooling a poor instrument for the attainment of those important effects.

Education critics have, of course, long attacked educational goals formulated in terms of the simple acquisition of knowledge. Dewey's (1916) criticisms have much in common with contemporary reanalysis. In his view, genuine experience involved the initiation of some activity and a recognition of the consequences that ensued. Experiences of this sort would result, Dewey argues, in the natural and integrated development of knowledge, skills and thinking. Schooling, on the other hand, attempted to develop the three independently of each other and with little regard for the experience of which they are products. No surprise then, that schools frequently failed to achieve any of them. Dewey's revised conception of the relation between experience and knowledge reappears in the current attempts at educational reform which emphasize the role of process rather than content or more specifically, emphasize activity, participation and experience rather than the acquisition of factual information (*Living and Learning*, 1968). The contemporary critic and Dewey

alike would attack the assumption that knowledge is acquired independently of the means of instruction and independently of the intended uses to which knowledge is to be put.

That knowledge is dependent on or in some ways limited by the purpose for which it was acquired has been illustrated in experiments by Duncker (1945), by Maier (1931) and by many other students of thinking and problem solving. The conventional use of pliers as a gripping instrument makes them difficult to perceive as a pendulum bob. Knowledge *per se* does not make it possible to solve problems. The same appears to be true of verbally coded information. Maier, Thurber and Janzen (1969) showed that information coded appropriately for purposes of recall was thereby inappropriate for purposes of solving a problem. Information picked up from experience is limited in important ways to the purpose for which it is acquired —unless special means are arranged to free it from its context. But this conclusion is at odds with the naïve view that one can substitute 'instruction' for 'learning-through-experience'.

We must, then, re-examine the nature of direct experience and its relation to both knowledge *and* skills or abilities. Of course, the term 'direct' experience is somewhat misleading in that all knowledge is mediated through activity; and the resulting knowledge is not independent of the nature of those activities. But if we consider both the knowledge of objects and events that results from experience and the structure of activities involved in experiencing, we may come closer to an adequate conception of 'direct experience'. We will then be in a better position to contrast it with mediated, or more accurately, with the symbolically encoded and vicarious experience that is so important in acculturation.

Direct experience

Psychology, mirroring an earlier physics, often begins an account of the nature of experience with the concept of the 'stimulus'. What occurs in behaviour is thought to be a reflection of the stimulus acting upon the organism. At a more abstract level of analysis, the shape of the effective stimulus is seen as the result of certain physical filterings or transformation of the input given by the nature of the nervous system and its transducers. This conception is much too passive and non-selective with respect to what affects organisms. Living systems have an integrity of their own; they have commerce with the environ-

ment on their own terms, selecting from the environment and building representations of this environment as required for the survival and fulfilment of the individual and the species. It follows that our conception of physical reality is itself achieved by selective mediation. The search for a psychological account of behaviour must begin with the organism's activities and then determine the nature of the 'reality' sustained by that type of activity. It is a point that is explicit and central to Piaget's conception of adaptive behaviour in general and intelligence in particular: objects and events are not passively recorded or copied but rather acted upon and perceived in terms of action performed. The relevance of such a view to the development of knowing has, of course, been well explicated by that distinguished scholar (Piaget, 1971). To illustrate, a child who brings to his mouth everything that he contacts is structuring his world in terms of those actions; the child learning to walk is elaborating his knowledge of the world in terms of that activity.

What does this imply about the nature and consequence of experience? As we have said, we have a picture of reality that is biased by or coded in terms of our actions upon it; knowledge is always mediated or specified through some form of human activity. But note that any knowledge acquired through any such activity has two facets: information about the *world* and information about the *activity* used in gaining knowledge. In an aphorism: from sitting on chairs one learns both about 'chairs' and about 'sitting'. This distinction is reflected in ordinary language in the terms of knowledge and skill or ability.

Consider more specifically how both facets are realized in practice. The performance of any act may be considered a sequence of decision points, each involving a set of alternatives. These decision points are specified jointly by the intention motivating the act and the structure of the medium or environment in which the act occurs. An effective performance requires that the actor have information available that permits him to choose between these alternatives. The most obvious way to learn about a country is to walk its streets, read its poets, eat its foods, work in its fields and so on. In so doing, one will learn both *about* the country (that the country is poor or hilly, etc.) and how to proceed in the activities required to be of that country (how to mend a net or tell a story). This is surely what is meant by learning through one's own direct contingent experience. It is this kind of learning that Dewey took to be basic to all other forms of learning and it is this kind of learning that learning theories have been devised to describe—from

Aristotle's laws of association, through Dewey (1916) to Skinner (1938). In all of them the consequences of one's acts are postulated as the major source of skill and/or knowledge.

Mediate experience

But there are other ways to acquire information. From seeing a man struggle with his load, one can make some estimate of its weight. That is, one can experience vicariously or mediately. Psychological studies have repeatedly shown that learning can occur when neither of the primary conditions for learning through contingent experience—self-initiated action or direct knowledge of its results—is fulfilled. An illustrative experiment was performed long ago by Herbert and Harsh (1944) that reveals something particularly interesting about observational learning. Two groups of cats learned to pull strings and open doors by observing other cats. One group of cats saw only the final errorless performances of cat models while the other group saw the early error-filled performances as well as the correct performances. Both groups of cats learned to solve the problems more quickly than the control cats who learned only from their own contingent experience. But the cats that saw the error-filled performances learned more readily than those who saw only the error-free performances. Might this finding point to an important difference between good and poor demonstrations? We shall return to the question shortly.

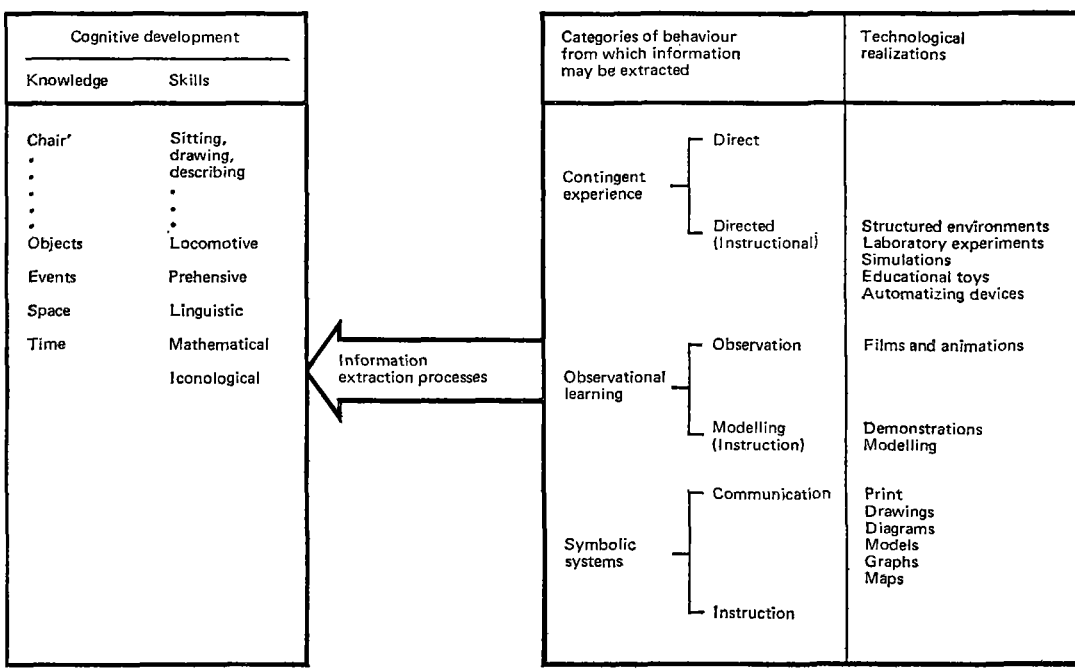
A second alternative to learning directly is through symbolically coded information, properly speaking, transmitted through the media: the spoken or printed word, film, diagram, etc. It is *learning through the media* that most readily substitutes for direct experience in formal schooling. Vygotsky (1962) and Bruner (1966) have emphasized the extent to which language *per se* provides the means *par excellence* for teaching and learning out of context, out of a situation in which action is in process and contingent consequences clearest. Language, then, provides the best opportunity for acquiring knowledge by criteria other than its usefulness in a particular line of action. It is the medium that most directly lends itself to ordering of knowledge in terms of the rules of abstract thought.

We have, therefore, three modes of experience which map roughly on to the three forms of representation discussed earlier (Bruner, 1966) as enactive, iconic and symbolic: the first related to direct

action, the second to models, and the third to symbolic systems.

More important to our purpose is the fact that these three modes of experience map on to evolutionary development. While all animals learn from contingent experience, primates are distinctive in their capacity for learning by observation—there is an enormous amount of observation of adult behaviour by the young, with incorporation of what has been learned into a pattern of play. The human species is, of course, marked by its reliance on symbolically coded experience—so much so that the development of language is taken as the distinctive characteristic of the human species and the development of literacy in various symbolic codes is the primary concern of formalized schooling. It follows that these three forms of experience differ greatly in the assumptions they make about the organism, that is, they differ primarily in terms of the skills they both assume and develop. We shall return to this point.

These modes of experience are represented in the schematic shown in the diagram. Note that they have a common underlying structure in that the consequence of the experience in each case can be differentiated into the facets of knowledge and of skill. And this common



structure, this duality of 'fact' and 'action' will be seen presently to be an important common feature of virtually all types of instruction—whether it be instruction by arranging direct encounters, by providing a model or by making available, so to speak, a text.

On the acquisition of knowledge

To this point, the burden of our argument has been to show that one can learn from three very different forms of experience and that these forms of experience, whether mediate or direct, qualify what is learned. This section of the paper is directed to an examination of what is common to different forms of experience; the final section is concerned with what is distinctive about them. Our conclusion will be that different forms of experience converge as to the knowledge they specify, but they diverge as to the skills they develop.

The assertion to be examined here is that different forms of experiencing an object or an event can be mapped on to a common underlying structure—a coherent and generalized conception of reality. Information about a particular event, regardless of the activity or medium through which it is obtained, has in common the property that it permits the differentiation of that event from the alternatives with which it is in danger of being confused. Consider the experience of actually seeing a zebra with that of hearing the instructional statement, 'A zebra is a striped, horse-like animal'. The same features detected in the act of discrimination are specified in the statement, hence, they are informationally equivalent and they can both be mapped on to an underlying conception, of zebras, horses, animals and so on. This is not to deny that each mode has a residual uniqueness but only that they share a common structure as well. The range of topographically dissimilar forms of experience including various forms of instruction may be considered as various 'surface structures' which relate in their special ways to a common underlying structure of knowledge. Indeed, it is the very fact that information relevant for action can be acquired through means *other* than direct action itself, that makes instruction possible. Thus, one can learn to sail, perhaps only to a limited extent, through watching films and reading books. There is considerable evidence from controlled laboratory experiments to show that common learning results from different types of experience. A child can learn to construct a diagonal either through activity coupled with reinforcement, through an

appropriate demonstration or through instruction in language (Olson, 1970*a*). Others have shown that, though difficult to teach, children can learn Piagetian conservation tasks through quite different training techniques (Bryant, 1971; Halford, 1970; Gelman, 1969). The problem then is to specify as far as possible the structure of information in these various instructional forms or surface structures and to see how they each relate to the underlying structure described above. Once these forms of instruction have been specified it may be possible to indicate how each of them relates to the various technologies involved in their production and distribution. Refer again to the scheme shown in the diagram. This figure indicates that there are three basic forms of instruction: through arranged contingent experience, observational learning, and symbolic systems, all of which have their effect by providing information for the guidance of various human activities.

All three forms of *instruction* can only be extensions of basic forms of interaction with the world. They may be characterized as 'instructional' only when their use is marked by the intent of another person who, for some reason, usually institutionally derived, accepts responsibility for the learner. The first, learning from one's own contingent experience can be considered as instruction only in special circumstances such as when the environment is intentionally prearranged by another person. The learner's role in this process is readily described as 'learning by doing' and the instructor's role is primarily that of selecting, simplifying or otherwise ordering the environment. The second form of instruction may be designated observational learning. The learner's role may be described as 'learning by seeing', or perhaps more appropriately, as 'learning by matching' and the instructor's role is primarily that of providing a demonstration or model and, perhaps, some feedback. The third form of instruction involves the use of various symbolic systems including a natural language. The learner's role is primarily that of 'learning by being told' and the instructor's role is that of telling—providing facts, descriptions, explanations, and much more if he can.

The three categories of instruction depend, as do the modes of learning on which they are based, upon the three modes of representing experience, namely, enactive, iconic and symbolic (Bruner, 1966). I. A. Richards (1968) has suggested that these modes of representation be construed as forms of instruction, that is, forms of conveying and/or picking up information through *performances*, *depictions* and *statements*, rather than as codes for the representation of

experience *per se*. But our argument here is that these forms of instruction and their systems of representation reflect different surface structures of experience that share an underlying informational or knowledge structure. In regard to abilities, to which we shall return, they may indeed be quite different.

Consider briefly how each of these surface structures relates to the common underlying knowledge structure. Specifically the problem is one of determining what information is invariant to all instruction and more specifically, how information is coded in the instructional programs we have examined to this point: reinforcement, modelling and verbal instruction.

REINFORCEMENT

Firstly, consider the instructional effects of reinforcement. Reinforcement broadly conceived is knowledge of the consequences of an act (Glaser, 1971). Reinforcement assures a means of determining when an appropriate choice among alternatives has been made. Reinforcement, by its universality across species provides a medium of information exchange whereby a Skinner can communicate with a pigeon and vice versa, for organisms are potent sources of consequence for the actions of other organisms. This assumes that organisms respond systematically to the responses of others—though not necessarily by a simple calculus of good and bad outcomes. And obviously, reinforcement mediates much interacting with the inanimate environment. But while the discovery of new knowledge may be dependent on our direct contingent experiences with nature and with other organisms, reinforcement has the limitation of being ambiguous in outcome. When a teacher reinforces a child for asking a question, the child may not know if it was the question-asking that she approved or the merits of that specific question. Reinforcement can indicate the consequences of the final performance but only rarely the critical alternatives. It is very surprising how uncritically many people accept the idea of control of behaviour by reinforcement in view of the very constrained circumstances necessary for it to be effective at all. And more important for instruction, a child obtains no relevant information from a reinforcement if he happens not to be considering the critical alternatives. Modern theories of discrimination learning move increasingly in the direction of distinguishing between feature selection (attention) and reinforcement to deal with this point (e.g., Sutherland, 1964; Mackintosh, 1965). Given such considerations, one can account not

only for the effects of this type of instruction, but also for some of the anomalies in reinforcement theory (Glaser, 1971; Levine, 1971).

Three devices are widely used to render reinforcement less ambiguous. One is by immediacy: tagging the reinforcement directly to the act. The second is by disambiguating the feature of the stimulus to be attended to, by placing it in a context that differentiates it from an alternative (Garner, 1966; Bryant and Trabasso, 1971). The third is through 'scientific method' by assigning unambiguously certain *sequelae* to certain prior events so that the necessity of the conceptual link cannot be overlooked. This is typically the way of 'guided discovery' which, as with the other two techniques, acts heavily on control of attention. In time, one who must learn by direct encounter comes to control his own attention in one of the three ways suggested: by keeping an eye peeled for immediate results, by being selective in his scanning of features, and by attending to necessity and regularity of relationship. Obviously, there is a technology and a form of materials that must go with the learning of such 'reinforcement skills'. It would be foolish to assume that such learning is not crucially subject to instruction. If such were not the case, there would be far more learning from direct experience than there seems to be.

MODELLING

One of the more transparent instructional approaches is that of modelling or providing demonstrations, an approach that makes up an important part of Montessori programmes. How is information conveyed through modelling? Complex acts cannot be simply imitated unless the performer already knows how to carry out the act. That is, modelling may initiate or instigate known behaviour, but not in any simple manner, produce learning. Yet learning does occur in some situations. Consider the possibility that there is a difference between a good and a poor model.

How can information be conveyed appropriately through modelling? In line with the general theory advanced above, information is such as to permit the choice between alternatives. That is, consciousness of the alternative is a necessary prerequisite for the pick-up or acquisition of new information.

A final skilled performance does not render observable the critical alternatives, hence, the observer does not detect the information required to choose between them. Good instruction through modelling, then, depends upon the sensitivity of the instructor to the

alternatives likely to be entertained by the child. Just as providing clear demonstrations involves skill, it seems possible *that learning from demonstrations itself demands a skill*; depending upon its generality and utility, it may be a skill worth including in our educational aims (aside from the knowledge conveyed by that means). Elsewhere it has been argued that learning in modelling depends precisely on the capacity not so much to imitate directly, but to construct behaviour from already mastered constituent acts in order to match selected features of the model—more like paraphrasing than imitating.

To summarize, any skilled performance, be it doing, saying or making something requires perceptual information for the guidance of each component of the act, that is, for selecting between all possible alternatives at each choice point in the performance. Modelling as an instructional technique is successful to the extent that it creates an awareness both of the critical alternatives and how to choose between them. It is a hypothesis that has been well argued by Garner (1966) and is worth testing in an instructional context.

VERBAL INSTRUCTION

Finally, consider language as an instructional medium. It is an instructional device *par excellence* by virtue of the fact that a word indicates not only a perceived referent, but also, in the nature of things, an excluded set of alternatives. Words function contrastively—they differentiate alternatives. The ordinary claim that 'words name things' overlooks the fact that words indicate or point to objects or events *in the implied context of the excluded alternatives* (Olson, 1970*b*). This point may be grasped by noting that the name or the description of an event is determined by the contrasting alternatives. Thus, a large white block in the context of a small white block is called 'the large one' while the same block in the context of a large block is called 'the white one'. Reciprocally, hearing such a sentence, or any other instructional sentence, the listener knows about both the intended referent *and the likely alternatives*. That is, language is structured precisely in the way that is required for instructional purposes in general. For this reason, the training of literate subjects almost always involves language; when experimentally tested, such instruction competes favourably with that of reinforcement and ordinary demonstrations; language coding is less ambiguous, that is, it conveys more information than those other media of instruction. This too accords with the results obtained by Masters and Branch (1969) and with

many of the discovery-expository studies reported in the literature (as Glazer and Resnick).

But there are many ways in which language can specify an intended referent and these ways provide a microcosm for examining the major premises of the instructional model presented in this paper. The point is that very different sentences convey the same information and hence are generally called paraphrases of each other or synonymous sentences. Consider these simple examples:

1a. George is here.
 b. His father's brother is here.
 c. His uncle is here.
2a. The stick is too short.
 b. The stick is not long enough.

The sentences in 1 all designate the same intended referent and in some contexts are informationally equivalent. The specific sentences in each case differ, however, in the way the information is coded and in the specific mental processes involved in arriving at that meaning. They also differ in the assumptions they make about the listener; the first could be used only if the listener already knew who George was and so on. This picture is complicated by the fact that, frequently, different sentences appear to arrive at a common effect without having a common meaning. Thus, Sheila Jones (1966) gave subjects sheets of paper filled with the randomly ordered digits 1 to 8. Some subjects were given the instruction in 3a while others were given that in 3b:

3a. Mark the numbers 3, 4, 7 and 8.
3b. Mark all the numbers except 1, 2, 5 and 6.

Subjects found the latter more difficult, implying that the same information is more easily processed when coded one way than when coded another way. This, however, raises the question of the nature of the equivalence of sentences which are superficially so different. It may be noted that in the context in which they were given, both of these sentences convey the same information; it is the 3, 4, 7 and 8 that are to be crossed out. Hence, in this specific context they are paraphrases of each other.

A new context would render them non-equivalent. Given the choice between two equivalent instructional sentences, one would choose between them on the same basis that one would choose between two instructional forms in general, that is, in terms of the complexity of the demands they make upon the learner and their generalizability to new but related problems.

This last point warrants an additional comment. In teaching children to find the perimeter of a particular rectangle, two instructional sentences which would convey the same information are the following:
4a. Add the 7 to the 5 and multiply by 2.
4b. Add the length to the width (...) and multiply by 2.

Yet these two statements differ radically in their demands upon the listener, the latter being more complex than the former, and in terms of their generality, the latter being more generalizable than the former. Generalizability refers simply to the fact that the second statement could apply to many different rectangles while the first could apply only to that particular rectangle. It is interesting to note that the greater the generalizability of an instructional sentence (roughly, its instructional value), the greater the demands it places upon the learner (roughly, its ease of comprehension).

The teaching of rules and strategies fall into a similar position; they are very difficult to comprehend but they have very wide generality. There is always a trade-off between these two factors, a trade-off that is reflected in an instructional rule of thumb coined by Bereiter (personal communication) to the effect that if the rules are easily stated and have few exceptions, teach the rule and let the learner practice applying it to various problems; if the rules are not easily stated or have many exceptions, simply give practice on the problems and let them extract what rules they care to for themselves.

The major limitation of language as an instructional medium, along with all cultural media such as graphs, diagrams, numbers, mime and so on, is that the information is conveyed through a symbolic system which places high demands upon literacy in that medium. Further, the meaning extracted from those symbolic systems will be limited to the meaning acquired by the use of that symbol in the referential or experiential world. Thus, the meaning of the word 'square' develops along with perceptual knowledge of squares and as the set of perceptual features increases; this in turn is accomplished by differentiating squares from an increasingly large set of alternatives (Olson, 1970*b*). Stated generally, this limitation of language implies an ancient point that no new information can be conveyed through language. If the information intended by the speaker falls outside the listener's 'competence', the listener will interpret that sentence in terms of the knowledge he already possesses. It follows that instruction through language is limited to rearranging, ordering and differentiating knowledge or information that the listener already has available from other sources such as

modelling or through his own direct experiences. In spite of this dependence of language upon perception, perception does come to be shaped in a way to permit easier comment, for reasons examined in the remainder of this essay.

On the acquisition of skills and abilities

Having said that knowledge from different forms of experience can map on to a common deep structure, we must now make plain that there are also differences. The most important non-equivalence between experiences of events in the three forms is manifest not so much in the knowledge acquired, but in the skills involved in extracting or utilizing that knowledge. It is true that common knowledge of zebras may be obtained from actual experience and from appropriate sentences, but the skills involved in the two cases are entirely different; it is no less a skill to discriminate zebras from horses, albeit a skill so overlearned that we fail to recognize it until we are faced with a subtler but equally 'obvious' discrimination between Grant's gazelle and impala. However combinable the outcome, the skill of discriminating is a radically different skill from extracting the same information from language. The crucial issue for instruction then becomes one of deciding which skill one wishes to cultivate.

What of these skills? As we pointed out earlier, they are frequently rendered invisible by our habitual focus on the knowledge specified through the activity. As we examine a rock by turning it over in our hand, we are not aware of the fact that we acquire knowledge about the rock but the skilled manipulation that gave rise to the knowledge of the rock is transparent to us. Carrying out that act across widely divergent objects or events would be responsible for the development of a skill of wide applicability. But if we look at the general skills that make up our cognitive or intellectual ability, we see that they are marked by the same property. Verbal, numerical and spatial abilities reflect skills in such cultural activities as speaking and writing, counting and manipulating Euclidean space.

It is enormously to Piaget's credit to have insisted and demonstrated that the structure of any ability must be conceptualized in some major part in terms of 'internalized activity'. Activities one carried out in the physical world—rotating an object in space, lining up objects to form a straight line, ordering objects serially—come to be internalized or carried out mentally. There is not only an

internalization of operations, but an increasingly economical representation of diverse events operated upon. A face looked at from various angles comes to be represented as a single face. Even more important are the temporal ordering operations, that permit an appreciation first of physical order then of logical relations. Once we can convert back from a changed state to our original one, we come to appreciate that such reversibility is a logical possibility or property of events and not simply an act one performs. In turn, such operations make it possible to transform a novel event into some standard or base event, or convert some base event into a new structure more appropriate to novel contexts.

The operations specified by Piaget were largely those appropriate to the manipulation of real objects in the physical environment. His basic premise is that their internalization not only produces the groundwork for logic, but assures that logic will be appropriate to the state of the world one experiences. Such operations, consequently, have a wide range of applicability and appear to be almost universally relevant to problem solving. But internalized activity related to the physical environment does not begin to describe the range of activities of the human mind.

Specifically, it leaves out of account how we learn to cope with the cultural or symbolic environment. 'Learning from the culture', like learning from physical activities, involves the act of picking up information to decide among alternatives, also involves skills and results finally in a biased knowledge of reality. There is no objective reality to 'copy' or to 'imitate', but only a selection from that reality in terms of the kinds of practical and symbolic activities in which we engage. Thus, Nelson Goodman is led to say that 'the world is as many ways as there are correct descriptions of it'. Similarly, Cézanne pointed out that the artist does not copy the world in his medium but rather recreates it in terms of the structure of that medium. So too, with the ordinary man operating in the various symbolic systems of his culture. Whorf was among the first to argue that we 'dissect nature along lines laid down by our native language'. But it probably goes even beyond that to something comparable to Gide's advising young poets to follow the rhymes and not their thoughts (Goodman, 1971). For the child, as for the creative artist, the use of the culture involves the process of expanding and refining the code, of defining 'lawful' or 'comprehensible' or 'possible' options as he goes. This is the heart of skill in the use of symbolic codes. Even our failures in understanding new media, as McLuhan has pointed out, came from a failure to recognize that they require different skills than the medium they

replace—as in going from an oral to a written code or in going from print to television.

New requirements, new purposes, and new activities alter our perceptions of objects and events; this is no less true for different cultural activities than it is for different physical activities. It follows that such symbolic activities as drawing an object, or describing an object, require somewhat different information about that object than does the manipulation of that object. To the extent that these new forms of symbolic activity require previously undetected information about the world, the media of expression and communication are *exploratory devices*—a point of immense importance to an understanding of the child's acquisition of knowledge.

Technological realizations

We return for the last time to the scheme illustrated on page 25. The column headed 'Technological realizations' indicates, in a rough manner, the media appropriate to each of the modes of experiencing the world. Learning through contingent experiences may be facilitated through rearranging the environment to render the consequences of activity more obvious. Laboratory experiments are attempts to simulate direct experience. Hansen (1958) has carefully documented how the elaborate arrangement of a physics experiment is merely a device for making invisible processes perceptible. Structured environments, simulations, toys and automatizing devices of various sorts have the advantages both of extending the range of a child's experience and in making the relations between events observable or otherwise comprehensible.

Observational learning is realized through the provision of a model—'This is how you break out a spinnaker'. As we pointed out earlier, carrying out a performance for its own sake and carrying it out so as to instruct another are not identical. A good demonstration makes explicit the decisions made in the course of the activity—thus a good demonstration shows the child what not to do as well as what to do; a skilled performance makes these same decisions invisible. Technological media can greatly facilitate these processes by highlighting in various ways the critical points in the performance; slow motion or stopped action as well as descriptions and drawings including caricature may have this effect. Such instruction, while it may convey some of the same information that would be apprehended

through direct contingent experience (by virtue of its shared deep structure) is never complete in itself but rather specifies some of the major features to be looked for when actual performances are attempted. That is, the forms of instruction rely heavily on prior or subsequent experience to 'instantiate' that information.

The instructional effects of a model are greatly increased by tying that demonstration to an appropriate symbolic representation as in the provision of a few mnemonic rules. 'Keep your weight on the downhill ski' coupled with a demonstration will render the demonstration more comprehensible—the observer knows what to look for. But even this will not perfect the novice's performance; direct contingent experience is required to 'instantiate' that instruction. Indeed, it is probably not until such instantiation occurs that the proposition is fully comprehended. One says (after the first fall), 'So that's what he meant'. Hence, all modes of instructing are in some sense incomplete or inadequate for achieving full performatory power or efficiency and knowledge in the last analysis is tied to one's own experience.

Learning through the various symbolic systems including language, graphs, mathematics and the various systems of visual representation is realized through books, graphs, maps, models and so on. These media make strong assumptions about the literacy of the learner. The properties of a 'good' explanation, description, or portrayal are complex subjects worthy of study in their own right. But to untangle the educational effects of these symbolic systems we again have to differentiate the knowledge of the world conveyed through the system from the skills involved in the mastery of the structure of the medium itself. As to the knowledge conveyed, these systems are useful for the partitioning of alternatives or the conveying of information in a way that is fundamentally compatible with the information picked up from other types of experiences. You may learn that the stove is hot by touching it, by seeing someone recoil from touching it, and by being told that it is hot. Granted some level of literacy and granted that the learner has had some experience to 'instantiate' the experience, the three forms are essentially equivalent, as we pointed out in the first part of this essay.

However, in regard to the skills they develop, symbolically coded information differs radically from contingent experience and from modelling. The choice of an instructional means, then, cannot depend solely upon the effectiveness of the means for conveying content or developing knowledge; it must depend, as well, on the psychological processes or mental skills that are developed in the course of extracting

that content or knowledge from that particular instructional form. The old experiments contrasting discovery with expository learning, or those simply comparing media such as television with textbooks, fell wide of the mark in that they assessed only the knowledge conveyed—the level at which all instructional systems tend to converge—and overlooked the skills developed—the level at which all instructional systems diverge.

We return then to our point of departure. The acquisition of knowledge as the primary goal of education must be reconsidered. The analysis we have developed points to the centrality of skill acquisition. To neglect skill is to forget about how an individual acquires and uses knowledge. Formal education has always been concerned with knowledge because it is tied directly to the content of any medium; it has tended to overlook skills because they are implicit in the very use of the media of expression, communication and instruction. How to adjust the forms of instruction to the joint development of knowledge and skill—that is the issue for further debate.

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Education for freedom:
a look at the pedagogy of Freire

Alberto Silva

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In the first two issues of Volume II, Prospects *published articles written by Latin American educators for the International Commission on the Development of Education.*

At a time when several countries of that region are undertaking reforms of their educational systems (see Vol. II, No. 4, the article by Augusto Salazar Bondy), Alberto Silva's analysis, through its emphasis on Paulo Freire's educational methods, seems to be appropriate in order to reopen thought and controversy on this line of thinking.

One of the most serious aspects of the social situation in Latin America is the stubborn survival of certain inhibiting usages, customs and beliefs. Latin American social scientists are agreed that this is due to the prevailing state of 'cultural dependence'. The injustice which presided over the process of colonization still persists; in fact the colonized peoples have embodied in their cultural background an interpretation of reality whereby they justify their own subjection.

Hence, education for social change signifies, first and foremost, freeing Latin Americans from this veritable 'colonization of the mind'. Paulo Freire, the Brazilian educator of international repute, works on this basis.

The 'culture of silence'

We know that every social structure based on domination engenders in the 'underdogs' a system of mental symbols and reactions reflecting and resulting from that structure. Paulo Freire's thinking is founded on this classic observation. He dubs the mentality developed in the

peasant population of most Latin American countries, as the aftermath of Spanish and Portuguese colonization, the 'culture of silence'.

In seventeenth and eighteenth century Latin America, the colonial system inevitably tended to reduce the people to silence. Since colonization was regarded primarily as a commercial undertaking, it was practically impossible for it to father any genuine civilization. When the Conquistadors were firmly in the saddle, they did not as a rule discover the fabulous wealth they had been promised; they therefore took possession of the land. The native inhabitants were gradually turned into mere vassals of these new overlords, who enlarged their estates by exacting labour from a horde of impoverished Indians.

In the end, the peasants tacitly accepted this domination, which matched their general situation in other respects: by their mute submission to any important decision, the peasants contributed to their own subordination; continuing throughout the two or three centuries of colonization, it greatly helped to inculcate the 'dominated consciousness'. It must not be supposed that what we call 'domination' was limited to the physical or political aspects: the peasants' alienation was only complete when they had incorporated the language of their masters with their silence and passivity. The dominated mind literally 'assimilated' the dominating mind: the peasants gradually developed a way of thinking and a conception of the world to conform to certain cultural patterns; these not only helped to perpetuate the *status quo*, but inspired beliefs and attitudes to justify it (Paulo Freire, *Sobre la acción cultural*). Such is the mechanism typifying the 'oppressed consciousness' of the peasant who, like his ancestors, lacks a coherent mental outlook, and cannot critically assess his condition.

The pervasive force of this 'culture of silence' depends on how long the peasants have been assimilated. Such a culture, engendered in and by the objective conditions of domination, with its attendant myths, still has a decisive influence on behaviour, although important social changes have occurred.

If the peasants are, in actual fact, fettered to penury and physical suffering in the prison of their own bemused consciousness, clearly their liberation can never be simply a matter of economics. Any genuine, lasting structural change must be preceded and brought about by a true liberation of this consciousness.

Education and social liberation

In many peasant societies, 'the dominant education is the education of the dominant classes'. Through the mechanism of assimilation or 'introjection' already described, the education imposed on the subject classes as 'legitimate' (i.e. forming part of the approved stock of knowledge), also imbues them with a sense of the 'illegitimacy' of their own culture (*Pedagogía del oprimido*). Paulo Freire, the distinguished Brazilian educator, points to a veritable 'alienation of ignorance' which the present system of education tends to legitimize: the humble man feels his own ignorance to be abysmal compared with the 'master' and his like, who set themselves up as undisputed arbiters of all learning (*Sobre la acción cultural*). The current scholastic system prolongs an oppressive *status quo* and deepens the gulf between the classes which characterizes Latin American societies.

In societies governed by the interests of groups, classes or dominant nations, 'education as the practice of freedom' (a phrase which sums up Paulo Freire's whole outlook) inevitably implies an 'education of the oppressed', not invented on their behalf, but growing out of their own invention.

The object is to enable man to recover his identity as the chief agent of his own destiny. Education thus becomes the 'practice' of freedom.

Such an approach points to a profound change in the concept of education. In the old view, the educational process constantly tended to inculcate certain facts and ideas in the mind of the subject, who was thus turned into a mere receptacle or 'stockpot of knowledge'. Paulo Freire, on the contrary, proposes a 'humanist and liberating conception of education': 'No-one educates anyone, no-one educates himself; men become educated by drawing ideas from each other, through the medium of the world they live in' (*Sobre la acción cultural*).

This outlook enriches the traditional conception of education in various ways. Education must be regarded above all as a 'process of change', leading to the development of the individual, who teaches and transforms himself while teaching and transforming his fellows and his environment. The field of conventional education is thus widened; more importance is attached to the indirect, informal aspects of learning, adapting existing methods to new needs and real-life situations.

The concept of education may thus include a new clientele: the adult population.

Paulo Freire's real originality lies in his manner of applying the principles of modern pedagogy and 'continuous education'. His literacy work provides one striking example, among others. A method of training in reading and writing was evolved from the approach we are describing which has been made available to illiterates, frustrated by the 'education of domination'. For more than twenty years, Paulo Freire has been duplicating his experiments in adult education in urban and rural areas. The cumulative results have convinced him that any effective method of teaching the masses to read and write must be related to their specific problems, and must inspire the illiterate to embark upon a process of enquiry and invention, for the recovery of the speech refused him. Illiteracy is merely the result of a slow erosion of the peasants' rights to express themselves.

A literacy campaign, then, involves teaching the illiterates to express their own experiences, as authors and witnesses of their own history. An intimate knowledge is needed of their 'basic linguistic universe'; accordingly, literacy work begins with an interdisciplinary study of the dialogue in the groups selected. A glossary is compiled from a series of informal meetings indicating not only the words most heavily charged with existential meaning and the population's most typical speech patterns, but also the social context of such words, mingling aspirations, frustrations, beliefs and prospects. A selection of 'generating words', chosen for their phonetic richness, the intensity of their relationship to the social context and their potential 'consciousness-awakening' power, makes it possible to crystallize and reproduce around the nucleus of these keywords, certain concrete 'situations' represented on lantern slides or display panels for discussion by the pupils later on. They meet in groups, perhaps in the house of one of their own number, to form a 'culture circle': during the discussions, they 'decode' the existential situation previously 'coded', to discover its ingredients and reveal its socio-political implications. The generating word which has been discussed is then visually identified and separated into its phonetic elements; these are subsequently recombined to form new words, whether they exist or not (*Una visión práctica del proceso*). Starting from the very first step, the members of the group discover that, peasants as they are, they are perfectly capable of producing their own reading manuals, since they later read the texts drafted during the learning period as an exercise.

Primary importance is allotted to the human environment in relation to any educational objective: a literacy project is a response to a specific situation; human factors determine the effectiveness of the

educational project, and dictate its scope. Social practice is thus linked up with educational work: years of taking silence for granted lie behind the members of each literacy group, who augment their capacity for communication and their possibilities of common action by interchanges of experience and specific skills.

Literacy represents more than a simple pursuit of efficacy, judged by purely pedagogic criteria; it awakens the consciousness of the individual and enables him to engage in activities of more and more human significance. A few words with a maximum of phonetic polyvalence constitute, for the illiterate, the starting point for the conquest of his own linguistic world. These words, arising out of everyday experience transfigured by the criticism practised in the 'culture circle', are restored to the practical world of work and the struggle for existence, and thus become the expression of a means of changing the world.

How does the process set in motion by this type of education develop in practice? The 'existential situations' presented on panels or lantern slides for discussion are regarded as a step towards 'the awakening of consciousness'. A series of ten pictures represent different situations typical of man's activities in the world: nature as mediator in men's dealings with each other, literate and illiterate culture, the transformation of nature through the work of man, cultural patterns, etc. The individual is gradually discovering his place in history and his dependence on the society in which he lives. The necessity of democratizing culture then arises spontaneously; at the first meetings, participants see that education is not the prerogative of the chosen few, but is every man's birthright. Usually the next step is for the members of the 'culture circle' to ask explicitly for instruction in reading and writing, as demonstrated by the reiterated experiments of Paulo Freire, and of those who have used his method.

By the end of thirty sessions, the peasants have learned to read and write, and acquired a rudimentary critical sense. It would be illusory to suppose that such short contact with them could commit them to any definite course; no such claim is made, as literacy work does not consist in emptying the heads of the oppressed in order to fill them with revolutionary slogans. The aim in view is above all to affirm a culture hitherto neglected: that of certain peasants who have no other means of expression than their own capacity to talk. The application of the method over whole regions provides proof of the existence of constants in the vocabulary and in the problems of the different groups; these constants are called 'generating themes'. If these could

be fully catalogued and analysed in the near future, the real language of the Latin American countries could be explored, and thus spoken, and even translated into wide-scale action.

It follows from the very logic of the method that literacy should be incorporated into a sort of internal vitalization of small social groups, gradually leading to the transformation of cultural relations and of the very fabric of society.

Education and social consciousness

Freire's method is now applied in may Latin American countries: among trilingual Indians in Guatemala, in farm co-operatives in Ecuador, in connexion with the process of agrarian reform in Chile, on the high tableland of Mexico, in the shanty fringes of Buenos Aires; and the Bolivian government adopted it as the basis of the nation-wide literacy campaign opened last year. Although commonly used to teach illiterates, the same method can be applied in marginal urban milieux for people who have already acquired the rudiments of reading and writing: such was the case, for example, with the experiments carried out a few years ago on the outskirts of Montevideo.

It is not merely a question of awakening the masses ignorant of their historical background, nor of forging an ideological instrument as a prelude to action. In both cases, education would belie its mission of preparing man for freedom and teaching him the constant practice of self-liberation through his own tongue. In Freire's dialectical view of education, there is a constant interchange between man and his world—both still in the making—so that man, in changing the world, marks the effects of his own metamorphosis. Education is the critical reflex of this interaction: it has been defined as 'intensification of the sense of awareness *vis-à-vis* the world' (*Extensión o comunicación?*). Man's relationship with his world tends to transform it; reflection is legitimate in so far as it shapes present or future action.

Thus, *the method engenders a process of change, and is ultimately identified with change, as the system of education coincides with a very specific form of social praxis*: the awakening of consciousness or, rather instilling consciousness. This is a further development which indicates how the situation is appropriated by its originators. Those who have been 'imbued with consciousness' take possession of their environment and incorporate with it in order to change it. Such, at least, is their intention. The process of instilling consciousness cannot,

therefore, be conceded any form of 'neutrality': being the consequence of education, it demonstrates that education, too, can never be neutral, as it sets up to be the 'process moulding man's influence on the world'.

This educational approach may not be neutral, there is no attempt to turn it into an instrument of manipulation. One does not make choices for others; the system aims to teach people to decide for themselves, knowing that any decision implies imminent action, and it has frequently led the newly literate to challenge established authority. Education is not, then a 'discourse' on liberation, nor an effort on the part of the pupil to adapt himself to his own world, and thus become less wretched; nor is it even the expression of the choices which the educators judge to be good for their pupils. It is an opportunity to awaken to reality, and to realize prospects opened up as a result.

Paul Coste

Is learning optimal in childhood or in adolescence?

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The 'alternative to universal primary education'[1] proposed at the Bellagio Conference on Education and Development in May 1971, was somewhat shocking at the time, and still seems to disturb those who are deeply attached to our traditional ways of training children. However, the evidence is mounting that this proposal was by no means flippant or nonsensical! Neil Sullivan, State Commissioner of Education in Massachusetts, has written: 'Our public schools are not working. In many cities, a third of the kids are quitting; almost as many of those still registered simply don't attend. Taxpayers are rebelling at the escalating costs of running schools; many large systems face bankruptcy. Alternative schools are springing up everywhere. The system is literally coming apart at the seams.'

Other critics have analysed the way schools work and decided they are incapable of educating children in the full sense of that word. Carl Bereiter of the Ontario Institute for Studies in Education writes in the *Harvard Educational Review* (August 1972), 'Schools should drop their *educational* function in order to do a better job of *child care* and *training*.' He goes on to say that 'education is not (child) development but the effort to *influence* development'. He sees as a far more realistic task the provision of superior child care and basic skill training such as learning to read, write and handle numbers. These, according to Bereiter, are not educational matters and need not be carried out in schools as we have known them.

Another interesting contribution to the debate on universal primary education was made by William D. Rohwer from the University of California at Berkeley. In 'Prime Time for Education: Early Childhood or Adolescence'? (*Harvard Educational Review*, August 1971)

1. See *Prospects*, vol. II, no. 3, p. 295, and vol. II, no. 4, p. 442.

he states that 'it has not been established that early childhood is the optimal age range for imposing the academic content traditionally required'. He asks if 'the present emphasis on early childhood education make(s) sense in light of later cognitive growth in children?' His conclusion is that formal schooling prior to age 11 or 12 should be abandoned on the grounds that it does more harm than good.

The Bellagio alternative to universal primary education makes a good deal of sense when seen against this background of disintegrating traditional schools, and the doubts of serious critics as to whether education, as distinct from child care and training is viable (or helpful). The alternative that six years of schooling could be offered, say from 13 to 18, emphasizing the teaching of values, citizenship, sensitivity, creativity, as well as a systematic introduction to the cultural heritage of the community. Attendance could be voluntary and there should be no pretence that such schools had a custodial or child-care role. Likewise, skill training, especially of a vocational nature, should not be provided in these schools. Training should take place *in* the community (hospitals, industries, social service centres, child care centres, etc.).

The argument that neither skill training nor child care functions require highly trained personnel, i.e. university graduates, opens the possibility of employing ordinary people, young and old, drawn from the community. Adolescents and parents could be trained to perform these functions with the guidance and supervision of well-qualified professionals. Programmed texts, radio, sound and video cassettes, as well as television would be utilized. The success of the pioneer television series *Sesame Street*, is a good example of what out-of-school training could become.

Bereiter sees such a de-schooling movement as a tremendous stimulus for the educational voucher plans, under which each parent would be allotted so many 'educational credits' to be 'spent' in the training centre or child-care centre of his choice. He points out that some children need far less training than others or much more child care in safe, happy places where children are exposed to wide varieties of voluntary activities. A great deal of incidental learning takes place in such places, which are not much different from the 'open classrooms' seen today in many English and American schools. But the learning is not deliberate, not consciously directed towards adult-imposed goals. Bereiter classifies such experience as effective child care, rather than education.

Clearly there are serious problems which would accompany the delayed entry into schools of our children and adolescents. At the

moment of entry a truly individualized programme would be needed to accommodate the unique experience each child would have had in his first eleven or twelve years of life. It is hard to imagine any two children with the same background, the same skills, the same readiness for *education*. Far from being a disadvantage, such a state of affairs would force the educators to do thoroughly that which is done poorly in our secondary schools today. New diagnostic tools for identifying the needs of each child, and new kinds of learning experiences for individuals and groups would be needed. School-community co-ordination for the training needs of the child must be assured, with far more sophisticated use of time, space and the calendar.

A second problem, that of inequality, may well become worse under such a reform. One of the main arguments for uniform and compulsory schooling is that it seeks to provide all children with skills and information deemed essential for participation in the economic and social activity of the community. We say that all children must learn to read, write and figure, although we know that many don't achieve these goals. What would happen, we might ask, if children (and their parents) were quite free not even to try to learn these fundamentals? Would we not widen the gap between the privileged, the successful, the ones who are concerned for their children on the one hand, and the disadvantaged who might not even provide minimum child-care or skill training on the other? It remains to be seen. Would this mean a new degree of inequality, or just a continuation of the stubborn inequality which permeates the world today? My own feeling is that most of us fail to understand the degree of inequality which we tacitly accept today, and that the proposed new structure for child care and training would not make the situation any worse. The Bellagio concept for delaying the starting age for school aims at the provision of educational services when they will have the greatest impact. The goal of social equality is not seen as a direct consequence of the reform.

One protection which must be provided is strictly enforced child-labour laws. We cannot allow parents the choice between exploiting their children, and providing suitable care and training for them during the years before enrolment.

Finally, the argument put forward at Bellagio, that many States cannot afford to provide more than six years of formal schooling, may be perfectly true. But my own view is that deferring entry to age 12 or 13 is not really an idea to save money. In fact, I suspect that the provision of pre-school child-care and training may in the end cost the community as much as it spends on rather inadequate schools today.

Elements for a dossier

'Learning to be': the renovation of education

'Human history becomes more and more a race between education and catastrophe.'
H. G. Wells, The Outline of History *(1920), Chapter 15.*

The genesis of a universal book

In December 1970, by a resolution adopted at its sixteenth session, the General Conference of Unesco authorized the Director-General to establish an International Commission on the Development of Education.

The Director-General appointed the Commission in February 1971, conferring its presidence to Mr. Edgar Faure, a former French Prime Minister and Minister of Education, and calling on persons belonging to different cultural regions and particularly qualified by training and experience: Felipe Herrera (Chile), Professor, University of Chile, formerly President of the Inter-American Development Bank and Executive-Director of the International Monetary Fund; Abdul-Razzak Kaddoura (Syrian Arab Republic), visiting scientist at the Nuclear Physics Laboratory, Oxford University, and member of the Board of Governors of the United Nations International Atomic Energy Agency; Henri Lopes (People's Republic of the Congo), then Minister of Education and now Minister of Foreign Affairs; Arthur Vladimirovitch Petrovsky (U.S.S.R.), Secretary of the Psychology and Physiology of Growth Section of the Academy of Pedagogical Sciences; Majid Rahnema (Iran), formerly Minister of Higher Education and Sciences and Vice-President of the United Nations Economic and Social Council; Frederick Champion Ward (United States), programme adviser on international education to the Ford Foundation and former Dean at the University of Chicago.

Aided in its work by a seven-member secretariat of Unesco staff members and outside consultants, the Commission enjoyed, thoughout its work, full intellectual autonomy and complete freedom in establishing the contents of its report and in the organization and execution of its work.

During the period between March 1971 and April 1972, the Commission members visited twenty-four countries to learn the views of authorities responsible for education and development in those countries, teachers and students. In addition, at specially organized round-tables they met people from other countries of the regions visited; followed the work of the Third Regional Conference of Ministers of Education and of Ministers responsible for Economic Planning in Asia and of the Thirty-third International Conference on Education; and made contact with certain senior officials of various institutions and organizations in the United Nations system, notably, officials of the United Nations Development Programme and the International Bank for Reconstruction and Development.

The Commission submitted its report to the Director-General in May 1972 and it was immediately published in English and French.[1] *The Director-General set forth his comments, and it was then discussed by the Executive Board. At the same time, the report was submitted to the seventeenth General Conference of Unesco as a working document; the delegates from 130 Member States were on the whole agreed in considering the report to be an important, bold, innovatory and hitherto unparalleled work in the literature on education.*

Immediately after publication, the international press devoted no less than three hundred articles to it, and translations of the report are planned into Danish, Dutch, Finnish, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Persian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Swahili, and Swedish.

But, more important than its success in bookshops will be the concrete follow-up in Member States and in their educational systems. The seventeenth General Conference 'invites Member States to examine the guidelines and recommendations of the report and to communicate their conclusions to Unesco for submission to the International Conference on Education at its 34th Session' (in Geneva, September 1973). On the other hand, it specifically invited the Director-General 'to provide, using the resources of Unesco's Approved Programme and Budget and such extra-budgetary funds as may be available, assistance to Member States in the organization of meetings and symposia for the study of specific problems posed by the concepts set out in the report, and the following-up of its recommendations[2] *at the national, sub-regional and regional levels, with the support of Unesco's Regional Offices for Education; and to provide such aid, if need be, for the organization of meetings of an international character.'*

At several levels and in several different countries, the process is under way. Prospects, *as a first step, has sought to contribute to the far-ranging debate which has begun, by asking specialists from Africa, Latin America, Arab countries, and Europe to express in these pages their first reactions to the analyses and proposals in the report. The most striking and positive result, as the reader will see, is the awareness, through the report,* Learning to be, *of the real education crisis in the countries of the Third World and the certainty that if the report is taken as seriously as it needs to be and as it should be, from now on nothing will be the same in education.*

1. *Learning to be*, Paris, Unesco; London, Harrap, 1972; *Apprendre à être*, Paris, Unesco, Fayard, 1972.
2. The Editor has inserted into the texts of the articles, where it seemed relevant, the twenty Recommendations of *Learning to be*.

René Maheu

An aid to reflection for necessary renovations

In preparing its report, the International Commission on the Development of Education has accomplished the work of broad reflection on the situation and objectives of education it was asked to undertake under a mandate which indicated that 'on the basis of a critical analysis of the present situation, of the main trends observed during the last decades and of the experience acquired in different countries, it will no doubt be called upon to define the new aims to be assigned to education as a result of the rapid changes in knowledge and in societies, the demands of development, the aspirations of the individual, and the overriding need for international understanding and peace.'

The report itself answers to its object, which was to assist governments to formulate national strategies for the development of education. It could provide the starting point for a series of studies and decisions at the national level. It will also serve to guide international co-operation in education, and Unesco's work in particular, during the Second United Nations Development Decade.

Throughout its work the Commission appears to have paid full heed to these guiding principles:

'(a) that the term "education" should be taken in its broadest connotation of coherent and deliberate action aimed at the transmission of knowledge, the development of aptitudes, and the training and betterment of man in all respects and throughout his life;

'(b) that quantitative expansion and qualitative improvement should be regarded as two complementary aspects of educational development;

'(c) that educational development should be studied within the framework of over-all integrated development;

'(d) that education should be envisaged as both an end in itself and a means of development;

'(e) that the work of the Commission should cover both the developed and the developing countries.'

Indications received during the past two years abundantly confirm the need for and timeliness of the task entrusted to the Commission. At the Conference of Ministers of Education and Ministers responsible for Economic Planning in Asia (Singapore, 31 May to 7 June 1971) and the Conference of Ministers of Education and those responsible for the Promotion of Science and Technology in Relation to Development in Latin America and the Caribbean (Caraballeda, Venezuela, 6–15 December 1971), and at the thirty-third session of the International Conference on Education (Geneva, 15–23 September 1971), declarations by delegations showed that for many countries solutions to educational development problems call for an over-all reform of educational systems and that this reform requires both a new over-all concept of education and a redefinition

of its goals. At the same time organizations for international aid and co-operation, such as the United Nations Development Programme, the World Bank, and Unicef, are more and more raising fundamental questions as to the scope, the methods and the directions of educational-assistance policies. In so far as the report attempts to furnish answers to this double series of concerns and questionings, it is admirably timed to meet the present needs of the world.

A decisive turning-point

The Commission set its reflections against a wide general background by considering education both historically and as one of the great world problems for the future of mankind. This full vision of education as linked with the principal changes in the modern world is just what is needed for a study intended to help the States individually and collectively to take stock of the present situation and orient their future action.

Now, it is clear that the present juncture is a decisive turning-point in the development of education. Thus, quite rightly, the necessity of reconsidering educational policies and practices comprehensively and in depth is presented with a force of conviction that compels assent, in a text abounding in facts and ideas, the product of a generous and stimulating train of thoughts.

A first series of arguments is based on the history of education and on a critical assessment of its present state.

A critical assessment

The past is evoked not in the manner of historians eager above all to reveal the facts, but rather by a method designed to throw light on current educational troubles by showing their origins and to instigate action that will end them. The authors have set out to demonstrate that the time has come for rediscovering he wealth of educational concepts and practices which recent evolution has obscured and moving beyond institutions, methods and attitudes which in their day made for advances in education but now weigh it down and prevent it from meeting the new demands of the modern world.

The detailed balance-sheet of the present state of educational action set forth tends to confirm and reinforce the results of historical analysis. While drawing attention to the progress made, it shows the various dead-ends to which present-day education often leads. In particular we find that, in spite of the spectacular general increase in school systems and the growth of school-attendance rates, the actual number of children not attending school and of illiterate persons is slightly increasing. Moreover the training given in schools is often inappropriate or antiquated. Sometimes the school creates social problems by launching into life young people who are ill prepared to face it, instead of providing the problem-solving elements society expects. In many cases and in many respects, opportunities are still unequal and the school tends to reproduce or even accentuate disparities between social groups. The contribution of education as hitherto conceived towards the real development of the Third World is highly questionable. The steady pursuit of educational endeavour appears to encounter grave financial difficulties. Finally, life in school often displays features scarcely favourable to the development of the personality, such as élitism, authoritarianism, rigidity.

On the whole, no doubt these criticisms can be accepted though over-simplifications or excessive generalization must be avoided and care taken not to underestimate the value of the many reforms now in progress. In this regard, we should note the method adopted, which is, as it were, dialectical. Every statement of inadequacy or failure is intended to advance the central ideas of the report: the need for going beyond current educational institutions, transforming them or supplementing them with other forms

of education, and the search for an enlarged, diversified education which would, at the limit, become 'a continuous project for society as a whole', for a transformed 'learning society' whose entire knowledge and entire means would be put towards promoting education for all persons at all ages.

This orientation is right in that it defines clearly the framework within which educational action coherently inspired by the concept of lifelong education must henceforth operate. The school in its traditional form cannot be the only scene of educational activity. The dividing lines between *in school* and *out of school* must be done away with; we must call on every organization, every person capable of playing any educational role.

The emergence of new aims

If the first series of arguments bears on education in itself, a second category of considerations looks at it in the context of its relations with society—the external pressures it undergoes, the new demands imposed on it by socio-economic and technological changes. These reflections lead to a general definition of the new ends of education with respect to the great problems of the modern world. Education 'may help society to become aware of its problems' and thus contribute towards their solution.

It is probably not distorting the sense of the report in this respect if we distinguish two essential orientations. First, as the report quite rightly notes, education 'suffers from growing social and economic gaps and disequilibria'. It must endeavour to reduce these disparities; priority must be given to the most deprived countries, the least favoured populations. Second, technical civilization has negative aspects, entails threats and nuisances. In this respect, education must be an 'antidote to the many distortions within man and society'. It must prepare men better able to master the risks involved for them in modern civilization.

Doubtless linked to these considerations are the very pertinent reflections of the President of the Commission, in his preamble, on strengthening the demand for democracy. The halting of economic growth foreseen and even advocated by some experts must be rejected, because it would lead to a continuation of the privileges of the rich countries; but in order that growth may continue, yet the quality of living be ensured, it appears that 'communities must organize their requisite priorities and disciplines democratically. This presupposes that the people concerned will be sufficiently educated, informed and aware.'

The theme of democracy, democracy in education and through education, takes on a greater importance here. Concern for true democratization of education means moving beyond the idea of formal equality of access. To begin with, what matters as much as access to education is real equality of chances for success in education. For this there must be 'a resolute social policy to correct unfair distribution of educational resources and effort', 'making certain that each individual receives a suitable education at a pace and through methods adapted to his particular person'. Moreover the obligation to enlarge access to education leads to a more flexible conception of the right to education, a right which often cannot be ensured by the institutional school system alone but requires use of a variety of in- and out-of-school methods.

Finally, while education must be democratized and give everyone his fair chance, by the same token it can and therefore must also be a preparation for democracy. Through participation, it will provide an apprenticeship in democracy. From this point of view, civic training is an essential part of educational action.

The points at which the Commission takes a stand in favour of the scientific and technological aspects of education should also be noted. The dangers man is exposed to by technical civilization are mentioned, but not from a feeling of distrust for science and technology as such. In the developing countries, especially, a major

problem is the integration of science into culture: 'development . . . implies adopting a scientific frame of mind'. In a general way, the acquisition of that frame of mind is one of the essential aims of education.

A dialectical conception of education

The goal of education being in the last analysis the 'physical, intellectual, emotional and ethical integration of the individual into a complete man . . .', it is from this end that emerges the new conception of education in the report. It is not a systematic conception but rather an *ensemble* of trends that are at once distinct and bound together by a network of dialectical tensions.

Permanent self-learning in a learning society

The major theme of the Learning Society, a society becoming wholly educational, with its daily life—occupations, economic and governmental structures, family and work relations, mass media—has a corresponding affirmation at various points in the report: affirmation of the role of the individual who educates himself, frees himself from the hierarchical authority which characterizes a certain stage of pedagogic evolution; in short, the individual who is the subject and not the object of education. This dialectic of educational socialization and individualization is one of the most interesting aspects of the report. In it the profound significance of the concept of lifelong education is to be discerned.

The most conspicuous aspect of the concept is its temporal dimension: education is not limited to the years traditionally called the years of learning and training, but affects every stage of life. But this extension is only possible if we accept on the one hand that all society takes part in the educational process and on the other hand that education is not something to which we are subjected as users to be cast off once we arrive at adult years, but is a fundamental aspect of the way in which each individual finds his place in the world around him and becomes a part of it. The position the Commission has taken on this issue, considering 'lifelong education' as 'the master concept for educational policies in the years to come' has thus confirmed a major orientation expressly prescribed for Unesco's efforts by the General Conference.

Synthesis of the requirements of scientific rationality and creative spontaneity

Another side of education which the report puts under a new light: modern education must attempt to combine the demands of scientific reason and the aspirations of spontaneous creation. While many of the difficulties education is experiencing today are due to social changes inseparable from the scientific and technological revolution, educational renewal can and must rely on the findings of scientific research in all fields affecting man and his relations with society and on the application of modern technologies to the educational process. The Commission has done valuable work in giving an overview of the most notable advances in scientific research that can serve to transform and modernize teaching and education: results of studies on the brain, on nutrition; recent contributions of psychology, linguistics, anthropology, information theory, and so on.

There is also a useful survey of the problem of educational technology. Two ideas should here be specially noted: first, that technological innovation is valueless unless it is based on an appropriate pedagogical approach and is truly integrated into an authentic educational process; second, that there is a need for conceiving relatively simple, cheap, widely applicable media which would be analogous in education to what are called 'intermediary technologies' in industrial development.

The Commission is also right in noting that the search for pedagogic efficiency, for scientific

and technological or even industrial inspiration, must not cause other trends to be overlooked: the aspirations of people who, in teaching practice, take part in various forms of educational action; the concern for making education an instrument for reintegration into society and putting the accent on creative vitality; 'young people's protest . . . when they demand the right to emotional expression and proclaim their rejection of constraints'.

But, finally, a more rational conception of the means and types of pedagogic action stimulates individualization of the educational process and the autonomy of learners; and we can only endorse the authors of the report when they declare that 'we must unite criticism, democratic participation and imagination with the power residing in operational, scientific and rational organization . . .'.

Dynamic integration of formal and non-formal educational activities

It is through a similar process of dialectical synthesis that the Commission's treatment of the possibility of a 'disinstitutionalization' of education must be appreciated. As has already been emphasized, one of the ideas that actuate the whole report is the necessity for renouncing the monopoly of the school, which in its traditional form can no longer meet all the many needs of contemporary society in either the developing or the industrialized countries. But that does not mean that the Commission aligns itself with the partisans of 'de-schooling'. If the report sometimes evinces sympathy for what might be called the 'libertarian myth' in education, the fact remains that the 'de-schooling' theory is expressly rejected as Utopian. The report says rather that we must draw both on the transformed, regenerated school and on education in out-of-school forms: varied, flexible, and non-institutional. Hence we must integrate school and university institutions on the one hand and non-formal educational activities on the other, so that they coexist in a fruitful relationship as complements or opposites. According to the report, only this pluralism of converging educational actions can provide an answer to the ever-growing demand for education and bring about a real reform of the quality of human education.

Toward a synthesis of the national and international aspects of educational policies

There is, finally, another synthesis to be conceived and realized: that of the international and national aspects of educational policies. That there are international educational problems is attested by the very existence of the International Commission on the Development of Education and proved by its report. The educational crisis is one of the great problems of modern society, which, for the same reason as the problems of population, economic growth, and environment —and even more than they, calls for concerted reflection by the international community.

In this connexion it is gratifying to note that certain fundamental orientations of universal validity emerge from the report. This is especially true of the methodological considerations according to which the co-ordinated, rational development of educational action must come about as a process in three successive stages: policy-making, strategy-development, and planning— policy defining and co-ordinating the objectives; strategy presenting combinations of methods according to hypotheses that correspond to different possible choices; and planning determining the sequence of actions and programmes to be undertaken in terms of qualitative and quantitative objectives defined by policy and according to options contained in the strategy. There is a general validity, again, in the statement: 'Linear strategies can no longer be justified'; and in the statement that strategies must move 'from a uniform procedure to diverse alternatives'.

National models of development . . .

To say that educational strategies are national is, in the first place, to record a simple statement of fact. The power of decision is the prerogative of governments. They, in full sovereignty and after setting the educational and extra-educational goals that should guide their country's educational policy, take the necessary measures for implementing them. But it is also and above all a recognition that educational activities are always part of a concrete context: cultural, economic, social and political. An educational strategy cannot be conceived without taking these factors into account, and one must unreservedly approve the Commission's declaration, apropos the general problem of development, that 'the essential criterion becomes the use of an authentically national development model and to ensure that the entire population participates democratically in the development effort'.

To emphasize national policies, strategies and plans, the report shows, is not at all to deny the existence of certain orientations and of certain common approaches adopted and practised by the international community; it is to revolt against the falsely universal, that is, against the abusive generalization of educational models which, conceived for a given type of society, have often been considered valid for all times and all places and been transplanted to countries where they fit neither the traditions nor the needs. Nor is there any contradiction between asserting the national character of educational strategies and calling for an intensification of international co-operation.

. . . in a universal outlook

This co-operation must first be manifested on the intellectual plane, through development of exchanges of ideas and experiences; it must also be expressed in the assignment of increased resources to operational aid, to education in the developing countries, with particular emphasis on research and the application of innovations which can improve educational action.

The foregoing considerations do not cover the full wealth of the report, which contains a host of ideas and suggestions only imperfectly reflected in these far from exhaustive comments.

Conversely, the field of education is so vast that one may note—without unfairness—that certain aspects of education are neglected in the report. It could hardly be otherwise. The report was not intended to be all-embracing and to cover each and every one of the problems arising in education. Its aim was merely to provide an aid to reflection in respect of certain essential aspects of educational thought and action with a view to throwing light on the choices available. In my opinion, this aim has been achieved in a most satisfactory manner.

It is now up to the governments to put it to the test by seeing to what extent they can use it as a basis for the necessary renovation of their educational systems. That is what some are already doing. I have no doubt that the movement will spread steadily.

Any States wishing to follow this path should in any case know that, in conformity with the recent guidelines furnished by the General Conference, the Secretariat is ready to help them to the limit of its possibilities by placing at their disposal the knowledge acquired by the international community as a whole and the results of the Organization's own experience.

Abdel Aziz Hamid El-Koussy

For a self-criticism of education in the Arab countries

Since the international report, *Learning to be*, presented to Unesco by the Edgar Faure Commission has appeared, it is timely for a somehow homogeneous region like that of the Arab countries to express its reactions. The Arab world itself as its educational system is in a state of flux, and hence the Arab people would be more than gratified to find some guiding light to help them define the direction of their educational policy. The report gives an admirable overview of the dimensions of the world educational situation, revealing the main factors, presenting diagnoses, and prescribing the broad lines of remedy. The Arab countries are happy to find that the report does not suggest an adaptation of education to the course of history; but rather charges education with the responsibility of helping make history by preparing for it. Education is seen by the Arab countries to be the most potent force for supporting political independence, rebuilding human resources, reconstructing society and establishing a national identity. With the move for emancipation which started at the turn of the century, there was a forceful educational movement which aimed at bringing forth qualities of independence, initiative, practicability, social commitment, responsibility, co-operativeness and all the human characteristics needed by the Arab citizen to reinforce his political independence, and be on a par with the progressing world.

The Arab countries did not acquire independence all at once. While one country became completely independent, another was on the move; and during the move for independence countries learned a great deal from each other.

We may add that the Arab region has a long and varied history determined by its strategic position on the world map, and by resources and possibilities often coveted by others. History tells the Arab countries that they were the cradle of civilization, the first source-land of wisdom and spiritual guidance. Side by side with this glorious past they have a turbulent present and must build for a better future. While the distant past fills the Arab citizen with pride, confidence, enthusiasm and hope, the recent past acts for some as a challenge and for others as a source of inferiority, downheartedness and regression. This may in part explain the conflict and the hesitation seen in attempts to decide which direction to take in education.

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The Arab context

The writer of the present article does not mean by the title he chose to draw a balance sheet stating in one column the findings and in another the absent items which, to his estimate, should have been there. The attitude he takes springs from the fact that the report gives in an unprecedented way a complete picture of the world education situation. Since the many major problems overshadow the almost infinite number of smaller ones, the reader keeps rediscovering in subsequent readings items he missed at previous times. The Arab educator looking closely at this report finds almost all his particular problems reflected in it, but the weights he gives to the problems are different from those given by the report.

For example, the report says on page 75: 'Pedagogy could improve immensely if it were to acknowledge two fundamental weaknesses that all too often make it a hard taskmaster. The first is ignoring, not to say purely and simply denying, the subtle and complex workings of a personality, the multiplicity of its various forms and means of expression. The second is failing to allow for the infinite diversity of individualities, temperaments, aspirations and vocations.

'Nowhere does this lack of understanding appear more clearly than in the inordinate importance given to selection, examinations, and diplomas.'

Yet, some educational authorities in the region think that it is 'examinations' that need reform in the first place. They are convinced that examinations well sharpened and properly administered provide stimulation and thus raise the levels of performance. They think that examination reform means making the habitual examinations more rigorous, more competitive, and, to their estimate, more valid and more reliable. The report in this sense seems to aim at less formalism and prefer self-evaluation techniques that are built into the learning process itself.

Another aspect is the order of importance of the *subject matter* in relation to the *subject matter approach*. Education authorities in the region on the whole attach more importance to the subject matter than to the approach, and for them the scientific facts are more important than the scientific attitudes and methods, while the report takes exactly the opposite view. Hence memorizing becomes more important for the Arab learner than thinking or experimentation, and the memorizing of grammatical rules becomes more important than effective language habits. The same line of thinking is found in social education as compared to social information, in citizenship education as compared to citizenship information, in nutritional education as compared to nutritional information and in many other areas. Curriculum makers and textbook writers talk well about principles but there is usually a gap between these principles and practice.

The Arab education authorities, like many others, will naturally also stop and think when they are faced with the thought that they should educate for a continuously changing world, and that an individual should be made to avoid 'systematically setting up his beliefs and convictions, his ideologies and visions of the world, his behaviour and customs, as models or rules valid for all time, all civilizations and all ways of life'. Such a trend will make some Arab education authorities reconsider their attitude to moral and to religious education in the light of the report and of the reform movement which appeared in Egypt in the nineteenth century with the leadership of El-Afgani and Mohamed Abdu. Both demonstrate that rational free thinking is a human necessity as well as a religious one. Some Arab countries use almost half of the school weekly timetable for the religion and the Arabic language studies thus leaving very little scope for other areas like the aesthetics, the scientific, the mathematical, the physical, the social, the practical, and the foreign language. What is being taught of religion and the Arabic language

is, moreover, usually (but not always) not sufficiently related to practical everyday life. The foundations of what is being taught and why it is taught have to be thoroughly restudied.

The report also asks the education authorities to think of an open education system that helps the learners to move within it both horizontally and vertically with a wide range of free choice available to them. Such a request is indeed absolutely correct, but for a developing nation with an exploding population, steeply increasing demand on education, scarcity of leading human and material resources, paucity of employment possibilities, dearth of infrastructural possibilities, it is very difficult to think of such a very flexible system. At the same time for a true educator to resist it is almost heretic. But it is to be feared that such fine ideas may be shied away from when presented to the directive and executive authorities because they are felt to be inapplicable at present or even in the near future.

The report also refers to the possibility of studies exempted from the usually accepted formal requirements which could be followed without having to lead to examinations or certificates.

11 *As educational systems become more diversified and as possibilities for entry, exit and re-entry increase, obtaining university degrees and diplomas should become less and less closely linked to completing a predetermined course of study. Examinations should serve essentially as a means of comparing skills acquired under varying conditions by individuals of different origins, a mark not of a conclusion but of a starting point, helping each individual to assess the effectiveness of his own study methods. Evaluation procedures should measure an individual's progress as much as the extent to which he conforms to externally fixed standards.*

Again, in practically all developing countries such an idea will be agreed to in theory but will be resisted in practice. The magic of the certificate will be difficult to break for a long time to come: it has been so far used in developing countries as a tool for upward social mobility. It has been deeply engraved by the colonizers in the hearts and minds of many people that the certificate crowning a certain course of a certain type and defined length is the guarantee to lasting prestige and increasing power.

A substantial portion of the report is quite rightly devoted to a number of defects in the present educational system which are more prevalent in our part of the world than in the developed countries. One of these is the domination of verbalism and more accurately 'oralism'. There is of course a great difference between the two; verbalism covers the written and the oral use of words while oralism implies a prevalence of the spoken word. We depend, in our education, more on words which give the impression that they are equivalent to their content. Education has largely become repetition of words. Evaluation of educational attainment is usually evaluation of words reproduced. Education thus becomes inclined to the acquisition and reproduction of verbal material. Good teaching as well as good coaching have become mainly the helping of the student to commit to 'memory' the material as it will have to be reproduced on the examination situation. It normally matters little if words do not carry the meanings originally intended for them. Examinations, as they are, reflect this aspect more than any other and a circular relationship has been firmly established between teaching, learning and examinations. This trio is in fact explicitly or implicitly shaping the very educational trends of many Arab countries and almost all developing countries. The excessive use of talk and chalk, of books, of summaries, of simplifications, of recitation, of quiz is a strong witness. Verbal aspects to many are more important than the practical aspects; classroom talks are usually more important than laboratory, workshop and life activities; theoretical subjects are to a large extent more important than practical subjects;

physical, aesthetic aspects are usually less important than the memorization of an old highbrow poem which is difficult to understand. The obvious or hidden directive thread in many educational systems is to a large extent the verbal aspect and its evaluation by examination, and this tends to shift the growing pupil from a realistic attitude to a non-realistic attitude. One of the main criticisms which the people of developing nations make of themselves is one of excessive verbalism and a lack of realism. These are both counterproductive to experimenting, data collecting, rationalizing, comprehensive examination of situations, and sound decision making. Following the implied superiority of the tongue over the hands, we find technical education in our region, with the exception of Egypt and Tunis, developing less than the so-called academic education.

Present-day educational systems in many countries encourage dependency. The pupil depends on what he reads in a book, and more so on what he hears from the teacher. Information, spoonfed, identically reproduced at all levels, is considered evidence of the superiority of the educand. Hence dependency is being encouraged, in spite of the fact that we talk about educating for freedom, for initiative, for resourcefulness, for independence, for self-improvement and for development.

These systems also encourage individualism rather than co-operative action and team-spirit. Children usually sit in a classroom all facing a teacher standing on an elevated platform, having a separating table in front of him and a blackboard behind him. The child sits next to his neighbour just like a town cinema-goer sits next to his neighbour whom he neither knows nor is even likely ever to talk to. Each individual child has to look and listen to the teacher like the cinema visitors who look to the screen. There is no task needing common concerted effort. If there is, this is extra-curricular—that is, unimportant.

Such individualism is again encouraged not only by teaching methods but also by the prevailing competitive examination trends. All the same, pupils do go together, of their own accord, in twos to help each other commit material to memory, recite to each other but the main objective is for each to attain his own individual ends.

All this links up with the sound conclusion that the Arab countries like other developing countries should attempt to reconsider their education policies in order to cultivate the qualities clearly brought forward by the Edgar Faure report. Accordingly we should educate—for responsibility and social commitment, for freedom and democracy, for creativity, resourcefulness, adaptiveness and initiative and, also—for the full realistic expression of the personality.

21 *All learners, whether young or adult, should be able to play a responsible part not only in their own education but in the entire educational entreprise.*

The report is not in this respect theoretically utopian. In fact it gives the aims and objectives, followed by the strategies which in their turn are also followed by the ways and means; the whole presentation being feasible and comprehensive.

At this point we may list the six contemporary traits which in the estimation of this writer have to be examined and counteracted not only in the Arab countries but also in almost all the developing world. The treatment may take time but can only be effected through education. Such qualities are:

1. Verbalism; i.e., the excessive use of words as contrasted with the contact with the concrete facts;
2. Emotionalism and impulsiveness; i.e., explosiveness of behaviour to situations contrasted with careful judicious examination of fact before decisions are taken and actions pursued;
3. Individualism as opposed to team behaviour qualities and to group comprehensiveness;

4. Dependency, leading to submissiveness and parasitic attitudes;
5. Traditionalism, not meaning that people are expected to detach themselves from their past, but that they should conserve and maintain those of their traditions that help as jumping boards for progress and further development;
6. Exhibitionism; this is the result of taking into account the possible criticism of others and it is prevalent in rural areas especially on occasions of birth, death, marriage, etc. It is a natural corollary of not being in harmony with one's own realistic conditions and due to the fact that one's ego concept does not grow out of sufficient contact with reality.

The diagnosis of the Arab society should lead to treatment which is either curative or preventive as the case may be judged to be.

Apart from the above qualities the developing nations seem to be in need of intensive training in the areas of first, time, and secondly, order. Concepts of time as a valuable element which should not be left to waste away should be brought forward. The same applies to order. These two areas need intensive research to find the differences between types of societies in this respect and the conditions for their handling them.

Objectives and constraints of educational renewal

We are not here to enter into a discussion about aims, objectives, policies, targets, strategies and programmes as they are being discussed in the Arab countries—at the country or at the regional levels—and as mentioned in the report. These in fact have been spelt out in various ways in protocols, treaties, constitutions, declarations and laws. Aims and objectives for the Arab countries usually comprise a raising of the standard of living, a higher degree of democracy, greater justice and greater equality of opportunity, stronger sense of human dignity based on confidence and a more profound sense of security; any one of these five genera laims can be interpreted into social, economic and educational strategies.

All the same, there are obstacles that have to be overcome in order to make perceptible progress. The Arab countries like, for example, to increase their productivity through modernization and industrialization, based partly on the development of technical education. But technical education is not as attractive to the people as the so-called academic education. In fact, the implicit (or even sometimes the explicit) definition of education for some is that it is an exercise through which children can avoid future manual or technical employment. For sixteen Arab countries taken together the percentage of enrolment in technical and vocational education as compared with the total enrolment of secondary education has decreased from 15 per cent in 1960/61 to 11 per cent in 1967/68. Education had been associated in the near past with the means of obtaining office posts which were so designed to help authorities maintain their domination, and was therefore understood to lead to posts as obedient civil servants. Another serious obstacle is population growth. It is true that the Arab countries have made tremendous progress at varying rates during the last thirty or forty years. It is also true that if this progress in education is measured against population growth and its increasing demand we shall find that the rate of increase is slowing down at a rate which is rather disheartening to most Arabs. While absolute enrolment in primary education increased by 11 per cent during the fifties it has increased by only 6 per cent in the sixties, at a decreasing rate in the second half of the decade. Again, if we include those outside the primary school age, i.e. 6–11, we find that the enrolment ratio is not much above 50 per cent. The number of children of primary school age at present out of school is estimated to be 10 millions; two-thirds of them are girls.

The population of 130 millions in the Arab countries will be doubled in less than thirty years and there are indications that the percentage of the primary school age population is on a slight increase. The 1966 Tripoli conference of Arab Ministers of Education and Ministers responsible for Economic Planning put 1980 as a target year for universalizing primary education. This indeed seems remote, if we go on at the present rates and with the present educational means which are already difficult to maintain.

Although this article is not intended to be a detailed analysis of the educational situation in the Arab world, the occasion may nevertheless be taken to define the main constraints to educational development.

The largest obstacle lies, as has been already shown, in the demographic and population factors. There is also the high proportion of young population and the related burden of many dependants in each family, one of the heaviest in the world. In many Arab countries the average economically active person has more than three or four dependants; two-fifths of them being of school age. There is also the high rate of rural-to-urban migration and the 'brain drain'.

Another obstacle lies in the economic conditions of the region. On the whole productivity is low as is the utilization of available natural and human resources. And in spite of the fact that trained high-level manpower is needed we find that the employment market is unable to absorb and benefit by the outstanding or the highly educated. There is no equilibrium between needs, demands and supplies. This is a partial explanation to the above-mentioned phenomena of brain drain. On the other hand, in some Arab countries which have suddenly become rich due to recent petrol production, the *per capita* income is among the highest of the world. The rate of increase in the exposure to modern ways, appliances and conveniences is different from the rate of development in relevant education.

The third set of factors is political—external or internal. The Edgar Faure report did not neglect the political factor, but it has—probably very prudently—overlooked a pernicious current political phenomenon. The newly emancipated countries either fall into the grips of their past colonial powers for cultural, economic and political domination, or become areas regarded by competing powers as possible zones of influence. The report seems to assume that internal conditions in each country take their own natural course. But internal and external conditions strongly influence each other. And if the people are occupied with questions of life and death or with questions of self-identification, then questions of education are naturally relegated to the background. When a country falls under continuing threat, when its fate is all the time in the balance and when it is subject to a state of permanent instability, it is difficult for it to plan for development.[1]

The most serious problem in such situations is that the United Nations and its specialized agencies have proved to have their limitations in such issues. There is in fact need for serious thought on such questions at the world level.

The political aspect extends itself in the Arab region to a number of questions which are dealt with in the Edgar Faure report. Of these, mention may be made of the influence of power states in the form of bilateral cultural aid on newly emancipated countries, where with a population of less than 20 millions, the number of teachers and experts from the pre-colonizing

1. The report gives as an example the case of the Democratic Republic of Viet-Nam in which an admirably varied and functional programme of educational development is taking place in the thick of war. Some idea of its extent may be gained from the example of Cam Binh, a small village where 95 per cent of 3- to 6-year-old children attend kindergartens, 100 per cent of school-age children attend general education classes, 90 per cent of adults have completed primary education studies and a growing number of adults are attending complementary education courses. All in all, six out of ten inhabitants are studying, in one way or another. The case of Viet-Nam, in this writer's opinion, is a very exceptional one.

state reaches (or exceeds) 20,000. The influence usually extends to the whole educational pattern including the ladder, the curriculum content, the language of instruction, the books, the equipment and the evaluation system. The military occupation army seems to have been replaced by an army for cultural, economic, social and political occupation. Some Arab authorities, perhaps still under the hypnotic effect of the previously dominant state, even go to the extent of claiming that school subjects, especially science and mathematics, can only be taught in a European language, since the Arabic language is no longer fit for teaching modern subjects.

Belonging to the same set of political factors there is that which led to the birth of the League of Arab States in March 1945. The foundation of the League witnessed as its first specific activity the issuing of the Cultural Agreement in 1945 and the establishment of the Directorate of Culture. Its activities and trends since 1945 could be summarized in an effort to promote education aimed at self-awareness, self-identification and progress, in other words at the determination of the Arab identity and Arab development. There were some people over-enthusiastic about a unification which they wanted to see realized in the details of curricula and textbook wording. It then appeared that because of the vastness of the region and the wide variation of conditions, the required unification could only cover the fundamentals, the principles, the standards and the techniques. A new objective to help every Arab country develop from the educational, the scientific and the cultural points of view resulted in the Pact of Cultural Unity signed in May 1964 and implemented in 1970 giving birth to the Arab Nations Organisation of Education, Science and Culture.

Arabic as a medium of instruction and as an important aspect of culture had been a theme in recent history all along. European language dominated until recently one country or another and the question of Arabization formed an important national question for some Arab countries. But the Arabization aspect has also come to cover Arab civilization, Arab folklore, art, music, literature and human and natural resources of Arab origin.

We have up to now mentioned three types of constraints; i.e., the demographic, the economic and the political. There is yet a fourth type—the socio-cultural. It includes the conflict of some degree or another between modernization and conservation; in other words, it includes the attitudes towards westernization which has invaded the Arab world. There is also the women's role in society and the needed share of education. Although the absolute figures are rising rapidly, the proportion of female enrolment in primary schools is still the lowest in the world. Special mention may be made of manual and physical activities as compared to those called intellectual or spiritual; there are, moreover, the attitudes to varieties of arts and leisure time activities. There are also traditional behaviour patterns within the family towards the old, towards governments and authorities, towards time, money, order and discipline.

Efforts and achievements

Some Arab countries are spending more than 6 per cent of their GNP and some are spending almost 30 per cent of their national budget on education. The study of the development of expenditure on education over the years shows a marked rise in all Arab countries. In fact most, if not all, countries of the region seem to have reached in this concern the limits beyond which it seems they cannot go. Local efforts and international aid seem proportionately small and are evidently only meant for stimulating or supporting purposes. Research has also revealed a wastage in expenditure due to the interrupted flow of students and examination policies or to inefficient management.

Expansion of primary education is slow in spite of the fact that there are 10 million children of primary school age who are not attending schools. More than 80 per cent of the population at the secondary school age are also out of school. For every thousand of the total population there are not more than four attending post-secondary education. Rates of increase in girls' education and in technical education are very small. The literacy potential is slowly increasing but more among males than among females. Adult illiteracy among the 15- to 24-year-olds in the region is about 55 per cent (about 35 per cent for males and 70 per cent for females). Such modest achievements are reached in spite of the great efforts made and the rapid growth of the absolute numbers at all levels is itself not without some sacrifice in quality.

Arab countries are obviously exerting tremendous efforts in the field of education but the achievements are short of the region's needs, demands and aspirations, especially if the region compares its modest progress with the overwhelming advance made by a developed country. The Edgar Faure report has quite rightly shown that the gap between the developed and the developing countries is widening at an increasing rate. Do we really expect assistance, as alluded to, from the developed world in such a way that it would make that gap become smaller in the foreseeable future?

Tasks for the future

The report is indeed rich with suggestions, most of which are practical and some of which have reached in generality the level of principles while some others have come down to earth in the minutest detail. The report goes as far as suggesting one single state authority to be given the general responsibility for the whole educational activity or at least for the entire school system. It warns countries like ours of the excessive prolongation of compulsory schooling and tends to advise on the shortening of the time spent on primary education. It also goes to the extent of advising on financial policy whether it be from the inside or the outside, whether it is at the public or voluntary level and whether it is at the state or local level. In all cases it suggests a threefold approach; i.e., increased spending, diversified resources and reduced unit costs. These are only a few examples taken from the multitude of solutions given and which, to our estimate, render the choice of some road exceedingly difficult, particularly for the uninitiated.

We have already seen that the educational achievement in the region is rather small and that we are already exerting almost all our available efforts. We have therefore to look out for other solutions. First of all we have to mobilize all possible resources and see to it that waste is reduced to a minimum. The newspaper, the radio, the television, the cinema and all the available means of correspondence and communication may be used. Every sector in the society can assume educational functions. The Ministry of Health can take over some educational responsibilities and the Ministry of Education can, besides its original duties, assume health responsibilities. The whole society can be transformed into an educated and educative society. In countries where technical education is not yet developed, farms and industries can have educational functions. Also schools could develop industrially and agriculturally. In every field of activity seniors can help juniors learn: in Arab countries it has been the practice for centuries that schools with more than 100 pupils had one teacher, with the seniors helping the juniors learn, and the teacher diligently orchestrating the work of the whole school.

19 *Auxiliaries and specialists from other professions (workers, technicians, professional and executive personnel) should be called in to work beside professional teachers. Authorities should also enlist the co-operation of pupils and students, in such a way that they*

teach themselves while instructing others, and become imbued with the idea that acquiring an 'intellectual capital' involves its possessor in the duty of sharing it with others.

On this occasion it may be suitable to mention that the men and women recently graduated from the secondary or higher schools may be mobilized for literacy campaigns, duties which might be credited for them as part of their share in public service. It is gratifying to see in this connexion that article 21 of the new Egyptian Constitution states that combating illiteracy is a national duty, for which all the people's resources have to be mobilized.

The whole world around us is continuously and quickly changing. An important factor of change is the progress of science and technology, and citizens of advanced countries are often better equipped to face the changes. We therefore have to see that our education produces citizens who are well equipped in science and technology and who are resourceful, adaptable, adaptive, responsible, realistic, efficient, enthusiastic, effective, and conscious of their problems and the way out of them. The concepts, the attitudes, the skills and the modes of behaving acquired in the past have to undergo changes for the present and more profound changes for the future. This means we should think seriously of lifelong education. The concept, as it has been shown in the Edgar Faure report, is not foreign amongst the Arabs, whose old motto was learning from the cradle to the grave.

To ask the authorities at present for continuing education would be asking too much. The only solution seems to be first to develop in the individuals and in the community the ability for self-education based on self-criticism, self-evaluation and the enthusiasm for self-renewal. The question is how to educate for further self-education, how to create in the individual the ability for self-regeneration. It is said nowadays that the objective of basic primary education is adult self-education. The principle is certainly sound and it only means that the teacher is no more a teacher or a master in the real sense of the word. He is a participant in a learning situation. If the boy asks about the meaning of a word, the teacher should not give him the answer but should guide him to learn how to find it in the dictionary. The old Chinese proverb says: if you see a hungry boy, do not give him a fish, but make him learn how to catch one.

So, good care must be given to primary education to cultivate basic abilities including this quality of self-education. The community must itself be developed in such a way as to make various levels and various types of education available any time.

We need to unite the school and the community; education should be mainly based on self-education and should go on continuously and at request. These are the two dimensions of time and space, as they should be for education.

3 *Each person should be able to choose his path more freely, in a more flexible framework, without being compelled to give up using educational services for life if he leaves the system.*

Continuity and immediate reform

There is a host of other principles and guidelines that can be adopted, along with the above mentioned, in order to show how to transform the present educational systems to more effective lifelong education in a learning society. The question is how to build up a guaranteed new structure to replace the gigantic present one. The problem is how to move from the current situation to a desired one which seems at present remote. It is true the report under the title of 'Ways and means' gives some suggestions which seem very practical. Of these we find the diagnosis, the identifying of disequilibrium, the choice of options, the experimentation and so on.

Such an approach needs long-range preparation and planning. It is thought that by the time we set it going the present system in some Arab countries would have crumbled down if it goes at its present rate. The quality of education in them is going down a great deal while the rise in quantity is reaching a plateau; the fabulous expenditures on primary education suffer from high wastage. The trend at present adopted by some governments is to do all that is possible to improve conditions of learning as they are. Their aim is to save the present situation as it is. They want to improve conditions of classrooms, of school furniture and equipment, of school transport and meals, of living conditions for teachers, of teachers' qualifications, salaries and standards, of textbooks, of curricula, of playing fields, of laboratories, of workshops and of everything that can be thought of to raise the level of performance in the present educational structure. They want to bring to bear democracy and equality of opportunity to break down inequalities between boys and girls, between rural and urban, between normal and handicapped, between young and old, between technical and general, between teacher and taught, between the policy-maker and the pupil and parent, between study and work and between school and society.

The first reform approach is the immediate; the second is not immediate on the implementation, but on the research level. It may be said that such an attitude implies a little resistance to innovation. The opposite could also be claimed and that it implies study and research followed by action based on firm ground.

The Edgar Faure report does not pretend to give recipes. In fact it states in one of its concluding remarks that it only gave a broad outline for educational action appropriate to emerging needs and possibilities and oriented towards the future.

Irma Salas

Education in Latin America between its past and the future

General impressions

My first feeling on reading this document was one of admiration for the magnitude of the task undertaken and for the originality of the approaches to it. This is an unusually well-documented work which contains some new material, especially in the second part with regard to facts for the future—new findings from research, developments from science and technology and new inventions—which it would be difficult to find grouped in a single document. This chapter contains more than one element that will be new to Latin American educators, and it will cause them to reflect on the consequences which these new scientific advances will have for education in their respective countries.

The critical assessment of the present state of education in the world seems to me correct, and many of the statements made can be applied unhesitatingly to education in Latin America. This document will therefore be most useful to Latin American readers; each one will be able to draw his own message from it directly.

The document impresses me because of its remarkable unity of thought. It is compact throughout and dominated by a clear purpose —that of modernizing education and preparing it to bring about the society of the future which, in a certain sense, is already with us, since we see signs of it everywhere.

I am, however, appalled by the immensity of the task that has to be undertaken, considering the relative backwardness and inefficiency which, to a greater or lesser degree, is observable in education in the Latin American countries, aggravated moreover by the social, economic and political problems deriving from underdevelopment, which have the effect of dividing our societies, on the one hand, and limiting their economic possibilities, on the other.

The educational transformation or rather educational revolution proposed in the Unesco document, the necessity for which seems to be very well documented and borne out by the current situation in many countries of all continents—and not only in the so-called Third World countries—will, I think, appeal to the imagination of the peoples of Latin America, because in point of fact almost all of them are undergoing a difficult process of economic and social development, and they urgently require the support of education if they are to continue to advance and reach goals which mean prosperity and well-being for the future.

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With its industrialization in full development, Latin America needs workers who are increasingly skilled. This implies giving further training to those who are now working and raising them to increasingly higher levels of technical ability by means of large-scale and permanent systems of refresher courses for workers in the various sectors of economic activity. Unesco's proposal for the extension of education beyond childhood and youth to the entire life of the individual therefore responds to an urgent need.

Moreover, there is in Latin America a fairly general awareness that education does not satisfy the needs of present-day society nor the interests, needs, aptitudes and aspirations of the people, and that consequently it ought to change in order to meet these new requirements.

For this reason, I believe that these divided societies, which are suffering from the consequences of the very changes now taking place and from their particular underdeveloped situation, will welcome with interest the ideas contained in the Unesco document, and that, by virtue of its high authority, the latter will undoubtedly promote the national consensus that is needed for carrying into effect such far-reaching, and at the same time urgent, alterations in regard to education.

Despite the complexity and magnitude of the alterations proposed, I am confident that the strategies and methods set out in the third part of the document will make it easier to introduce the innovations needed to bring about the learning society of the future. The international aid, both technical and financial, which would supplement the action of governments, gives assurance that education for tomorrow will be able to start with a firm step on the road to its accomplishment in Latin America.

Lastly, I should like to add to these general impressions that the document also has the merit of showing the historical continuity of education throughout the world, from the era of primitive societies to our own time, thereby demonstrating the unity of civilization.

Having stated these impressions of the document as a whole, I shall now refer to some specific aspects which I consider more particularly significant for Latin America.

Education and society

The relationship between education and society provides the key to an understanding of education in Latin America. In this regard, one of the most important points mentioned in the document is that the European colonists —Spanish and Portuguese—not only brought to Latin America their language, their religion, their culture, their institutions, but also imported their education. These imported educational models which reflected the feudal system of society prevailing in Europe at that time, and which served the needs and interests of the colonial powers, were introduced into primitive societies and into empires such as the Aztec and Inca with their advanced original civilizations.

It was then that the inevitable breach occurred between education and society, a breach which was to separate for centuries the needs and interests of the people from the ends pursued by imported academic institutions, some of whose effects may still be observed more than four hundred years later.

Historically, education has been a response to the conditions of society and has been designed to satisfy its needs and aspirations. The fact that education in Latin America is the result of models transplanted from Europe during the colonial period, having all their characteristics and intended to serve foreign interests rather than those of the nascent *mestizo* societies of the continent, created a gulf from the beginning between education and society which has still not been completely bridged and which has caused education up to the present time to be inadequate and inefficient in relation to social aspirations and needs.

Hitherto, our education has been influenced by the markedly classicist social structure inherited from the colonial period which left its selective and antidemocratic stamp on our school systems and which has retarded the expansion of education and prevented the spread of equal educational opportunity.

The educational models transplanted from Europe also influenced the aims and content of education, since the latter was fitted to the needs and interests of European societies, to their environment and culture. In other words, it was an education foreign to our people and ways, to our life and to the needs of our incipient social, cultural, economic and political development. It was a bookish and alien education, the traces of which are still evident in our predominantly passive teaching methods whereby emphasis is placed on the teacher's verbalism and the use of textbooks, to the detriment of active procedures which put the pupil in direct contact with things and people and with life around him.

School curricula still do not accord the necessary importance to an understanding of our own situation in all its apsects, and this is highly prejudicial to our development as peoples and nations. The authoritarianism that prevailed in European societies of a former period has also left its imprint on the authoritarian relation between teacher and pupil which still obtains and which has undeniably had serious social consequences.

Latin America is only very slowly seeking its own direction in the matter of education, for which purpose it must re-establish the relation of interdependence between education and society, so that the former may effectively respond to the present-day needs of the peoples of Latin America and to the interests, needs and aspirations of its inhabitants. Only in this way can our education be converted into an instrument capable of bringing us out of underdevelopment and leading us to the full realization of our personality as individuals, as peoples and as nations.

In this connexion, the Unesco document will acquaint Latin American educators with the problem of the mutual dependence that exists between education and society, and will act as a strong stimulus for the regeneration of education in this part of the world. It will be necessary to determine in each country the degree and type of maladjustment that exists between education and society. What aspects of education in the various Latin American countries are best adapted to social, economic and political conditions that are quite different from the present ones? What new needs and values have arisen in our societies which should be recognized and expressed in our education? These and other questions should be asked and replies to them scientifically sought, so that the requisite new educational structures may be set up.

Democratization of education

This is another of the major problems examined in the Unesco document, and one that is basic to Latin American education, especially at this time of far-reaching social, economic and political change.

The educational systems of Latin America have mirrored the social structure prevailing in Europe in the colonial era and, because of that, their democratization has taken place very gradually, in proportion to the transformation of our society. The markedly stratified social structure inherited from colonial times impressed its character on the school systems from the beginning of independence. And thus from the birth of our republics, primary schooling, which ought to have provided education for the children of workers and craftsmen, was relegated to a very secondary place and from the outset represented a schooling for the lower classes but one which did not prepare them for secondary school or lead anywhere else.

At the same time, in most of the countries there arose for the education of the children of

the wealthier families private secondary schools in charge of religious congregations or private persons, and in some countries secondary schools were set up which were supported by public funds. These establishments provided their own annexed primary courses, which had no connexion whatsoever with the common primary schools. In this way, the more privileged groups of society had a school system for their children where there was perfect co-ordination between primary and secondary schooling and between secondary and higher studies, a system which thus incorporated them into the ruling class.

This duality in the school system maintained and accentuated the profound social inequalities that already existed, for while a cultivated and well-to-do minority received the benefits of a complete education which enabled them to retain their status and even improve it, the vast majority, poor and ignorant, had access only to primary schools and, because of their slender educational opportunities, were unable to emerge from their inferior condition.

At the beginning of the present century new social, political and economic forces sprang up in Latin America, manifesting themselves in the growth of the middle class, the advancement of the masses, progress in liberal and democratic ideas, and improvement in the teaching profession, all of which began slowly to give shape to a new social order based on a number of principles among which was the ideal of equal educational opportunity, an ideal which was expressed later, in the years between 1920 and 1960, in the form of laws making primary education compulsory.

This process was encouraged and accelerated by the Regional Conference on Compulsory Primary Education in Latin America convened by Unesco in 1956 in the city of Lima, which gave rise to the Unesco Major Project. Its first result was the expansion of primary education in Latin America and the adoption of measures to facilitate access to primary schooling and also to make it easier for pupils to remain in school until completion of their primary course, by diminishing and eliminating the obstacles that stood in the way of this.

During the ten-year life of the Unesco Major Project, primary schooling in Latin America made great progress in almost every country. Nevertheless, there are still inequalities of educational opportunity among the various social sectors. These inequalities begin in the basic or primary school, which even today is not attended by all children of school age, particularly in rural areas where absenteeism is frequent. There is also a high level of drop-out in mid-course. Both phenomena—absenteeism and drop-out—are found to a greater extent in the economically less favoured groups.

In secondary or middle schools the selective and anti-democratic character of education is even more pronounced and, despite the considerable increase in enrolment which has taken place at this level in the last decade, those young people who have an opportunity to attend a secondary or middle school still constitute a select group from the socio-economic point of view, whereas most of the children of workers are excluded. Although equality of opportunity at the secondary level has made great progress in Latin America, it still has a long way to go to reach full democratization. Higher education represents the culmination of the selective process and only a very small percentage of students in Latin America find admittance to it.

The Unesco document draws attention to the mistake of believing that equal access to education means equal opportunity and that the expansion of education is equivalent to democracy in education. Equal opportunity for all does not mean the same treatment for all; it means an education which is suited to each individual in accordance with his particular abilities, interests and aptitudes, through the application of methods adapted to his specific situation.

The document under reference also stresses the need to change the trend and the content of

studies as education ceases to be designed for a relatively homogeneous minority and is opened to a broad heterogeneous mass of people. The high rate of educational drop-out in Latin America shows that the educational system is adapted neither to social requirements nor to the needs, interests, skills and aspirations of students.

In connexion with the democratization of education, the Unesco document also refers to the flexibility with which educational structures should be endowed so as to offer the student many diversified options and courses, enabling him to enter the system at any stage, to transfer from one course to another, to leave the system and subsequently to return to it. The educational systems of Latin American countries generally have a tradition of centralization and uniformity which makes them extremely rigid; it is therefore difficult to achieve flexible structures and diversification of courses and methods.

How can the process of democratization of education in Latin America be speeded up? For this purpose, the degree to which the various Latin American countries have democratized education would have to be determined by means of scientific criteria and methods for evaluation. It would also be necessary to investigate the various causes underlying the inequality of educational opportunities. Lastly, measures would have to be recommended for the eradication of the causes of the aforesaid inequality and the acceleration of the democratization of education, all this fitting in with the methods of planning which would include all the variables involved.

In the Unesco document, the problem of the democratization of education is accorded a central position, which it should indeed occupy in any analysis of education. I therefore think it will provide a great impetus for Latin American educationists, who, with the help of the strategy and methodology described in the document, will be able to investigate this very important problem and keep it alive until all the objectives of the democratization of education are achieved.

Lifelong education

This is another of the Unesco document's major themes. It creeps in from the first pages onward, appears in one form or another in all the chapters, and culminates in the education of the future as the very foundation of the new society in which learning and education constitute a lifelong process.

1 *We propose lifelong education as the master concept for educational policies in the years to come for both developed and developing countries.*

In the Latin American countries lifelong education has traditionally been known as adult education and has formed part of the system of national education, both public and private. In general, it has been confined to the provision of primary education in night schools for adult workers, with curricula and methods little adapted to the characteristics of adults. Secondary education has also been provided in night schools for adult workers who have completed their primary education, following exactly the pattern of day-time secondary education devised for adolescents. Only in recent years have attempts been made to adapt adult education, at both the primary and the secondary level, to the needs and interests of adults.

For some years past, public and private institutions have also been undertaking out-of-school educational activities for adults, such as extension courses, short courses, lectures, refresher courses, in-service training, rapid training courses, etc. Another recent departure is a form of out-of-school education which supplements regular education and is provided for pupils in the final grades of primary or secondary education; it fosters the special interests and

aptitudes of students, thus broadening and enriching their educational experience.

The idea of lifelong education has been accepted, but its introduction is still rather hesitant, in Latin America. Its slow progress is perhaps due to the belief, mentioned in the Unesco document, that education is restricted to the period from early childhood to adolescence, which is false because findings in psychology prove that man learns throughout his life.

The notion that schools must equip pupils with knowledge and skills to last them a lifetime, and that they should therefore provide a complete education, has been stripped of any relevance by the breathtaking changes which have made impermanence and evanescence the hallmark of our age. No form of education, however perfect, could in these days offer a preparation fitted to last a lifetime. The speed of change would make it impossible, and for precisely this reason education must be pursued throughout life, either continuously or at intervals, so as to help the individual constantly to adapt and readapt himself to the ever-changing world around him. This has important repercussions both on technical education and on higher professional training. Although the speed of change is not yet affecting the Latin American countries to the same extent as it affects the more advanced ones, the adjustment problems it produces can, nevertheless, already be seen.

Lifelong education is a fundamental requirement for nations which, while backward in their educational development, have made a start on the road to industrialization. The absence of skilled labour is one of the chief obstacles to industrial development. It is therefore urgently necessary to provide primary education and rapid technical training for young people and adults in need of them, as well as periodic in-service training courses for workers and technicians needing to learn new industrial procedures and techniques which are constantly changing.

9 *Efforts must be made to bridge the gap, still found in all too many cases, between educational establishments and business companies, whether privately or publicly owned, for the latter constitute a key element in the over-all education system. Their role should not be limited to training workers, but extended so far as possible to training technicians and researchers.*

The maintenance of a competent and skilled labour force, whatever the changes that scientific and technological progress may bring to industrial processes, is precisely the concern of lifelong education, and so long as this is not adequately developed we shall have a serious disparity in Latin America between the requirements of a job and the training given to the worker, with a consequent slowing down of the process of industrialization.

Lifelong education is important, moreover, in other areas of social life related to the adult's responsibilities in the family, as a citizen, etc., which contribute to individual and collective well-being.

Perhaps the great progress made by lifelong education in recent years has been in the training of young people for industry by means of technical training courses combined with regular primary and secondary studies. There are courses of this kind in various Latin American countries, and in some they have been in existence for more than twenty years.

8 *Professional and technical training colleges must be developed in conjunction with the secondary education system. The instruction they give must be followed by practical training at places of work, all of which must, above all, be completed by recurrent education and vocational training courses.*

Lifelong education differs from ordinary institutionalized education, among other things, by reason of its flexibility as opposed to the rigidity of traditional school curricula. It represents, for

young people and adults who have completed their regular education or dropped out before its completion, an extension of opportunities to educate themselves by means of reading, study and instruction. It is provided in a great many forms, in special schools, in centres, in cultural and social institutions, etc.

The characteristic of lifelong education is the freedom enjoyed by those attending the centres to learn what interests them, whether it be general education, trades or specialized techniques, without being subject to classes, teachers, timetables, syllabuses, sequential patterns or any of the other restrictions of formal education in schools. The learning process is thus genuinely individualized and personally motivated; in other words, the student directs and creates it himself.

Under the most favourable conditions, lifelong education takes place in centres housed in large buildings with libraries, documentation facilities, various sources of materials and information, audio-visual aids, learning based on modular systems or packages, computer-assisted instruction, and, in general, possessing the most advanced technology applied in education. These centres are much frequented and it is easy to meet people with similar interests and to establish relationships which favour the principle of learning through teaching among equals, free of the authoritarianism of the teacher and of the oppression which the institutionalized school implies to a greater or lesser extent. Self-instruction is encouraged through numerous recreational activities and social and community programmes which can bring about participation and promote reciprocal education.

14 *Institutions and services of a new kind, intended to help people teach themselves —language laboratories, technical training laboratories, information centres, libraries and related services, data banks, programmed and personalized teaching aids, audio-visual aids, etc.—should be integrated into all education systems.*

This advanced type of lifelong education does not yet exist in Latin America. However, it is desirable that the possibilities offered by new types of 'de-institutionalized' schools, which have been called 'parallel schools', should be known. In the Latin American countries a great endeavour in lifelong education is being made, in a more modest way, by such schools, which operate outside any co-ordinated system and without any great technological resources, some of them being financed by the State and others by private groups or institutions.

Lifelong education can make a notable contribution in Latin America if, to some extent, it can re-establish the idea of education in society as it existed among primitive peoples at the dawn of civilization. Education was then predominantly oral, and in direct contact with people and things. Learning sprang from the environment, the family and society, through the experience of everyday life. It was a process of discovery and sharing in which the adult would show how to learn and doing so he would learn himself. Every adult was, in a way, a teacher and at the same time a pupil. This non-institutionalized and lifelong kind of education enabled children and young people to educate themselves through their contacts with adults.

Lifelong education perhaps offers the greatest opportunities for the educational, cultural, social, economic and political development of the world's backward nations. Will these nations be able to take advantage of the enormous possibilities thus opened to them? In Latin America, lifelong education could absorb a huge clientèle made up of adolescents who have left school early and would like to continue their primary education and to learn or have further training in a particular trade: adults wishing to complete their partial primary or secondary education; and untrained adults wishing to acquire a trade or profession.

Other groups which could benefit from lifelong education would be adults in technical occupations wishing to receive further training so as to become better qualified for their job; adults seeking admission to universities and wishing to obtain the necessary qualifications; and young people or adults wishing to gain some knowledge in the spheres of art or science in their leisure time and with all the freedom that lifelong education allows.

The challenge presented solely by the co-ordination of the different State and private activities which make up the rich fund of lifelong education in each country seems a Herculean labour. More colossal still is the task of planning and programming the courses to be offered in different sectors and at different levels, when they must be harmonized, on the one hand, with the requirements of economic development and, on the other, with the demands of regular education as they occur, while maintaining the conditions of freedom, flexibility and individualization that characterize this kind of education.

This vast enterprise would also have to be financed and this could only be achieved if, to some extent, it replaced the education which is at present provided through traditional educational systems. This could, I think, be done with advantage in the case of several of the categories of young people and adults mentioned above, particularly in the case of rapid training for trades or technical occupations which at present require expensive buildings and equipment in specialized technical schools. Careful study of the situation might make it possible to transfer some 50 per cent of what is taught in the traditional system to lifelong education courses, with a consequent saving in resources in the traditional system which could in part be used for the financing of lifelong education.

I believe that the principles of lifelong education set out in the Unesco document and briefly commented on here, and the methodology and strategies for innovation contained in the third part, could give rise to practical projects in lifelong education to be carried out in our countries. Technical aid from Unesco would be essential at the planning stage of these projects. It would be necessary to co-ordinate a large number of institutions and activities and a potential clientèle with the most varied backgrounds, interests and needs. This would stimulate the creative ability of Latin American educationists as they search for and apply innovations calculated to give the necessary impulse to the process of change implied by the development of a model lifelong education project on a comparatively small scale such as would enable the different variables involved to be dealt with in an experimental way.

The Unesco document makes it clear that the two forms of education should exist simultaneously: the full-time day school for children, adolescents and young people, on the one hand, and part-time lifelong education for young people who are working or wish to train for work, and for adults who are working and wish to receive further training or further elementary plus manual or technical education so as to improve their professional qualifications, on the other. Pre-adolescents and adolescents (12 to 16 years old) could also enrol in lifelong education courses during part of the period of their regular education if they wish to benefit from a self-directed, individualized and flexible system offering a greater degree of freedom and creativity in keeping with their own motivation, interests, knowledge, skills and values. These courses would be reckoned as equivalent to the systematized teacher-directed studies and experiences of the traditional educational system in which they would take part the rest of the time.

This arrangement of linking school education with out-of-school or lifelong education favours both forms, since they are of mutual advantage; it is also particularly beneficial to the student in that it enables him to combine school education and social or lifelong education, to enrich his experience through contact with other things

and with people of different ages and backgrounds, and to learn in an independent way what interests him.

A fundamental aspect of this plan, in which education and society are integrated, is the provision of guidance for the student, so as to help him select such studies, experiences, lectures and forms of self-education as will supplement what he is learning at school and will also be in keeping with his individual interest and aptitudes and show him how to make appropriate use of the technological facilities made available to him. These will enable him to acquire rapidly and efficiently the knowledge, skills, attitudes and values which he has selected and which best meet the needs of his over-all development as a person, at this stage of his life, through complete personal fulfilment.

20 *It should be made a principle to centre educational activity on the learner, to allow him greater and greater freedom, as he matures, to decide for himself what he wants to learn, and how and where he wants to learn it and take his training. Even if the learner has to accept certain pedagogic and socio-cultural obligations as to subject-matter and methods, these should still be defined more in terms of free choice, of psychological propensities and drives among learners than hitherto.*

When lifelong education has no premises of its own and has to make use of the resources available in town: cultural (libraries, museums, etc.), social (community institutions and programmes, sports and recreation centres), economic (workshops and factories), it has its base in some school building where it can have the use of a large room for one or two hours a day for the planning of activities and the evaluation of results. Young people and adults following courses will be distributed, during their periods of study, among the above-mentioned institutions, to carry out their scheduled learning activities.

In such a case the cost of lifelong education would be very much reduced, for it would only comprise the salaries of teachers and guidance counsellors working with the students. These could be limited to one for every 100 people, and in addition only a small sum would be needed for teaching materials. The principles of out-of-school or lifelong education, of self-learning, individualization, flexibility, etc. would be observed, and audio-visual methods and other technological innovations would be put to only occasional and restricted use.

Experiments of this kind would be of the utmost value because, on the one hand, they would meet the desire of adolescents and young people for personal freedom and the direction of their own education, thus reducing their unrest, and on the other, they would enable room and teachers to be made available from the regular educational system—thus making it possible to increase enrolment at no extra cost to the State. This would therefore go some way towards overcoming the financial crisis that is affecting education, particularly in the developing countries which have a larger proportion of young people than do the advanced countries.

Out-of-school or lifelong education can be considered as an effective means of bringing about the changes that are needed for the integration of school and society as a happier and more human development of 'learning to be'.

W. Senteza Kajubi

Educational priorities in Africa

When over half the nation is illiterate and the people clamour for education; when public expenditure on education is mounting, but the number of children who are denied the right to education is increasing; when classroom techniques are autocratic and teachers are in short supply and inadequately trained; when government and private firms demand trained recruits, but unemployment is widespread and is increasing; when a country is poor, what policies should the national officials responsible for the planning of educational development pursue?

Although these problems do not occur to the same extent in every country, it would be true to say that to a greater or lesser degree, all countries of the world are faced with the problem of the population explosion, and of the scientific and technical revolution, both of which have resulted in more people to be taught and more information to be learned, which have in turn caused an unprecedented and almost insatiable social demand for more and better education.

However, despite public zeal and heavy investment in formal education, the gap between supply and demand for education in the various countries is wide and increasing, as is the gulf between the rich and the poorer countries of the world. About half of the world's population can neither write nor read, while only half of the children of primary school age receive more than a few years of schooling in most developing countries. Combined with this is the widening cleavage between country and town, and the inability of the economies of the developing countries to absorb readily the products of the schools. These, and similar problems, baffle policy makers and educational planners everywhere.

How can the limited resources available for education be used to tackle these massive problems, and make a difference?

The report of the International Commission on the Development of Education (1972) is a wide-angle lens covering a vast array of educational problems and zooming in on a number of the major issues related to educational development.

Although the treatment is 'global', almost every crucial and critical issue related to education is raised and brought into proper focus. There is no doubt that this study should be a source of inspiration and a guide to policy makers, educationists, educational administrators, planners and personnel concerned with the organization and implementation of educational development, throughout the world, because of the way it raises the right questions and discusses the possible means at our disposal

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to answer them. The report should also be of immense value to teacher educators as a source-book for courses on foundation studies and current issues in education.

It is not possible to comment on the many issues that are encompassed by the report. Attention will be focused in this short paper on a few main recommendations which seem to the writer to be of most significance to the educational problem of developing countries.

Futility of schooling

The importance of formal education through the traditional school system is almost everywhere taken for granted. Governments devote large proportions of the annual budgets to formal education, and parents in developing countries build *Harambee* or self-help schools and spend large proportions of their meagre incomes to pay school fees for the education of their children. Children walk long distances from their homes to school, and memorize voluminous chalk-board notes and the contents of partially understood foreign textbooks, in order to try to go over the hurdles of examinations which are often set externally. There seems to be an unquestioning faith in the power of school education, which is seen by the pupils and their parents and teachers alike as the chief and almost the only means of advancement on the social and economic ladder.

The report is unequivocal about the futility of the current practice of concentrating public attention and spending on the conventional school and other formal institutions reserved for children and adolescents. As the report rightly points out, 'so great is the demand for education today, and so great will it be in years to come, that present institutionalized systems are, and will be, incapable of absorbing it'.

4 *Artificial or outmoded barriers between different educational disciplines, courses and levels, and between formal and non-formal education should be abolished; recurrent education should be gradually introduced and made available in the first place to certain categories of the active population.*

The old notion which equates education with school and limits the time for learning to the traditional school age is challenged.

First, the formal schooling system is proving to be prohibitively expensive. Even if the traditional primary school system could be extended to cover all the children in the relevant age group, in the short run this would do little to combat the problem of mass illiteracy throughout the world and, in the long run, would take too long and would be very costly. The conventional school is open for a limited number of hours during the day, and for only nine months during the year. The school plant is thus under-utilized and teachers in many ways underemployed. Secondly, the children upon whom the school has traditionally focused its attention take time to become adult men and women who can affect production and development. For example, primary school children can only learn *about* the importance of a balanced diet, mosquito and malaria control, family planning, soil conservation, etc. They are not in a position to apply this knowledge directly to present-day problems in their homes and thus to affect the pace of development *today*. Society cannot wait until the children who are being educated today at such great cost and sacrifice are grown, in order to get the economic and social development it urgently needs *now*, nor can it afford to keep half of its children in cold storage because they cannot enter the school system. Moreover, because of the knowledge explosion the schools can no longer be expected to equip the individual with an adequate educational experience and intellectual capital to last him a lifetime. By the time the children who are in primary schools of today become adult producers several years later, much of

what they learned at school will be obsolete.

These considerations should lead us to the following conclusions.

1. The enormous and growing commitment and the central position accorded to the school as the chief vehicle of conveying education to the world's population must be re-appraised.

2. The internal structure and organization of formal education must also be critically re-examined. For example, it is inevitable that all pupils spend the same number of years and the same number of hours a day sitting before a teacher to 'cover' the primary school curriculum? Can we not seek ways of increasing the quantity and quality of educational facilities within the limits of the present resources so as to enable us to lessen, if not to close, the gap between the 'schooled' and 'unschooled' sectors of our population?

3. A much larger share of public educational spending must be directed towards adult and continuing non-formal education than has been traditionally the case.

12 *Educational strategies in the coming decade should have rapid development of adult education, in school and out of school, as one of their priority objectives.*

4. The school must be more integrated with the community than is the case at present. It must become a social and cultural centre where, not only the children, but also their parents come to receive continuing education. Emphasis of the curricula must shift from the transmission of information aimed at the production of finished 'educated' élites to the creation of an 'educable learning' society. The report rightly calls for more immediate, more practical, more massive and also more lively non-traditional educational patterns.

5. It follows that formal education and adult education, which have traditionally been seen as competing and unrelated items and have been planned and financed under different ministries, must be seen as complementing each other, and as part of the same process. Educational planning must embrace not only the formal aspects of education but also the non-formal aspects such as adult mass literacy, health and agricultural education.

Lifelong education

The central theme of the report is based on the concept of lifelong or continual education for everyone. Lifelong education, says the report, is the keystone of a learning society. Lifelong education means that there must be opportunities for every individual to learn for the rest of his life. It implies that education must pay less attention in the future to the transmission of information than to the development of the individual's capacity to continue learning by himself, and to the development of his reasoning faculties, critical judgement and proficiency in problem-solving. It means providing opportunities at every stage for adults and out-of-school youth to become 'learning stations' and to continue to be learners for the rest of their lives, and thus to close the gap between the 'schooled' and 'unschooled' sections of the population.

Lifelong education inevitably implies that the present cleavage between the content of education and the living experience of the learners, between the system of values of the school and the goals set up by society, between ancient time-honoured curricula and the modernity of science must be narrowed if not entirely closed. Education ceases to be merely a preparation for life and a process of selecting and training the social élites. It becomes life itself, every human being becoming, as it were, 'a learning station'. From this point of view, the report is appropriately entitled *Learning to be.*

The idea of continual or recurring education for everyone has far-reaching implications for educational planners in developing countries. It would mean opening several alternative gates into and through institutions of formal learning

and abandoning or at least modifying drastically the current cut-throat competitive examinations which pervade the education systems of most countries. This would make it possible for adults and out-of-school youth who missed the bus to enter, at various levels, and continue in the system for the rest of their lives.

Lifelong education may at first appear to be a Utopian ideal which cannot be within the reach of developing countries for a long time to come. Given the present constraints of limited financial resources, many countries have, in their plans, adopted the manpower requirements strategy, aimed at pushing through the educational pipeline only those men and women who are required and are likely to be absorbed by the economy at various levels. This has meant in some countries making educational provision for only 50 per cent of the children in the primary school age group, and for only 3–4 per cent of the children in the secondary school age group, thus denying educational opportunity to one out of every two individuals.

It is clear that the world cannot afford to continue much longer with this magnitude of wastage of human resources. One question we have not asked seriously in the past, and which we must ask now is: assuming that it is imperative to spread education to all the population, how can the present resources be used to accomplish this task? In other words, how can the resources be disbursed to transform the present meritocratic systems of education into lifelong learning for the majority if not for everyone?

The report rightly points out that there are many modern means and discoveries which science has placed at our disposal, but which we do not at the moment use sufficiently to improve and spread education. Planning strategies in the developing countries should look more into the application of mass media and modern technology to the problems of spreading and improving education. They should be prepared, in this respect, to make a great leap into the future. The Director-General of Unesco has called for 'a more systematic utilization of the means which technology has placed at our disposal'. There is no field in which this is more essential today than that of education, particularly in the developing countries. As Frederick Harbison has said, the newly developing countries must pioneer in the new methods of teaching—perhaps in utilizing modern inventions such as television, teaching machines, and other technological devices which are not yet widely employed even in most advanced countries. In fact, the need for new technologies of pedagogy is probably greater in newly developing countries than in those more fully developed education systems. 'Consequently, the African countries should give serious thought to the establishment of centres for research in educational technology.'

Television and/or radio which are now used mostly for entertainment and political indoctrination in most developing countries, could in the long run prove to be the cheapest if not the only practical means of combating mass-illiteracy effectively, and of bringing education to all the children and adults who want to learn and who are at the present denied admission to the schoolhouse.

13 *In all areas where there is widespread illiteracy, programmes organized for the adult population must include a strong literacy campaign. Action must be taken in two ways: it must aim firstly at functional literacy among strongly motivated sections of the working population and secondly at mass literacy when conditions are appropriate and, above all, when social development conditions—political, economic and cultural—are suitable for active large-scale participation by the people.*

An evaluation of the experience of American Samoa, and that of the Ivory Coast, where educational television is being used in primary schools, may help to reveal the tremendous potentialities of modern instructional media in the developing countries.

A more systematic and regular use of self-instructional correspondence materials through newspapers seems to have great potentialities which are worth examining in developing countries.

Educational technology, however, should not be taken as a panacea for all educational ills of the present time. It is not merely the application of sophisticated hardware and gadgetry to conventional systems of education and thus broadcasting traditional styles and techniques. We are warned that educational technology can be of value only if it is totally integrated in the system and if it leads us to rethink and renovate it.

While the need for total reform is accepted, not everyone will go all the way with the report when it suggests that it is impossible really to derive advantage from educational technology without overhauling the entire educational edifice. Must we wait until we have dismantled and reconstructed the entire educational structure before we can take advantage of the offerings of educational technology? A technology of education can, and is being developed with the aim not only of making education more widely available, but also of improving the quality of education which is already being offered. Experience has shown that widespread use of closed-circuit television in certain British universities is having a great impact on university teaching by way of improving even the traditional lecture techniques. From this standpoint the section of the report 'Intermediate technologies' (Chapter 5), about the use of simplified technologies, adapted to each country's particular needs and possibilities, is especially relevant to African and other developing countries.

The content of teaching

In the foregoing section, we have been concerned mostly with the problem of the acceleration of educational expansion to cover not only school-age children but also the adult sector of the population. Another area in which education in developing countries is beset with problems is in the field of curriculum development and reconstruction. We have already referred to the problem of unemployed school-leavers who cannot be absorbed in the economies of these countries. Existing school curricula inherited from the former colonial régimes are by and large irrelevant and inappropriate to the needs of economic and social development.

The point is made, for example, that the curricula and teaching methods are often theoretical and academic, and do not include agriculture and technical education and manual arts, which these countries need for their development.

The report makes numerous references to the gap between the content of education and the living experience of the pupils. The schools, among other things, 'inculcate values into schoolchildren which estrange them from their surroundings, feeding intellectual and material ambitions which are becoming harder and harder to realize in a rural setting. Schools thereby push young people out toward the towns, having failed to instil in them the kind of values which should make people attached to their everyday surroundings'.

It is accepted, as the report recommends, that the development of authentically national educational systems which enable individuals to achieve an increasingly harmonious and positive integration at all levels into their environment is essential. It is certain, however, that the education system alone cannot accomplish this task merely by manipulating the school curricula to include rural subjects. The problems of the rural-urban exodus are not entirely, nor principally educational. They have their roots in economic considerations, namely, in the wide disparity in economic opportunities between the rural and the urban sectors of the economy. No matter how much agricultural or rurally-

oriented education they may have had, school leavers will not achieve a harmonious integration with a one-acre-one-goat-one-hoe subsistence economy.

Although there are some educational considerations bearing on this problem, the real solution to it seems to be in the field of rural development and transformation. It is village and small-town development, extension of health, education services, water supply, construction of access roads, organization of marketing facilities, and the like which will induce school leavers and those who have never been to school alike, to remain or go *forward* into rural areas.

This is not, however, to detract from the importance of curriculum reform related to the rural environment but rather to suggest that the school curriculum should not be looked at in isolation from other aspects of life in the community.

Much research is essential to develop curricula that will create in the children and adults alike a rational and experimental outlook towards their social and physical environment and foster attitudes which are favourable to development; this must be done in conjunction with other aspects of physical and economic planning in each country.

Child growth and development

The reconstruction of curricula, teaching methodology, examination instruments, and many other facets of educational change and renewal recommended in the report, all require that we have systematic knowledge about the children and adults for whom they are intended.

5 *The development of education for pre-school-age children must become one of the major objectives for educational strategies in the 1970s.*

Today, most of educational thinking and methodology in African countries, for example, is still based on knowledge and research related to children of other cultures. Let me suggest that there is a crying need for programmes of research in child growth and development in our countries to provide a framework of knowledge on which to build curricula that are meaningful for the physical and social needs and of the cultural milieu of the learners. This is an area in which great technical assistance is essential and urgent.

Reforming teacher education

There is no area in which there is more urgent need for reform than that of the professional preparation of teachers. Implementation of the recommendations of the report demands a new type of teacher who is basically an educator. One cannot agree more with the report when it suggests that 'one of the essential tasks for the educators at present is to change the mentalities and qualifications inherent in all professions'; this is especially true of the teaching profession.

Although the last decade has been a period of considerable activity in the field of curriculum development and reconstruction in most countries of the world, almost all of the efforts in this area have been directed primarily to the improvement of curricula for primary and secondary schools. As far as African countries are concerned, little if any attention has been given to the improvement and modernization of the professional education of teachers.

Of all the aspects of the curriculum for teacher education there is not one in which there is more urgent need for reform than that which relates to the social role of the teacher. With the diminishing gap between formal and informal education, school and out-of-school, child and adult education, it is essential that the teacher should cease to be merely a classroom operator but should be a community leader. Teachers, more than any other group of professional workers, need to have a deep conception of the nature of

society and of their own role in influencing the shaping of social goals. They need to know much more than merely those things which immediately impinge on the academic welfare of their pupils. They need to have an adequate grasp of the main social, political and economic problems of their countries, and the role which education can play in alleviating, if not solving, these problems. It is equally important for teacher training institutions to demonstrate through their own teaching and involvement in community affairs the principles and methods which they advocate, instead of, as they do at present, merely teaching *about* how to teach.

In many developing countries, however, teacher education institutions stand in very poor and inferior relations compared to other institutions concerned with academic education, from the standpoint of libraries, staffing, laboratories and other teaching materials. There is need, therefore, not only to reform the professional component of teacher education, but also to accord a higher status to teacher education institutions.

Increasing aid to education

If the fundamental reforms in education proposed by the group were to be implemented, much greater educational aid to developing countries would be essential. Development is an international problem, and while self-reliance is a useful concept, no country today, let alone a developing country, can solve all its problems when left to itself. The gap between the poor and the more affluent nations of the world could never be bridged if only country-by-country approaches were to be relied upon. The continued flow of capital, technical skills and ideas between nations is a *sine qua non* for development.

As Philip Coombs had said in *The World Educational Crisis*, 'educational assistance programmes, whatever future labels they may wear, must become an accepted fact of life for at least the balance of this century. And they must acquire much higher dimensions—of size, quality, creativity and sophistication—than anything seen to date'.

Bhuntin Attagara
with the collaboration of Carl J. Manone

Concerning goals and methods: the case of Thailand

Learning to be, the recently released report of the International Commission for Educational Development, is an ambitious undertaking, and it succeeds. Its scope is spectacular: some history, philosophy, anthropology, demography, psychology and even ergonomy; a word on conceptualization, institutionalization, implementation; and for good measure, a bit of systems analysis, intermediate technology, dial access, and even modular scheduling. And the book's design is no less impressive; ringing rhetoric balanced with substance, concepts footnoted with touchables and tangibles, and up-to-date data, charts, graphs, and illustrations that envelop our small but not so simple word. Need I say more? The Commission's report is inspirational yet useful; it deserves a wide audience especially among those individuals and agencies that feel that education can serve as a major instrument in shaping a better world.

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The report in a sense represents a paradox: a Commission comprising a French chairman, a seven-nation authorship, a world audience, and a Thai review.... But the paradox is also reality. Narrow provincialism in terms of man's mind or money is no longer a defensible or paying proposition. Men are brothers, or at least they ought to be, and the problems, needs, and aspirations that they share largely in common dwarf, by comparison, individual and national differences. The ubiquitous educational pyramid, the frustrating dilemma of how to stretch an already over-sized budget to upgrade both educational quantity and quality, and the trying task of bending the slow, deliberative process of learning to meet the clamorous and impatient demands of countless millions for instant improvement in their monotonous, dreary lives are conditions in developing countries that are common to all of us. Perhaps, we are not so unique after all. Through strategies and action programmes of co-operation and sharing, who knows, we may in our own time kick a bit of positive acceleration into the deadly inertia of our existing policies and institutions. And the report is a real invitation to international sharing.

Unlike so many educational publications, the Commission's report was a pleasure to read. But, more important, it was stimulating and provocative.

Let me in the remaining paragraphs be more specific by reaction to a few selected passages

in the report. In the main I shall concentrate on the Third Part which in my judgement is exceptionally well designed and, by virtue of its concreteness, most open to controversy and discussion. The statements of principles followed by considerata, recommendations, comments, and illustrations constitute a useful format for studying the relationships between concept formulation and programme implementation, for analysing research and rationale before committing money, men and time. National development is no nuts and bolts game although, admittedly, it is partly and essentially that. Rather, it is basically a mental game requiring clear conceptualization, perceptive design, effective communication, resourceful implementation, and, yes, tenacity of purpose which is also a matter of the mind.

Wholeness and totality

On page 175 one reads: 'Today, it is no longer desirable to undertake educational reforms in piecemeal fashion, without a concept of the totality of the goals and modes of the educational process. To find out how to reshape its component parts, one must have a vision of the whole.' On all of this I quite agree, but who is it that has this vision of wholeness? Where can it be found, in rare individuals or in the collective mind of an unusual group?

Specialists, both local and foreign, bring to any new endeavour their little bag of expertise and tricks, a little segment of a much larger whole. And it all adds up to the distorted perceptions of the five blind men trying to describe the elephant they were touching. Then, maybe, generalists are the answer. But here, too, past experience reveals dismal results. Too often too many generalists have matched their inability to contribute to specialization with a more conspicuous inability to provide a mentality and vision of wholeness, interrelatedness, priority, and balance.

So where are we? Educational programmes, both domestic and foreign, that are designed to contribute to national socio-economic well-being too often are, at source, when all the so-called window dressing, sometimes called involvement or participation, is stripped away, fundamentally the work of one or two limited and biased (as we all are) individuals. So, in effect, right from the start programme design begins as a fragmentary and piecemeal rather than total and comprehensive venture.

And what comes after design—the unenviable task of discovering an agency and/or a contractor, again domestic or foreign, to implement a project. The selection of an agency then introduces, all too often, an endless array of new considerations, special interests, new biases, and new criteria.

In the likelihood that some agency is interested in supporting a particular project, with or without major surgery, then what? How can a university or other agency, represented by diverse men, identify closely and comprehensively with project objectives and procedures, especially in a foreign culture, when they were not involved in the design? What can recent history teach us about well designed programmes that never really got off the ground? How often has unrestrained excitement at the start of a project ended up, three or five years later and one or ten million dollars later, as just another project?

What I am saying is that systems approaches and wholeness are absolutely essential for effective educational planning. But I am also saying that individuals, institutions, history, culture, social inertia, and so many other forces militate against such totality. And time, especially in the developing countries, is not on our side. Urgency is in the air.

So then, what? Cannot the Commission's report, which certainly provides an excellent conceptual base for educational action on an international plane, trigger a series of related activities designed to reduce the gap between

planning principles and concepts and their implementation—and do it soon. For example, does educational planning, whether it be highly specialized or broad in spectrum, involve the learning of specific conceptual, organizational, and communicative skills and processes? If so, then would it not be profitable to develop appropriate materials and conduct workshops for educational policy-makers and programme designers that stress skill development in specifically needed areas?

Some additional questions: In order to get at wholeness in another way, how can educational planners be more effective in working with economists, politicians, agriculturists, and representatives from other disciplines with whom they are often required to work? What strategies and skills can be learned relative to the relationships between project design, implementation, and dispersion? What research and data are needed to help the educator present a case for education, a sector that not infrequently is accused of being too subjective, conservative, vague, and ill defined? How should such research and data be packaged to be palatable, saleable, digestible?

The questions could go on *ad infinitum*. Suffice it to say here that bringing the concept of totality to the market place—and that includes all levels of educational planning and decision-making—will call for follow-up activities of a very practical and specific nature. Unesco, with its publication of *Learning to be*, has opened the door. Perhaps that door might be opened wider, again by Unesco, by brainstorming more rapid and efficient ways for translating mature concepts into improved daily practices.

Quantity and quality

'Linear expansion strategies can no longer be justified. . . . When an educational system has to absorb a huge number of children, strategies must be modified, must move from the quantitative to the qualitative, from imitation and reproduction to a search for innovations, from a uniform procedure to diverse alternatives' (p. 173).

Again I wholeheartedly agree. And again there is the baffling question, 'How?' Providing universal elementary education alone, say for six or seven years, has proved for many of us to be a quantitative exercise in futility. Promises are made and broken, new target dates replace solemnly pledged old ones, new headlines are concocted probably for people with poor memories, and all the while birth rates soar and so do educational budgets in their futile and doomed attempt to keep the percentage of children in school from dropping—even though simple statistics clearly indicate that the mass of children out of school continues to rise. And yet, go into any ministry of education quarters, any principal's office, any educators' conference or seminar, and what is the focus of the wall charts, the many written and spoken words, and yesterday's as well as today's five-year plan? Yes, to curriculum development, instructional materials, in-service education, and the like. The major preoccupation, however, is more and more students, inadequate numbers of teachers, enrolment growth through wastage or failure, extension of the number of years of compulsory schooling, and shortages in dormitories, textbooks and money.

Now we cannot ignore linear expansion on either political or moral grounds. A plausible case can be made for it. But, there is—or ought to be—a meaningful relationship between quantity and quality. A successful pilot project, for example, eventually ought to disperse its qualitative innovations among an ever-increasing quantity of the population. Good things often start small. Yet in so many developing countries a disproportionate amount of effort and funds are expended to give more children more years of irrelevant and inefficient schooling at the expense of upgrading the teaching staff, the content and method of instruction, teaching

materials and educational leadership? Expanding quantity with only a corresponding marginal return of quality is a little bit like adding zeros after the decimal point—the number may look impressive, but it does not add up to very much. Only quality can make quantity come alive.

I suspect that the strong preponderance of concern for quantity, as opposed to quality, stems from such forces as the mushrooming public demand for more and more schooling, political considerations, planning inertia, and the job role of the educational policy-maker as both he and the public at large perceive it. But even all of that does not explain away the fact that, comparatively speaking, so little effort is directed to innovation, experimentation, pilot programmes, ideational exploration, new concepts, new plans, new approaches. The terms, 'innovation', 'structure', 'systems approach', 'cognitive, affective, and psychomotor', are commonplace, but the substance, the concrete performance is lacking—greatly and sadly lacking.

How then do we translate the essence of quality into the development of knowledge, attitudes, and skills that are relevant and useful in improving the learning-teaching process? What is the role of a leader in a small group? How does small group instruction relate to large group instruction? When do you use one, and when the other? What techniques and materials are best suited for each?

I might go on to raise similar questions on programmed learning, independent study, flexible scheduling, team teaching, learning space, micro-teaching, the case study method, and many other areas. The point is that improvement in quality requires an intimate acquaintance with specific bodies of knowledge, with specific materials and equipment, with mastery of specific skills and processes. Skills, specific skills, relevant skills, useful skills, learnable skills are the real key to educational quality.

If this be so, why do so many participant training programmes tend to be degree-oriented rather than skill-oriented? (Of course, it would be nice if some of them could be both.) Why do so many teacher training programmes, both degree and non-degree, both graduate and undergraduate, tend to be stronger in dealing with pedagogic studies such as educational foundations, child growth and development, etc., and weaker when it comes to providing preservice and in-service teachers with appropriate experiences for the more specialized aspects of their jobs such as writing performance objectives, designing and utilizing different kinds of instructional media, mastering a variety of teaching methods and processes, acquiring skills related to group work and leadership training, and developing and applying an assortment of evaluative instruments and approaches? The teacher is both an artist and a technician. To improve the quality of his performance, we will have to begin soon to give more emphasis to the latter—without incidentally, neglecting or slighting the former.

If the Commission's statement on moving more fully from the quantitative to the qualitative is to have a chance at reality, then in planning new outside-supported educational programmes, much more critical attention needs to be focused on the balance among such major inputs as participant training, foreign experts, and materials and commodities. Too often, I fear, we have not been analytical enough in attempting to determine what amount of which particular input would be most likely to produce quality outputs and at the same time, contribute to national institutionalization and self-reliance. Once again we can see the need for imaginative and innovative programme planning.

Achieving quality will also require a good hard look at the educational budget allocations in each of our nations. Because of the unimpressive incomes of teachers *vis-à-vis* other workers in a nation's manpower pool, it is quite common, I imagine, for governments to allocate almost their total educational budgets (well over 90 per cent) to teachers' salaries in an attempt to make them more competitive. Consequently,

possibly only about 5 per cent, more or less, of the budgets is then available for such critical items as textbooks and supplies, audio-visual materials, physical facilities and equipment, in-service education, leadership training, curriculum development, guidance and counselling, and experimentation and research. Pay-off on a medical doctor, highly intelligent and well trained, I feel certain would be marginal without drugs and medical supplies, specialized equipment, and an appropriate place to work. Pay-off related to a classroom teacher or educational leader, may I suggest, is no different.

And now for a few summarizing questions: three cheers for more emphasis on quality, but how do we bring it about? Where? When? For whom? At what cost? With what expected outcomes? Is there an 'intermediate technology' that might serve to bridge the gap between the principles and recommendations enunciated in the report and actual policy and programme development in the respective developing nations where in the final analysis the final decisions and the real action must take place?

Teacher training

The recommendation concerning teacher training reads as follows:

> 18 *Conditions in which teachers are trained should be profoundly changed so that, essentially, they become educators rather than specialists in transmitting pre-established curricula; the principle of a first, accelerated training stage, followed by in-service training cycles, should be adopted.*

The importance given to teacher training is gratifying; it is not, unfortunately, singled out for a special level of priority, advertently or inadvertently. In Thailand, the largest single allocation in our budget is directed to education (18.05 per cent in 1972). Education is perceived as an indispensable factor related to socio-economic development as well as to the process of democratization. Appropriate education is increasingly being recognized as a prerequisite to success in other development areas such as agriculture, population control, economic growth and equitable distribution, and even national unity and security. Relevant education, in fact, represents the *sine qua non* for the institutionalization of all national endeavours. To put it another way, self-reliance and education are indispensable partners; pace and progress in one is directly tied to the other.

And how do we intend to improve education in Thailand? Certainly, there are many approaches to educational improvement. Our major thrust is in the field of teacher education. Why? The answer is sixfold: (1) because teacher education *embraces comprehensively all academic disciplines* (science, mathematics, history, music, etc.); (2) because it very directly *involves all the critical educational components* (curriculum, instructional materials, staffing, facilities, research, etc.) required for teaching and learning; (3) because it represents the *optimum vehicle for multiplier effect* in the dispersion of education on a national or regional scale; (4) because it affords, among a myriad of public and private established institutions, the *most promising route for shortening the time* between the introduction of an educational innovation and its implementation; (5) because it serves as the *most economical approach* for maximizing dollar inputs in terms of learning outputs; and (6) because it possesses a powerful potential for acting as a *bridge between school and community*, a classroom without walls, a place where teachers teach humanity, where age difference is unimportant, and where children and adults take on the common name of learners.

I concur fully in principle with the ideas that (a) teacher education programmes ought to be modified 'so that teachers are equipped for the different roles and functions imposed by the new technologies', (b) 'hierarchical distinctions maintained for no valid reason among the

various categories of teachers should be gradually reduced and finally abolished', (c) educators should 'rethink and change the criteria and basic situation of the teaching profession', (d) 'conditions in which teachers are trained should be profoundly changed', and (e) 'in-service training cycles should be adopted'.

I repeat that my concurrence is basically in principle. In terms of real life such principles must be modified, and even ignored, in the light of the sometimes harsh and sad realities that prevail among a particular people, in a particular setting, and in a particular moment in time. Now I am aware that the Commission's report reminds the reader, amply and explicitly, that every principle and recommendation it enunciates will not make sense to all people at all times in all places. There is a call for timing, careful and total planning, sensitivity to the past and vision for the future; there are cautions concerning the process and potential pitfalls of change; and there are exciting invitations to bolder and more imaginative planning and action to meet more successfully in the future than we have in the past the accelerating tumultuous tides of change.

My word of caution, by use of a single example seeks to raise doubts about one of the recommendations which the Commission has proposed:

17 *Legislative, professional, labour union and social action should gradually reduce and finally abolish hierarchical distinctions maintained for no valid reason among the various categories of teachers.*

Concerning the gradual abolishment of hierarchical distinctions among categories of teachers, may I suggest that it may still be some time before we shall be able to afford to give elementary teachers as many years of training and as big a salary as secondary teachers, let alone university professors. In Thailand today there are four times as many elementary teachers as teachers in all other institutions combined. Now I am sure that a strong case can be made for the nature and length of training, the personal characteristics, the years of preparation, the work load, and the salary of the kindergarten teacher *vis-à-vis* the university instructor in calculus. Nevertheless, the current situation in our country, and I presume in many others, now and in the foreseeable future is that resources are far too few and the problems and needs far too many. This clearly calls for value judgements. And one of our value judgements has been to go along with hierarchies, which I believe not to be antithetical to the democratic ethic. Free institutions, it seems, still have their men at the top. Our decision to live with teacher categorical gradations with their accompanying salary gradations stems from our history, culture, public image of various teaching positions, and the current civil servant organizational and administrative framework. The number of students we must serve, the amount and kind of education needed for living basically in a rural sector, the nation's manpower needs, the governmental salary structure, the omnipresent stricture on available funds, and the not so simple matter of recruiting, rewarding and retaining in the teaching profession some of the nation's most capable people are other considerations that weigh heavily in our pursuit of our present practices.

The adoption, therefore, of policies and practices designed to abolish teacher categories in developing countries with their current levels of development and educational sophistication might well bring on a deterioration of morale and intra- and inter-organizational balance and co-operation (to the degree that it now exists) without increasing effectiveness and productivity. In defence of the Commission's statement, however, the words 'gradually reduce' and 'abolish hierarchical distinctions *maintained for no valid reason*' were used. Nevertheless, as a final shot, we might well ask whether or not it is really possible to dispense with hierarchical rank among teachers, and if it is, would it improve

the teaching profession. In the United States with all of its development and resources, one still finds today, despite long experience with single-salary scales and recent flirtations with differentiated staffing, teaching hierarchies and squabbles over professional qualification, institutional standards, teaching loads, and financial reimbursement. One final word: our educational hierarchies today are quite evidently not in good shape. My suggestion, however, is that we attempt evolutionary change rather than burn them down.

New technologies

Two principles and their related recommendations deal with new techniques of reproduction and communication and new technologies. The recommendations read as follows:

15 *1. In the conception and general planning of educational systems, allowance must be made for the possible contribution of new techniques with a view to developing a unified process aimed at using available means and resources in the most efficient way.*

2. When getting systems with technological support under way, strategies must be differentiated according to different levels of economic development.

16 *1. Modify teacher-training programmes so that teachers are equipped for the different roles and functions imposed by new technologies.*

2. Reserve a fixed part of the increase in education budgets for the rational development of sophisticated techniques.

Here again I inject a word of what I consider to be caution and balance. In my opinion one of the most dramatic breakthroughs in American education during the past fifteen (post-Sputnik) years has been in the field of instructional materials of which sophisticated technology has been only one part—but, granted, a significant part. The jumping off spot for educational reform in the United States was curriculum reform. In almost every academic discipline, teams of subject-matter specialists joined hands and minds with psychologists on learning theory to produce the 'new mathematics', the 'discovery method in science', the 'audio-lingual approach to language, and the anthropological and problem-solving process in the social sciences'. New curricula, new textbooks, new materials, new activities, new evaluative instruments, and carefully designed national (in some cases, state, regional or local) programmes of in-service education were all integral parts of a comprehensive scheme to tip American education in the direction of more drastic and rapid change. Where technology was successful was where it was closely related to a larger educational whole.

By contrast, I have witnessed cases where technological hardware was not accompanied by appropriate curriculum reform, pre-service and in-service teacher training, relevant software, skilled technicians for repair and maintenance, and the necessary funds for experimentation, recurrent operating costs, and possible growth. The result—a short honeymoon, a long period of disillusionment, and then a return to old ways.

Professor Frederick Harbison of Princeton University a few years ago stated that 'the newly developing countries must pioneer in new methods of teaching . . . and that the need for new technologies of pedagogy is greater in developing countries than in those with more fully developed education systems' (from a speech made in East Africa in 1969). Here again I agree. But we need to add to this a balance of hardware with relevant software, locally made low-cost materials with modern media, new equipment with skilled technicians, new curricula with related pre-service and in-service education, and short-term installation costs with long-term operational costs.

Far too few funds are currently allocated

for educational media especially in developing countries. Our need is for both sophisticated and unsophisticated materials. Many of our schools have no electricity, and some have no floors. In many cases teachers, with good hearts, in lonely and remote outposts would give anything for several simple books, a few wall-charts, an occasional visit by a supervisor, and maybe most of all, a nearby water well.

On the other side, the overhead projector, video-tape, sound laboratories, programmed materials, radio and television have a real and powerful role to play in bringing more confidently and rapidly developing countries into the fast-moving decades ahead. Too many educational projects have given only peripheral consideration to media and technology. Where there is perceptive planning and discriminating selection, educational media and technology can make a significant impact on the quality and quantity of learning and teaching.

Bilateral and multilateral aid

The report begins on page 252 by saying, 'We consider that aid to education can and must be increased', but also on the same page, 'Comparatively speaking, bilateral aid opens doors slightly; multilateral aid starts a world-wide circulation of information and experience. It is relatively neutral and open to scrutiny and offers the widest possible opportunity for solutions and comparisons of all kinds and from all sources.' Then on page 253 it concludes that 'Bilateral aid should not be discouraged, since it performs a useful service and because the countries concerned might possibly refuse to accord it in another form. Development of multilateral aid is however highly desirable, since it is more in line with the requirements of international solidarity. It should, in any event, be stepped up sufficiently to reach a higher proportion than bilateral aid.'

These are rather sweeping statements. They project a strong flavour of bias, yet there is nothing wrong with bias if it can be empirically substantiated. But can it? There are, and have been, and even will be, many productive projects in many corners of the world, some with assistance from bilateral sources, and others from multilateral. My guess is, however, that the key ingredients to success of a particular project are not to be found in the nature or location of the donor group's organizational structure, but rather in the imaginative design of the enterprise, and even more important, in the quality, both professionally and personally, of the specific human individuals who are directly involved.

When assistance is so desperately needed by so many nations, when organizational and national purposes are so diverse, when the process of rendering aid is still in a period of trial and error, and when history warns us in so many ways of the dangers of total monopolies—of putting all of our eggs into one basket—is it not wise to think of bilateralism, multilateralism, and also independent agencies and private foundations as co-operative, not competitive, partners in championing the cause of faceless millions who yearn for a better tomorrow and who today have no trusted and total spokesman? The same arguments apply, it seems, with equal validity concerning individual nation versus regional projects on the recipient side. We can only hope that eventually, as the world matures, less attention will be paid to the politics of aid, and more to the responsibility and opportunity of making mankind one.

My remarks have been concentrated on several areas which were of particular concern to me and, I believe, my nation. My reactions have been basically in terms of questions all leading to the next big query: What do we do next? In my opening statement I asserted that the Commission's report 'succeeds'. I should have said, 'initially succeeds' since success in the final

analysis will depend on how fully, how effectively, and how rapidly the principles and recommendations of the report find their way into the daily lives of the dispirited and the deprived. The proposal on the final page of the report calling for the establishment of an International Programme for Educational Innovations attached to Unesco and placed under the control of a representative international body is a bold and specific step in this direction. In my judgement it is the most dramatic proposal in a volume replete with great ideas. I certainly hope it will come to pass.

Learning to be is a monumental international work. It is 'must' reading for those who hope to chart the course of education on a global scale in the partly predictable but still uncertain decade ahead.

Peter Scott

Education at the hour of choosing

The report of the International Commission on the Development of Education under its chairman, Mr. Edgar Faure, the former Prime Minister and Minister of Education of France, is perhaps as radical a document as one could hope for within the constraints in which the seven members of the Commission have had to operate.

It is hardly the fault of the Commission that while it can emphasize with great eloquence and passion the intolerable division that exists in the world between the developed and the developing nations, it cannot propose any solution more fundamental than the recommendation made at the second UNCTAD conference four years ago that rich nations should give one per cent of their GNP in aid to the countries of the Third World—a modest enough proposal, but one that has been honoured only by a few countries. Nor is it the fault of the Commission that they have failed to examine rigorously the relationship between education and power in society, or whether individual enlightenment, achieved through educational reform, can overcome structural inequalities of class and race, or indeed whether such reforms are even possible until these inequalities have been removed.

It would have been idle for the Commission to have speculated on these questions; a carthorse cannot be blamed because it is not a racehorse, and *Learning to be* cannot be blamed because it is not a political manifesto. But it is important to recognize that there is a great gulf between the ease with which an international commission can propose desirable and progressive reforms in education, and the difficulty with which these reforms are sold in the market place of politics to conservative and cost-conscious governments and people. Education is not above politics, but subject to all the irrational whims and prejudices that affect the practice of politics. To be fair to the members of the Commission they are aware of this limitation. In their report they write: 'It is vain to claim to be "fighting" for a learning society which will spring up one fine day, fully formed and equipped, shiny as a new toy, under the effect of ringing phrases. At the most it may be one of the slogans on the banners in a rough political, social and cultural battle, leading to the creation of objective conditions—a call for effort, imagination, daring ideas and actions.'

The report has three important themes: the widening gulf in wealth, and often in educational provision, between the developed countries of Europe, the U.S.S.R., and North America, and the developing countries of Africa and Asia: the need to find a wider concept of education in space—which is no longer synonymous with the school or college—and in time—which is no

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longer confined to the years of adolescence and early adulthood but covers the whole life of the citizen: and the need to break through the traditional barriers of pedagogy and to develop, with the help of technology and other innovations, democratic systems and methods more appropriate to the education of the mass of the people. The first two themes are treated in great detail, but the third, which follows logically from the first two and is probably the most important and certainly the most controversial argument, is not dealt with in a systematic way. Throughout the report there are glimpses, often enticing, of the learning society of the future, but its outline remains fuzzy.

The problems of aid

'The ever-growing gap between industrialized and developing countries has produced the fundamental drama of the contemporary world.' This categorical statement by the Commission near the beginning of their report sets the tone for their discussion of the first theme. They point out that even if the objectives of the United Nations Second Development Decade are met in full, the gap will have become wider by the end of the century. Indeed they go further in their illustration: the report emphasizes that even if the annual rate of increase in population in the countries of the Third World levelled off at 1.8 to 2 per cent—that is considerably lower than the present rate of increase—and the GNP of these countries increased at an annual rate of between 5 and 6 per cent, and the gain in productivity increased at the average rate of the last twenty-five years, then the gap between rich and poor countries would still be 15 per cent greater in the year 2000 than it is today. This gap is, of course, reflected in educational provision and expenditure. Between 1960 and 1968 the developed nations increased their GNP by 78 per cent, and increased spending on education as a share of the GNP from 3.52 per cent to 4.8 per cent. In the same period the GNP of the developing countries increased by 62 per cent, and they pushed up spending on education as a percentage of their GNP from 2.73 to 3.91. So although an absolute increase in expenditure had, of course, taken place in the countries of the Third World, their share of world-wide expenditure on education had fallen—from 9 per cent in 1960 to 8.6 per cent in 1968. This widening gap is expressed in worsening discrimination. While in the United States almost half of the young people (44.5 per cent) receive higher education, and 15 per cent do the same in Europe, less than 4 per cent are so fortunate in Latin America and Asia, and in Africa the proportion is even lower. The developing countries have 65 million more pupils than Europe and North America, but only the same number of teachers.

The Commission has reached a stark verdict on this intolerable discrimination. They write: 'We do not see how this division can ever be overcome—quite the contrary—without an organized, rational transfer, an equitable distribution, of the scientific and technological stockpile which has accumulated at one pole of the community of mankind.' But they do not appear optimistic. They simply repeat the hope —made at the UNCTAD conference in 1968— that the economically advanced nations will heed the call of the United Nations and make a genuine effort to make yearly transfers of resources equal to at least one per cent of their GNP to the countries of the Third World. But, as the report points out, the total contribution of the developed countries in aid to the developing countries in 1970 only amounted to 0.78 per cent of their collective GNP—that is, 4,000 million dollars short of the extremely modest target set in 1968. Only five countries managed to contribute more than one per cent of their GNP.

There are two vital aspects of aid to the Third World that must be examined. The first, the apparent absence of the political will to make this commitment to aid in the advanced countries,

hardly comes within the brief of the Commission, although one member apparently believes that those countries which took no direct part in imperialist and colonialist adventures are under no moral obligation to devote one per cent of the GNP in aid to the Third World. The experience of Britain in the last eight years is perhaps a good illustration of the priority that overseas aid tends to enjoy in the developed nations. In 1964 the Labour Party came to power determined to improve Britain's record in this field. A separate Ministry of Overseas Development was set up, and Barbara Castle, an important figure in the Labour establishment, was appointed as the first minister, with a seat in the Cabinet. But in spite of this, overseas aid was always a low priority in government policy. After all, the millions in Asia and Africa who might benefit, had no votes to give the Labour Party, while the people of Birmingham or Newcastle who wanted new primary schools for their children did. It was not that the government or the people of Britain were any less convinced of the need to aid the Third World: it was simply that they were convinced that there was a greater and more immediate need to solve the economic problems that beset the country, or to build new schools and hospitals. The Commission is, no doubt, on the right lines when they suggest that the international community—through organs like the United Nations or Unesco—must exert itself more energetically to redistribute the wealth, material and mental, of the world. Moral indignation alone will never be able to generate the political will. Within narrow perspectives there will always be greater priorities for governments than overseas aid—except for brief periods when idealism and indignation stirs the conscience of the developed world: only within a wider international perspective can the full injustice of the widening gap between rich and poor countries be appreciated and the political will generated to right this wrong. In the final chapter of the report, 'Roads to solidarity', the Commission tries to suggest ways in which aid can be increased and the principles which should govern the granting and the acceptance of aid. They are inevitably more successful in their second aim than in their first, but the two are connected. By encouraging international, multilateral aid in place of bilateral, often 'tied' aid agreements between individual countries, they hope more effective action will be taken to make the essential transfer of resources from rich to poor countries, and also that the countries of the Third World will be able to receive aid under less restrictive, and perhaps less paternalistic conditions than in the past. Although their hope may be misplaced, there is no alternative strategy.

Some members of the Commission advocate a new international programme for educational innovations. Their ideas on financing this proposed programme, in fact, represent the only sound basis for the desired increase in aid. They write: 'Financing the international programme should be done primarily through channelling into it budget savings equivalent to a fixed percentage of military budgets. It is obvious, of course, that progressive general disarmament would not only be a vital safeguard for humanity, but would release vast resources for the development of human society. Remote as such a prospect may appear to be, a decision to devote funds from budgetary economies equal to a minimal part of military expenditures to the development of education would certainly be noble evidence of the determination of peoples and their governments to undertake, without waiting for world-wide initiatives, the task of serving Man, of freeing him culturally and spiritually and promoting his individual development.' The argument by the Left in many countries that military budgets must be cut to pay for improvements in education and the social services usually provokes a whole variety of reactions—from accusations of outright treason, to charges of harbouring worthy but unrealistic hopes. Far from being unrealistic,

this report shows that on a global as well as a national scale, the hope that nations may soon devote as many of their resources to enlightenment as to death is really the only hope left.

The second aspect of aid, which is perhaps more immediately relevant to the development of education, is the conditions on which such aid is granted. The Commission clearly has doubts about the value of 'tied' aid, although they recognize that this may be the only way in which developing countries can sometimes receive equipment and technical assistance from nations whose currencies are not convertible. But they point out that the money eventually returns to companies in the developed country that carry out the work, and that the price paid, for instance, for school building may be higher than world rates. The same drawbacks, although not in such an acute form, are attached to much of bilateral aid. Indeed such aid may be little different than trade in some circumstances, and the charges of neo-colonialism that are sometimes made may be justified.

But there is an even greater objection to some bilateral aid, which has clearly carried more weight with the Commission. There is a danger that a developed country that has a bilateral aid agreement with a developing country may try and impose its own patterns of educational development perhaps unconsciously. This not only discourages indigenous innovation, but may leave a country with institutions and structures that are not appropriate to its own needs. For instance, a developed country may organize its higher technological education on monotechnic lines: this may make good sense in that country if it trains large numbers of technologists. But to try and impose the same pattern on a developing country that only trains a small number of technologists may lead to small, educationally unbalanced and inefficient institutions. This consideration, rather than the profits that firms from advanced countries may make from bilateral aid agreements, is the true basis of the charge of neo-colonialism.

The question of bilateral versus multilateral aid is still contentious, but the Commission has few doubts about which form it favours. They write: 'Bilateral aid should not be discouraged, since it performs a useful service and because the countries concerned might possibly refuse to accord it in another form. Development of multilateral aid is however highly desirable, since it is more in line with the requirements of international solidarity. It should, in any event, be stepped up sufficiently to reach a higher proportion than bilateral aid.' Later they add: 'One pre-condition for over-all educational reform is that the universal fund of experience and innovation in education be openly available to the international community. Comparatively speaking, bilateral aid opens doors slightly. Multilateral aid starts a worldwide circulation of information and experience. It is relatively neutral and open to scrutiny.'

The school in question

The cloud of pessimism that surrounds the Commission's discussion of the widening gap between rich and poor countries and how aid can help to bridge that gap, gives way to measured optimism when they come to the second important theme in their report—the need to find a concept of education that is wider both in space and time. The argument is briefly that governments and their peoples must cease to think only of a conventional education taking place in schools, colleges and universities, but of a wider enlightenment that is experienced in every part of society.

2 *Educational institutions and means must be multiplied, made more accessible, offer the individual a far more diversified choice. Education must assume the proportions of a true mass movement.*

At one point the report says: 'The most unquestioned dogma in education is that related

to the school. Education = school.' The Commission has set out to question that dogma and with considerable success. They argue in favour of a much wider view of education—ranging from the recognition that traditional and informal styles of education, especially in some parts of Africa, must not necessarily be uprooted and destroyed to make way for that urban invention, the school, to the growing interest in permanent education, or in its more limited Anglo-Saxon form adult education for older learners, and the expansion of pre-school education in most industrialized societies.

There are really two quite separate reasons why the hegemony of the school in education should be challenged—one is the practical consideration that many people, especially in the Third World, are still excluded by economic deprivation and discrimination from formal schooling: the second reason is the ideological argument that formal schooling merely reflects and reinforces the existing unjust hierarchies in societies and blocks the way to true democratic education. On the first point the Commission has no doubts. They write: 'For hundreds of millions of illiterate people in the world, school can no longer be of help. In the developing countries nearly half the children of primary school age today are condemned, no matter what happens, to grow up without ever attending a class. Even if we acknowledge the pedagogic and didactic superiority of methodical, rigorous instruction in school, does not our sense of equity, combined with the requirements of social and economic development, make it imperative that we avoid sacrificing one person in every two among the present generation, and many of those in future generations, by providing for more immediate, more practical, more massive and also more lively non-traditional educational patterns.' A few pages later, the Commission carries the argument one stage further. 'Until now the school as an institution and symbol has had its prestige strengthened, its position confirmed, through the extension of school systems in accordance with the combined wishes of public authorities, parents and young people and also by the extent of the sacrifices which society made on its behalf. But now the massive demands being made on schools, the often vehement calls for a more equitable sharing of the existing educational potential and the growing insistence of all the people who have never had, or fear they will never have access to instruction would appear to be leading to a reappraisal of the school's supreme, or reputedly supreme hegemony in the world of education.' A few pages further on in their report, the Commission further widen their criticism of formal educational structures. 'The system looks inward and backward. This viewpoint helps to consolidate existing structures and to form individuals for living in society as it is. Therefore, and we do not mean this pejoratively, education is by nature conservative.' Later they broaden their criticism again. 'A bureaucratic system, habitually estranged from life, finds it hard to entertain the idea that schools are made for children, instead of children being made for schools. Régimes based on authority from the top and obedience from the bottom cannot develop an education for freedom. It is difficult to imagine school imparting a taste for creative work in socio-economic conditions in which work is generally an alienation.' But the Commission's argument, which at this point seems to be rushing headlong towards the position taken up by the so-called 'de-schoolers', is never consummated. Although they argue for lifelong education and for less formal structures, they still see that the expansion of basic education is the only path to the liberation of the underprivileged.

6 *Universal basic education, in a variety of forms depending on possibilities and needs, should be the top priority for educational policies in the 1970s.*

Nevertheless this is an important argument. It is naïve to pretend that in developing countries

the school does not often embody Western ideals of education and alien values, grounded not in the development of Africa or Asia, but in the political, social and cultural experience of Europe in the past three hundred years. At times this cultural imperialism is obvious and perhaps not too serious. Many thousands of African children in countries that were once ruled by Britain learn about Magna Carta or the victories of Marlborough or Nelson. But it is possible to argue on a more serious level that the school is itself an alien import because its form and ideology is determined by the experience of Europe, not of the developing countries. When the dependence of many developing countries on Europe, the U.S.S.R., and America for teachers and textbooks and modern audio-visual equipment, and the brain drain from the poor to the rich countries is also remembered, it is clear that many developing countries face a difficult task in establishing their own identity in cultural and in educational terms. This struggle must clearly include a reappraisal of the forms of traditional schooling that have been imported from the developed world.

The challenge to formal schooling is perhaps stronger in the developed world, and in particular in the United States where many intelligent people see that even almost universal education has not solved any of the grave problems of that nation. Their disillusionment has been the breeding ground for the de-schooling movement, which is now spreading rapidly through Europe. Their arguments are simple: schools and colleges are not really concerned with the enlightenment or the liberation of the individual, but with providing skilled manpower for the economy of the class state. Schools must die, so that education can live.

It is only fair to add that these arguments carry a great deal of conviction. On the face of it in Britain there has been a strong trend towards more progressive forms of education in the past twenty years. Primary education has been liberalized and the importance of formal learning has been very much reduced in these schools: selective secondary schools have been abolished and in their place comprehensive schools have been established which children of all classes and all abilities attend: higher education has been expanded and a higher proportion of the age group now go to a college or university.

7 *Rigid distinctions between different types of teaching—general, scientific, technical and professional—must be dropped, and education, as from primary and secondary levels, must become theoretical, technological, practical and manual at the same time.*

It is possible to see this movement as the achievement of the liberal-socialist progressives—as their conservative enemies do: it is also possible to see it as the result of the demand from the economy for a more skilled and more flexible labour force, which could no longer be provided from élite and restrictive institutions. Both views are correct, and both are exaggerations.

The flaw in the argument of the 'de-schoolers' is that very similar arguments can be used to justify discrimination in education against the underprivileged, usually the working classes, and the continuing existence of élite institutions. The Commission recognizes this danger. They write: 'The universal right to education—in which contemporary civilization takes such premature pride—is often refused, by a complete reversal of justice, to the most underprivileged. They are the first to be denied their right in poor societies; the only ones deprived in the rich.' From the point of view of the individual, judged in Laingian terms, school may well be an oppression: but from a collective point of view any diminution of the effort put into the expansion of formal schooling can only favour those classes that are already over-privileged. The solution is not to dissolve formal structures in education, but to liberalize existing

structures and introduce into them some form of positive discrimination in favour of the underprivileged—as the Commission suggests in their report but does not really try to develop. They point out: 'Equal access to education is only a necessary—not a sufficient—condition for justice. Equal access is not equal opportunity. This must comprise equal chance of success.' They suggest that in higher education 'measures such as organizing university campuses, implicitly or explicitly fixing university enrolment quotas for specific groups or even expanding scholarship systems are merely palliatives, unless they are incorporated into a resolute, long-term cultural promotion strategy, backed by a comprehensive effort to bring about political and social democracy'. Yet the chances of many universities even adopting the policies which the Commission calls palliatives are not good. In England the newly established North East London Polytechnic announced that it would accept students not on the usual basis of 'likely to succeed' (in degree examinations) but on the new criterion of 'likely to benefit'. This announcement was met with open scepticism, and secret contempt. But however slight the hopes of success, the Commission is surely right in its call to 'cease confusing, as people have more or less consciously done for a long while, equal access to education with equal opportunity, and broad access to education with democracy in education'.

Mr. Faure and his colleagues were probably wise not to linger over the ideological and political implications of these questions. Although they were obviously tempted by the arguments of the 'de-schoolers', they have not fallen into the trap of taking up a fundamentalist position on the future of formal schooling. While holding to their main theme, that a wider and more liberal concept of education must be found, they have tried to define how this can be achieved in concrete terms. They argue, first, that the development of education for pre-school age children must be one of the major objectives for educational strategies in the next ten years. Few people would question this priority today. Pre-school education has been ignored in many countries, with the exception of the U.S.S.R. and the other socialist countries. Yet its development is desirable both in educational and social terms—educationally because the lack of formal education in the early years of a child's life means that many children arrive for their first day of school already handicapped because of their social and intellectual environment at home, and socially because few policies can contribute more to the liberation of women from their dependent status—even in the most advanced countries.

A second priority for the Commission is the development of adult education, which like pre-school education has too often been the poor relation, especially in countries with well-developed systems of formal schooling. Again few people will question this priority, but past experience may make us a little doubtful about whether governments will ever divert resources from more prestigious sectors of education—like the universities—to adult education. There are perhaps some hopeful signs. In the developing countries, of course, adult education can be built up on the base of literacy campaigns, but even in the advanced countries the pace of economic change, with its demands for a more versatile work force and the need for more and more workers to be retrained, or have their skills brought up to date, can give greater impetus to the demands for adult education. The shorter working week will have the same effect. In the English county of Leicestershire the local education authority has set up 'community colleges', which are a mixture of secondary schools, centres for adult education, and for the cultural life of the local community. The newly founded polytechnics in Britain have a much greater commitment to serving the needs of the local community than the universities. Many of their courses—even at degree level—are on a part-time basis and are intended for mature students who are already practising their profession. Perhaps the most important British contribution

to the development of adult education is the Open University, which provides degree-level instruction for the student in his own home by means of television, radio, correspondence courses, seminars, and summer schools. In almost every country there is a powerful movement to bring higher and adult education closer to the life of the people, and into greater harmony with their needs and wishes. This movement has even affected those bastions of traditional learning and social exclusiveness, the universities, which have introduced new courses in response to the demands of students and the needs of society.

These two principles, the development of pre-school and adult education, will be the practical expression of what the Commission calls 'the master concept for educational policies in the years to come for both developed and developing countries', the concept of lifelong education. They write: 'Every individual must be in a position to keep learning throughout his life. The idea of lifelong education is the keystone of the learning society. . . . The various applications of this idea will of course differ greatly. . . . But we remain convinced that the question of lifelong education, the decisions to take and the paths to follow in order to achieve it, are the crucial issues of our time, in all countries of the world, even in those which have yet to become fully aware of this idea.' A Utopian concept perhaps, but education is a Utopian business. The Commission is really arguing for an extension of the very concept of education—in space by breaking through the school walls and taking enlightenment to the people in their homes, in factories and in the fields, and in time by encouraging the development of education from the pre-school infant stage through to maturity and old age—and so bringing closer their ideal of a learning society.

Education for democracy

The final theme of the report is both the most obscure and the most controversial. Its short title might be 'Education for democracy', or, as the Commission prefers 'Towards a learning society'. It is about the widening of educational opportunity—real not mechanical opportunity—to the underprivileged masses, and about the democratization both of structures and methods in education. Although the tone of the report is on the whole optimistic, the Commission does not pretend that there will not be obstacles on the road to a learning society. At one point they write: 'Threats are growing more serious, clashes are intensifying, and so are conservative reactions. Failure to grasp the essential contradictions in the world will make it harder than ever to find one's bearings in it, and especially to discern the necessary paths for future educational action.'

In spite of these doubts the Commission makes a brave attempt to define these paths of development. At the end of the first section of their report they attempt to define some of the preconditions of achieving democracy in education. They write: 'Foreseeing the advent of democracy to the world of education is not an illusion. It may not be a perfect democracy, but when has this ever existed? Yet it will at least be a real, concrete, practical democracy, not inspired and built by bureaucrats or technocrats, or granted by some ruling caste. It will be living, creative and evolving. For this to be achieved, social structures must change and the privileges developed into our cultural heritage must be reduced. Educational structures must be remodelled, to extend widely the field of choice and enable people to follow lifelong education patterns. Subject-matter must be individualized. Pupils and students must be aware of their status, their rights and their own wishes. Authoritarian forms of teaching must give way to relationships marked by independence, mutual responsibility and dialogue.

The pedagogical training must be geared to knowing and respecting the multiple aspects of human personality. Guidance must replace selection. Those making use of educational institutions must participate in their management and policy making. The bureaucratic aspects of educational activity must be broken down and its administration decentralized.' This passage, which sounds more perhaps like a shopping list for revolution than the recommendations of a distinguished commission of educationists, could be dismissed as Utopian. Just as St. Augustine was against sin, so the majority of people working in education are against 'authoritarian structures'. The problem is defining authoritarianism, and the search for alternative structures.

Within the broad programme of worthy objectives the Commission emphasizes three points: first, the irrelevance of many curricula taught in schools and colleges. This criticism is to some extent an extension of their criticism of the hegemony of the school. They make the well-worn points that humanities and arts subjects carry more prestige than science, and especially applied science subjects (although they are hardly correct, surely, to suggest that history is invested with greater prestige than economics; certainly in many European countries, the social sciences are the most popular subjects among students). Many developing countries find that the curricula that they have inherited are hopelessly irrelevant to the life of their country. This feeling in Algeria after the departure of the French was one of the motives behind the setting up of the new Institute of Technology with closer links with the lives of the people. But the same disquiet about the relevance of curricula exists also in the developed world. One of the motives which prompted the British Government in 1966 to set up new polytechnics instead of founding new universities was their feeling that alternative, more relevant, and more socially conscious forms of higher education should be developed.

10 *Throughout the post-secondary educational system, structures, subject-matter and student categories must be very broadly diversified.*

The second point emphasized by the Commission is the need to abolish or at least to curtail the influence of selection and of examinations. The Commission suggests that the present 'inordinate importance given to selection, examinations and diplomas' rewards the strong, the lucky and the conformist, and penalizes the unfortunate, the slow, the ill-adapted, and the people who are and feel different. They attack the reassuring ideology that it is democratic to replace privilege based on birth or money by privilege based on merit. 'Are those who have the advantage of socio-cultural conditions which are favourable to linguistic and abstract expression—or even those who have an above average IQ—more deserving, from the human and moral point of view, than their peers?', they ask. The Commission pins much hope on the effect of lifelong education on the whole concept of success and failure. 'Once education has become continual, ideas as to what constitutes success and failure will change. An individual who fails at a given age and level in the course of his educational career will have other opportunities. He will no longer be relegated for life to the ghetto of his own failure.'

Their third point is more directly relevant to the democratization of educational institutions. They argue that all the participants in an enterprise—students and pupils as well as teachers and administrators—must be free to participate in the decision-making process within their school or college. Although this idea is becoming more widely accepted at the level of universities—all students, are after all citizens with the right to vote—but it is still sharply resisted in the case of school-age pupils. Another aspect of the same point is the Commission's call for greater decentralization of power within educational systems. They state the inevitable dilemma clearly: 'The first of these concerns [to

control the educational system as systematically as possible] may be justified—practical and political considerations aside—by the need to allocate community resources in the most efficient and rational way, to check on how they are used and to define general goals. The second stems from the fact that an enterprise will flourish all the more if the authority under whose jurisdiction it falls can, without violating the harmony of the whole system, decentralize more, and through a flexible, sympathetic and non-interfering approach, encourage initiatives "from the ranks".' Unfortunately the problem is not as simple as that. No satisfactory way has yet been found to encourage diversity that does not at the same time help to perpetuate class and regional differences. A government that insisted on decentralizing control of its schools in poor city areas may not have helped the children in those schools. A certain degree of central control is sometimes the only guarantee that schools in rich and poor areas alike can be treated equally, or—better still—a policy of positive discrimination in favour of poor areas can be implemented. A second consideration is finance. As the education system is squeezed between the millstone of growing demand and the millstone of budgetary retrenchment, it is increasingly difficult to tolerate diversity and decentralization if they appear to be a source of waste. Both these considerations are beginning to carry more and more weight in the developed world, and it would be wrong to underestimate the pressure for more centralized control of educational systems.

The 'free school' movement, which has become so important in the United States (and has spread also to Britain where the best example of a free school is in a working class area of Liverpool), is perhaps the most practical expression of what the Commission is striving towards. In these schools teaching is individualized, there is often genuine participation, the oppressive control of the State bureaucracy has been removed, and the tyranny of curricula and examinations removed. The only doubt that remains is whether such a movement can ever be anything more than a minority movement, a useful goad to liberalization within State systems of education. If this movement ever became a serious rival, it would lose its progressive face, and its structural weakness—its dependence on the enthusiasm of individuals, and funds from charities or fees—would become apparent. In the end there can be no effective substitute—for those who look forward to a socialist reconstruction of society—to the extension and the perfection of State systems of education. The alternative, however well meaning and however progressive, is anarchy. The only true path to democratic and participatory education is to build a democratic and participatory society.

So the argument has come full circle. To reform education, first reform society, and that is clearly beyond the brief and the power of the International Commission on the Development of Education. Nevertheless in their report the Commission have raised some of the fundamental issues connected with the development of education. They have not been afraid to ask awkward questions, or to give radical answers. This report is essentially a humanistic, not a bureaucratic document. Mr. Faure and his colleagues have painted in broad brush strokes an image of the learning society of the future, in which all citizens will receive lifelong education whatever their age, or their race, or their class, in which divisions between rich and poor countries will be broken down through international solidarity, in which education will no longer consist of formal instruction, or a hurdle race of examinations and degrees, but a process of enlightenment and self-discovery, in which participation will replace authority as the guiding principle. It is now the task of governments and of their peoples to bring that image to life.

Open-air geography teaching in Tolbukhin

Practical geography, taught in the open air, has an important place in education in the People's Republic of Bulgaria. The results of the experiment made in the schools of the Province of Tolbukhin in north-east Bulgaria are of particular interest in this connexion. The experiment was started with the idea of meeting new requirements in children's education and achieving the prime objective of Communist education—the harmonious development of the personality.

The open-air geography ground is a specially equipped area in the school yard where, under the supervision of the teacher, the pupils carry out a number of observations, experiments and measurements, make models of geographical sites and use various pieces of apparatus and instruments. The area comes under the geography department and forms an open-air laboratory where the principles of audio-visual teaching and of combining theory and practice are applied.

These practical studies of geographical sites, phenomena and processes in the open-air geography ground provide excellent opportunities of getting away from the purely oral, bookish type of teaching, inculcating the habit of individual work and allowing for a more personal and varied approach; the teaching of physical geography is thus closely linked with practical work.

Experience in the schools has shown that pupils, when taught orally in the classroom, are unable to form a mental picture of the concrete elements of geography and are therefore unable to study those elements on their own, to observe and assimilate them, or to work out the principles and logic of geography. In the open-air, however, the pupils carry out a series of practical exercises provided for in the syllabus, the results of which show that the pupils: (a) acquire knowledge, skills and habits based on direct observation and analysis of natural phenomena in connexion with such subjects as mathematical geography, climatology, geomorphology and hydrology, which are included in the geography syllabus from the fifth class to the eighth; (b) add to their knowledge and learn how to handle various pieces of geographical apparatus, instruments and equipment having practical applications; (c) learn to model in clay, plaster, papier-mâché, sand, etc.

The open-air geography work enables the teacher to accustom pupils to independent experimental work, to broaden their technical background considerably, and to guide them towards an understanding of the laws governing the environment and changes in it, with due regard for the needs of society.

Planning and equipment of the open-air geography grounds

The average size of the ground is 22 by 12 metres. Ideally, the four sides should face towards the four cardinal points. The pupils thus get used to finding their bearings in the open air without the help of instruments.

The apparatus and equipment is divided into groups so that the geography ground can be used rationally and with maximum efficiency. The geography ground of the Assène Zlatarov school in the town of Shabla is typical of the way these areas are arranged throughout the Province of Tolbukhin, with different parts for

mathematical geography, hydrology and geomorphology, topography and modelling (see Fig. 1).

The experience acquired while working in these open-air geography grounds has brought out a series of facts concerning teaching and hygiene which have since been applied to practice in all schools in the province, namely:

1. The dimensions of the geography grounds are suitable and the pupils can easily handle the apparatus during the study periods;
2. Dry areas are chosen, with asphalt paths and open spaces, so that work can continue without interruption throughout the year;
3. These areas are piped and have electricity and water laid on, for convenience in teaching hydrology, geomorphology and modelling;
4. The sites have been chosen so as to avoid windy places and thus avoid the pupils catching cold;
5. The area is large enough for practical observations to be carried out on the spot; if the vegetation is too high or too dense it would interfere with exact evaluation of the climatic factors.

Practical teaching out-of-doors

Learning how to find one's bearings in natural surroundings is of great practical importance in the children's life and work. Studies for this purpose are carried out mainly in the area reserved for mathematical geography. In the classroom, the pupils learn how to orient themselves with a compass. If there is no compass, they learn how to do so by using an ordinary wrist-

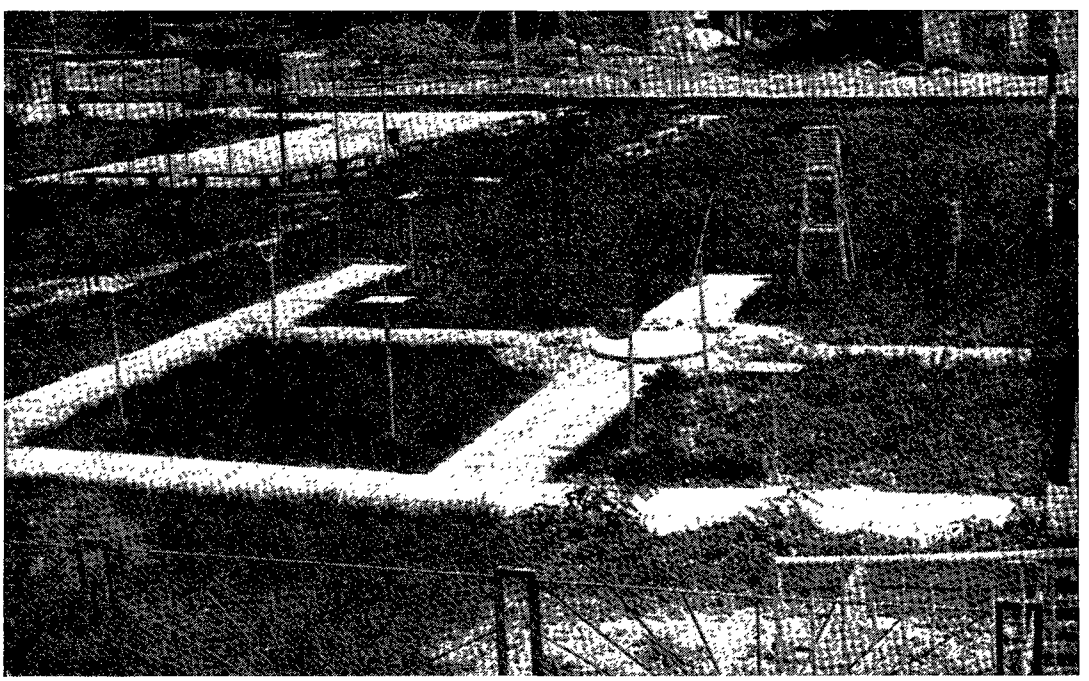

FIG. 1. Grounds laid out for geography teaching, Shabla primary school, Tolbukhin Province.

watch. In real life, this is often not enough. On the geography ground, the pupils also learn direction-finding with the help of other objects. In the Alpine garden of the geography area, they find stones and pieces of rock, the north side of which is covered with common moss and lichens. In the dendrology corner there are trees which can help in direction-finding by the shape of their crowns and the places in which lichens grow on their trunks. Old tree-trunks, cut across horizontally and used as decoration in the Alpine garden, also help, by showing the arrangement of the annual age-rings. The trees are so placed that the children can see that the pith grows faster in the part of the tree facing south than in that facing north.

The teacher divides the pupils into groups, giving each group the task of determining the cardinal points by reference to the main features of the stones, trees, tree-trunks, etc. The exercises are repeated in a natural environment during forest excursions, in order to consolidate the knowledge and skills acquired.

Direction-finding by means of special apparatus is of particular interest in the mathematics section. The equipment makes it possible to determine the cardinal points and to define the notions of horizon, local meridian and parallel.

The gnomon is an astronomical instrument used for position-finding by the sun. The orientation and functioning of this instrument are based on the fact that the shadows cast by objects in sunlight change direction and length as the day proceeds. In the morning, the shadows lie to the west of the objects in question and are relatively longer. When the sun rises above the horizon, the shadows cast gradually move towards the north and grow shorter. At midday, local time, the shadow of the object is at its shortest and points due north. During the afternoon, the shadow goes on swinging eastwards, again growing longer and longer.

The pupils, supervised by the teacher, assemble the instrument themselves. A piece of wood (30 by 40 cm) is fixed horizontally on a support roughly corresponding to the average height of the pupils—1.20 m, to 1.30 m, from the ground—with one of the longer sides facing north (N). A metal style, 10 centimetres long, is driven vertically into the middle of this plane surface, 5 centimetres from the southern edge. Concentric semicircles with varying radii are drawn around the rod. The radius of the outside circle is equal to the length of the shadow cast by the style at 9 a.m.; the radius of the middle circle equals the length of the shadow at 10 a.m., and that of the inner circle equals the length of the shadow at 11 a.m.

The exercise carried out by the pupils with the help of the gnomon proceeds as follows: on a sunny day, they note the time and the place at which the shadow of the style reaches each of the three circumferences, marking the points on the different circles. The shadow will touch the outer circle at 9 a.m., and 3 p.m., the middle circle at 10 a.m., and 2 p.m., and the inner circle at 11 a.m., and 1 p.m. The pupils draw straight lines joining the points at which the shadow touches each circle, thus obtaining three chords; each of these is bisected and the three median points are then joined by a straight line to the base of the style. During the day, the shadow will be shortest when it coincides with this line, showing the true mid-day for that point on the globe, and the line will indicate noon by local solar time. This line runs north-south, and the east-west axis is, of course, perpendicular to it (cf. Fig. 2).

The compass disc is very similar to the gnomon, except that its horizontal plane surface represents a circle painted in different colours with oil paints, indicating the different directions. The instrument is set by compass on the local meridian and is used to accustom pupils to determining the position of the various objects visible in relation to the observer's position (cf. Fig. 3). From the geography ground at the Shabla school one can see in the distance the sea and the contours of the green belt, in the direction of the town of Tolbukhin, etc., and

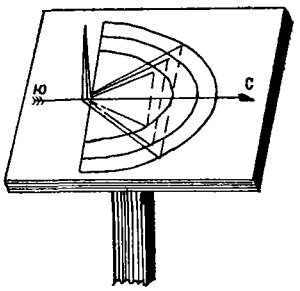

FIG. 2. Gnomon.

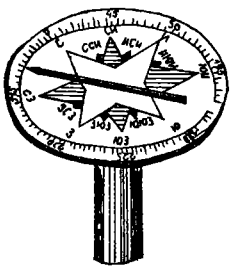

FIG. 3. Compass disc.

the pupils have to take their bearings. One after another they take their places in front of the apparatus and the teacher asks them to indicate, one by one, the position of the various features or sites. The pupil taking the observations stands so that he has the disc between himself and the object observed. He then takes the indicator and places it horizontally in the centre of the instrument, pointing towards the object whose position he has to determine. Having done so, he holds the pointer in place on the horizontal plane surface, stands upright and reads off the position from the compass points shown on the circle.

The pupils generally have no difficulty in finding directions from their native town. Almost all know the directions in which lie the towns of Sofia, Varna, Plovdiv, Vidin, Kurdzhali and Ruse. This is largely due to their practice with the following orientation apparatus based on the principle of the compass-card. This instrument represents a circle, in the centre of which lies the town of Shabla, with the cardinal points indicated. The bearings of the various towns and sites from Shabla are shown on this circle. The teacher also lays on the circle a small geographical map, with the town of Shabla situated in the centre, the map being placed according to the position of the various sites—towns, rivers, mountains, etc. The pupils can thus, rapidly and correctly, give the directions of a whole series of geographical sites from their home-town.

The position of any place on the earth is determined, as we all know, by its geographical co-ordinates—its latitude and longitude. It is very easy to determine the exact position of a place by reference to a topographical or ordinary map. Without maps, the pupils can use the eclimeter on the geography ground to work out rapidly and exactly the geographical latitude of the sites. The eclimeter is a goniometer placed vertically on a support and directed towards the Pole Star. The angle formed by the support and the indicator, less 90°, gives the geographical latitude of the place where the observation is made.

Work to determine geographical latitude by using the eclimeter is done on a starry night. The operations are carried out at night only by the teacher, with a small group of pupils; during the day, however, all pupils are shown how to use the instrument. The observer stands on the south side of the instrument, holding the indicator with his left hand and pointing it towards the Pole Star. He then tightens the screw of the goniometer so as to prevent the indicator from moving. The observer (teacher or pupil) then turns side-ways to examine the position of the indicator in relation to the marked scale. The indicator has moved through a certain angle from its original position (zero). This angle in fact

represents the geographical latitude of the site or spot from which the observation is made.

Longitude is worked out in the geography area with the help of a sun-dial. A time, as communicated by the local radio, is chosen—for example, mid-day. The class assembles round the sun-dial and as soon as the radio gives the exact time (mid-day), the pupils all set their watches accordingly and immediately note the time indicated by the gnomon of the sun-dial. During their work, they find that in Shabla the sun-dial is 'slow' and that it will not show mid-day exactly until 5 minutes, 48 seconds later than the radio. The teacher explains to the pupils the reasons for this difference between the official time and the astronomical time. He recapitulates what they have studied on time zones and thus explains that our watches are set to the astronomical time of the meridian situated 30° east of Greenwich. The fact that the sun-dial is 5 minutes 48 seconds slow in relation to the children's watches shows that Shabla is situated to the west of the 30th meridian. How many degrees exactly? This is worked out from the time-lag indicated by the sun-dial. Considering that the earth turns on its axis through one degree (1°) in four minutes and that it turns through 1′ in four seconds, the amount of time by which the Shabla sun-dial is slow represents, 1°27′47″. Consequently, the town of Shabla lies to the east of Greenwich at 30° less 1°27′47″—i.e. at 28°32′13″. The geographical longitude of any town or village in our country can be determined in the same way.

The sun-dial is, of course, not used only to determine longitude but chiefly to tell the time of day. The way it works is simple. On a fixed support, 1.30 m high, a horizontal plane surface of unspecified size is so placed that one of its sides runs north-south and the other east-west. Five centimetres from the south side of the plane surface, a metal or wooden style is set up, pointing due north and inclined at an angle equal to the latitude of the town of Shabla. The shadow cast by the style is, as it were, the hand of the sun-dial. When this shadow falls along the line of the local meridian, the sun-dial shows 12 o'clock, that is, noon by the sun. Lines for the other times of the day can be drawn on the plane surface in various ways. The pupils generally prefer to do this the easiest way, by using their watches. They take the time by their watches when the shadow of the style coincides exactly with the local meridian and, one hour later by their watches, they once more mark the position of the shadow. After another hour, they do likewise, and so on until sunset. Similarly, they make marks on the sun-dial to enable them to tell the time in the morning, while allowing for differences between local solar and official time, the difference in the case of Shabla being 5 minutes 48 seconds.

It is also of interest for the pupils to learn how to gain an idea of the time from the floral dial, arranged in the Alpine garden of the Shabla school.

For example, the flower known as *taraxacum officinale* takes on a yellow hue at the very beginning of spring. The flowers generally open their corollas at about 5 a.m., so that one can tell whether it is before or after five o'clock.

The tri-coloured violet turns its flowers towards the sun at noon; the *erodium cicotarium*, a small dark-pink flower, closes its petals at about 6 p.m., the *sedum acre* at approximately 7 p.m., and the campanula around midnight.

Each flower has a notice beside it in Bulgarian and Latin mentioning how it indicates the time. Wherever the pupils, on their outings, come across similar flowers, they will be able to recall their peculiarities and so have a rough idea of the time of day.

Meteorology studies and practicals

Under the teacher's guidance, the pupils learn to use the various instruments for gauging the elements. In this way they acquire direct

knowledge of the atmospheric phenomena peculiar to their region, while at the same time learning to apply the knowledge they have acquired in the geography ground. The readings taken in the meteorology section are recorded on a daily, monthly or annual basis, and the pupils prepare various climate charts, diagrams, sketch-plans and tables concerning weather and climate. In class they scrutinize and piece together all the data gathered and so get to know the laws governing the climatological phenomena of their region. This variety of weather-study activities is of considerable importance in the life of the pupils, giving them new knowledge and new skills which will enable them, later on, when working in the countryside, to foresee the effects of certain atmospheric phenomena, such as hoar-frost, heavy snowfall, freezing, and so forth.

Only sound organization yields good results. Accordingly, at the very start of the school year, the geography teacher at the Shabla primary school prepares a timetable for regular observation of natural phenomena. All pupils in the fifth, sixth and seventh classes take part in this. To begin with, the teacher tells the pupils exactly what they are going to do, shows them how to use the instruments, and instructs each of them individually in how to handle them, taking trial readings with them. Readings are generally taken at 7 a.m., 2 p.m., and 8 p.m., for the following:

1. Wind—strength and direction;
2. Air—humidity and temperature;
3. Precipitation;
4. Barometric pressure;
5. Cloud cover—type and volume;
6. Snow depth.

The type of observations differ from class to class, depending on the syllabus. Pupils in the fifth class observe temperature, atmospheric pressure, wind and precipitations; they learn to take readings with instruments, to enter them in registers by means of conventional signs, to analyse the data and to prepare a current weather chart for the region from their notes.

Pupils in the sixth and seventh classes continue the observations made in the fifth class, adding new factors they have learnt about in the course of their studies, concerning aid humidity and secondary cloud types. At this stage, the analysis becomes more independent of the data gathered, the emphasis being on the interdependence of climatic elements.

The readings taken by the pupils in the course of their observations are recorded in a special register—a weather journal—with particulars of the place and its latitude, longitude and altitude.

The journal kept by the pupils of the Shabla school contains all the data collected, at various times of the day, on such factors as temperature, atmospheric pressure, humidity, cloud cover, wind and rain. These data provide the basic material for various sorts of practical work in geography and are used for the preparation of a synthesis and conclusions during classroom instruction.

Geomorphology and hydrology work and exercises

Work and exercises in geomorphology and hydrology are intended to help pupils study phenomena with which they are unfamiliar or of which they have only an elementary knowledge.

This work is particularly important for teaching third-form pupils about nature and society and for teaching geography to pupils in the fourth, fifth and eighth classes, when pupils are taught the fundamentals of geomorphology and hydrology, which cannot be practically demonstrated in the field.

The hydrological and geomorphological sites in the Shabla school's model are presented as a whole, always closely interlinked, as in nature itself.

With the help of the model, the pupils acquire

practical knowledge of the sea basin and such features as gulfs, isthmuses, islands, peninsulas, deltas and varieties of coastline. Pupils in the fifth and seventh classes use the model when they are introduced to the notion of the depth contour. The model of the Black Sea comprises contours of different colours providing a visual representation of the sea bed.

The demonstration procedure here is as follows. When the basin is full, the pupils observe the line along which the surface of the water meets the land. It is assumed, conventionally, that this line corresponds to zero altitude. The teacher then empties the water down to the second isobath. Here he explains the notion of the *continental shelf*. More water is then drawn off to show what is meant by the term *continental slope*. Finally, when the basin is empty, the sea bed can be seen. This basin gives the pupils a direct visual idea of a whole series of other elements in hydrology, such as abrasion and sediments, as well as port installations, and so on.

The model also shows freshwater hydrological features, representing a spring, the upper, middle and lower reaches of a river, its banks, bed and tributaries, drainage basins, waterfalls, the branches of rivers, reservoir lakes, hydroelectric stations, irrigation systems, and so forth.

In the geography area, various land surfaces studied in the third to eighth classes are also represented, such as: plane configurations (depression, basin, plain, plateau); relief (hill, low mountain, medium mountain, dome, longitudinal fold, mountain mass); concave folds (valley, transverse and longitudinal valley, gorge).

For the purposes of geomorphology and hydrology, certain practical exercises can be carried out, such as experiments with artesian wells, erosion processes, and design of water-engineering works.

In all this, it must never be forgotten that there can be no better geomorphology and hydrology model than natural sites themselves. In the course of outings, pupils make an on-the-spot study of geographical sites as they really are, thus acquiring first-hand practical knowledge of the lie of the land which will remain in their memories all the better.

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Curriculum innovation in the South Pacific

Some of the problems and how they are being met

Readers will have heard of young Johnny excitedly telling his father how much Mathematics he knew. 'Listen, Dad, three and two, the son of a bitch is five; four and three, the son of a bitch is seven.' From the ensuing parental complaint it was discovered that the teacher had said 'Three and two, the *sum of which* is five'. For young Johnny it was all words, words, words. Another child parrots 'Two minuses give a plus'. 'Why?' you ask him—or his teacher. No reply. Here mathematics has become 'magic' instead of 'logic'. 'π is $^{22}/_{7}$'. 'Is it?' you ask. 'Why?'—'Because it is!' Pie from the sky! After a few lessons on simple proportion I once interspersed this question: 'If Henry VIII had six wives, how many did Henry II have?' A smile from some of the class; but others were quite happy with their answer '$1\frac{1}{2}$'.

These are examples, culled from mathematics, to illustrate why many people in many parts of the world pressed for a change not only in *what* is taught but also *how* it is taught, and not only in mathematics but in all subjects. In the South Pacific, also, came the plea for reform. Here the plea was stronger because so much of what was being taught was irrelevant to the background and needs and aspirations of the countries of the South Pacific. Was the Court of the Star Chamber really of such great significance for the South Pacific as to be included in school syllabuses to the exclusion of topics more germane to life here? Should the girls in the Gilbert and Ellice Islands located on the Equator and where the temperature seldom drops below 85 degrees, day or night, winter or summer—really have to knit pullovers in order to meet the requirements of the Cambridge Overseas School Certificate Examination? In last year's Cambridge School Certificate Examination a question in the biology practical examination involved a sheep's tooth. There are no sheep in the Gilberts. For art the examinees had to draw a lily. There are no lilies in the Gilberts. Can you really penalize children in Tonga for thinking the Golden Kiwi—an essay topic in a recent New Zealand School Certificate examination—was some sort of strange animal instead of the New Zealand State Lottery, which it is, bearing in mind, particularly that lotteries are illegal in Tonga anyway?

Background and objectives of the project

In 1969 the governments of the South Pacific submitted a request to the United Nations Development Programme (UNDP) for assistance in developing a new and relevant curriculum, based on the requirements of the region. As a result of this request a Regional Project for Secondary School Curriculum Development was set up in 1970, located at the University of the South Pacific. The governments of the South Pacific participating in the project are the British Solomon Islands (a protectorate); the Cook Islands; Fiji; the Gilbert and Ellice Islands (a colony); the New Hebrides (a condominium); Niue and Tokelau Islands; Tonga (a kingdom); and Western Samoa—covering an area as large as that of the United States of America.

The project is required to produce a new and relevant curriculum for Forms I to VI, in other words, beginning with the sixth year of schooling. It is a joint co-operative venture between, on the one hand, the United Nations Development Programme, Unesco (the executive

Agency) and Unicef, who together are providing about two million dollars (U.S.); and, on the other hand, the governments of the South Pacific. Although at one stage it was proposed that the participating governments make a financial counterpart contribution amounting to about 7 per cent of the costs of the project to be based proportionately on the number of secondary-school pupils in each participating island (as a result of which Fiji would pay about half the total counterpart costs while Nauru, which is among the wealthiest of the islands because of its phosphate industry, was to pay a mere few hundred dollars), since January 1972 all financial contributions in respect of the regional project have been waived.

The project is of four years duration, scheduled to terminate at the end of 1973. Someone has remarked that it takes twenty-five years to remove a cemetery and that it takes just as long to change a curriculum. We have four years. This means we must get a move on. We have done careful preliminary work and systematic planning and development, but I feel one can err on the side of being *too* academic and philosophical. Developing countries are in a hurry; so, too, are Directors of Education. For each year that the project does not produce new curricular materials in any particular subject, a whole age-group of children passes out from the schools and so misses a more relevant and rewarding experience. For those children who remain in school and who have embarked on a new curriculum it is essential that they be supplied with new material, not at infrequent intervals, but continuously and on a carefully mapped-out plan and schedule.

There is a plan of operation which lays down the objectives and accompanying activities of the project and the obligations of all the parties participating in it. This has been agreed to and signed by the British Government on behalf of the Gilbert and Ellice Islands, the Solomon Islands, and the British half of the New Hebrides Condominium; by the New Zealand Government on behalf of Niue and Tokelau Islands, and by nearly, but not all, the governments of the South Pacific. This reflects one of the difficulties arising from the project being a *regional* one, as against one co-operating with *only* one government.

The objectives laid down in the plan of operation are:

1. To assist the governments in the region to improve the quality and capacity of their secondary level education;
2. To provide a new and comprehensive curriculum based on the requirements of the region;
3. To produce experimental curricular materials and teaching aids based on the new curriculum;
4. To train teachers to implement this curriculum innovation;
5. To establish a permanent unit in the University of the South Pacific for curriculum and teaching materials development and for preservice and in-service training of teachers.

Unesco has provided a staff of ten to implement these objectives: a chief technical adviser and nine specialists in the fields of English language, mathematics, physical science, biological/agricultural/rural science, social science, business/commercial studies, home economics, technical education, and educational media.

Overcoming geographical and cultural obstacles

I have mentioned difficulties arising from its being a regional project. Since the area of the region is so extensive and spread over vast tracts of ocean, our difficulties of communication and travel are magnified. Not all the participating countries have air facilities, one barely has adequate shipping communication. For example, four ships a year call at the Tokelau Islands, which means that a visit by a member of the project to these islands could

involve an absence from the university of perhaps up to six months. Air fares are anyhow exorbitant: it is cheaper to fly from Fiji to Europe than to fly to the Gilberts and back. We are constantly facing deadlines: a new school term has begun and the pupils are champing at the bit for new class materials. This means we must often air-freight the equipment and materials—a very expensive undertaking. When the project introduced its Form I basic science course in pilot schools in the region, free experimental kits, costing Unesco 62 Australian dollars each, were issued to these schools. Due to delays in shipment from Australia these free kits eventually had to be air-freighted to the islands at a cost considerably more than the value of the kits themselves.

The difficulties and expense of travel mean we are to some extent restricted in our visits to the islands co-operating with us in the project. In spite of these difficulties all members of the team have visited nearly all the islands, where they have not only held discussions but also have conducted courses for local teachers. Understandably, no one has visited the Tokelaus yet; and only one of us has gone to Niue so far.

These visits to the co-operating countries are vital to the success of the project. It is essential that we maintain close liaison and a continuous dialogue with the Directors of Education, with the teachers and with other interested people involved in curriculum innovation so that their views can be reflected in the curricular materials we are producing. At the same time, members of the project are engaged in teaching the methodology courses to B.A./B.Sc. degree and Diploma in Education students in the University of the South Pacific and in supervising their teaching practice.

This ensures that the new generation of graduating teachers, who will be implementing the new curricula in the schools, is conversant with the rationale and philosophy underlying the new curricular materials and is capable of using them to maximum advantage. The calls on project members to visit and conduct courses on the islands at times when they are scheduled to take courses in the university presents another problem.

Perhaps the biggest difficulty arising from being a regional project is that we are dealing with eight different countries, each with its own specific language, culture, traditions, and each differing immensely in climate, vegetation, economic viability and educational attainments. There are the lush tropical vegetation and rugged mountains of one side of Fiji as against the coral atolls, none more than a few feet above sea-level, that make up some of the islands with their barren vegetation barely managing to eke out an existence. What difference does this make? We produced what we thought, and still do, a very good lesson about soil erosion, where the children enjoy themselves in class using grass and mud and water, examining the effects of rain on hillsides and how the resulting erosion may be prevented. Back came a query from Tonga: 'Don't you know there are no hills at all in Tonga?' We did know, but we have continued to include the lesson on erosion because of its general importance in the South Pacific.

With so much diversity in the prevailing conditions and in the differing needs of the islands, it would be foolish to try to impose one standard, uniform syllabus and curriculum throughout the region, which would not meet with success. We have overcome this problem by developing a flexible approach, one that can be geared to the specific needs and requirements of any one country. Western Samoa, for example, has devised its own syllabus in mathematics. The mathematics 'units'—as against a single textbook—that we are producing can still be used in Samoa, since they are flexible enough to allow each country to select whichever units suit its own specific needs and desires, and also enable pupils to enter for any final examination in modern mathematics. Of course, diversity has limits. When the project terminates, the participating countries will have to produce their own text-

books and materials, and no publisher will produce 150 textbooks for one small island. Examining bodies will certainly permit some measure of latitude in their questions but simply would not be able to cope with the mechanics—and expense—of different papers and examinations for each island, though this might be ideal in theory. Besides each country breathes the same oxygen, feels the same effects of gravitation, uses principles in physics and chemistry that apply the world over. So there can be a good deal of uniformity in our curricula whilst at the same time allowing for regional differentiation. This flexible system of units permits us to meet the two opposing and conflicting demands of uniformity and diversity.

Reference has been made to our welcoming the desire of all the participating countries to 'do their own thing', if I may use the title of a pop-song, and to be as self-sufficient and self-reliant in the matter of curriculum development as soon as possible. Our ambition is to be like the good doctor—to make ourselves unnecessary and redundant as soon as we can. In the matter of social science, the Solomon Islands, Tonga, the New Hebrides and Samoa have produced their *own* excellent units. These units, e.g., *Living in Tonga*, are distributed to the other participating countries who are at liberty to use them as supplementary material to back up the core studies in social science.

But each country is very justifiably proud of its own heritage and traditions and guards these with commendable pride. Samoa, for example, would not be happy with curricular materials that it suspects were produced specifically for Fiji. Trying to keep everyone happy is another of our challenging headaches!

In the past the imposition of external school-leaving examinations has determined *what* is taught and *how* it is taught. In our initial in-service courses in Fiji the teachers' main concern was 'the exam'. In the end an officer from the Department of Education spoke to the teachers to reassure them that the 'new exams' their pupils would do would be based on the new content and new methods they would be piloting in their schools.

In consultation with officials and teachers in the region we are engaged in devising a curriculum that is relevant to the South Pacific, pertinent to its needs and rooted firmly in the local environment. Pupils will take a final examination based on this curriculum. We are convinced this is the right way. Plan a suitable curriculum first, then later orient the examination to that curriculum, if examinations one must have.

Planning the curriculum

How was the curriculum first planned? Each country has its own curriculum revision committee, consisting of officials from the Department of Education, of principals and teachers, of representatives from the teachers' unions and of other interested organizations, and, where possible, representatives of the University of the South Pacific. Members of the United Nations project serve on the syllabus revision committee of the Government of Fiji. We would like very much to serve on the corresponding committees of the other governments but the high costs of travel make this difficult.

We start from 'square one': 'What shall we teach in geography?' In a situation such as we have here should we have separate subjects geography and history? How do we answer such pertinent questions to the satisfaction of everyone?

In order to get everyone's views, towards the end of 1970 the university held a three-day seminar to which all interested persons and bodies were invited. The result was a decision to amalgamate geography and history into one single social science. This led to some disaffection on the part of history teachers who feared that their subject would be elbowed out. We assured them it wouldn't. I am sure history

teachers will agree that their subject is just as adequately represented in the social science units now being produced. Following the large seminar a smaller working party has been, and is, working on the more specific, lesson-by-lesson or topic-by-topic programme.

Social science is perhaps our most sensitive area, where we touch upon the traditional lore and culture patterns, the beliefs and customs, the national heritage of the people. In my first visits to the islands I would sometimes detect a concern in some of the questions directed to me. I had to reassure the questioners that in the project we were not saboteurs out to undermine the traditional heritages and cultural patterns. On the contrary we would do everything possible to respect and foster these traditions. On the title page of one our early units we used, in all innocence, the word 'territory'. This was politely objected to on the grounds that the word carried connotations of colonialism.

Social science provides teachers with opportunities to encourage desirable attitudes in nation building and in promoting racial harmony. One of the principal aims of the social science course is to foster 'the practice of tolerance, harmony and understanding'. To this end an Indian school in Fiji has linked up with a local Fijian school in order that the Indian pupils may learn something about *mekes* and other traditional Fijian customs. And vice versa.

In 1970 another seminar was held, this time to consider the desirability of introducing a business studies course in the school curriculum.

Apart from book-keeping, there is virtually no teaching of commercial or business studies in the schools of the South Pacific. However, we have been producing units that we felt would prove of great benefit to future citizens and by this infiltration technique the subject is slowly beginning to be recognized as just as important and relevant a subject for study in schools in the South Pacific as any other subject.

In the case of the English language curriculum, after visits to the participating countries, and after discussions with the respective syllabus revision committees in these countries, Mr. Hill, the English language adviser, drafted a *suggested* Form I-IV syllabus, which was circulated to all Directors of Education for comment and revision. As a result of the feedback a *detailed* curriculum has now been prepared and circulated, detailing the content and activities that might be undertaken in the 840 lessons of a seven hours a week, thirty weeks a year, four-year course in English language. Similar strategies have been used in securing a fair measure of agreement for syllabuses in social science, mathematics, home economics, commercial studies and science.

At every possible opportunity attempts are made to link the various topics and to integrate the fields of study. But we are only too aware that 'integration' of the curriculum is easier said than done.

It would be most desirable if we could arrange to have all the people in all the islands who are working on curriculum revision to meet together at frequent intervals. Despite the cost and difficulties of travel it is hoped to find funds to permit persons working in one area of the curriculum of each island to meet together during this long vacation at some central venue say, for example, the University of the South Pacific, so that representatives working in the various fields of the curriculum could meet their counterparts from other islands working in the same fields. These groups could then, using the resources in manpower, materials and facilities available in the university, work together planning and developing further programmes in curriculum innovation in their various fields and even sit down and jointly write the units, incorporating their country's own particular needs or bias in the units.

Implementation and revision

The co-operation the project now enjoys from the several countries participating is gratifying and encouraging in the extreme. In order to keep close control on the units being piloted in the schools we restricted ourselves to twenty pilot, or trial, schools in Fiji with up to ten schools in each of the other countries. This year the Fiji Department has extended the units in basic science to 150 schools and next year intends to introduce the new basic science into all its 450 schools having a Form I and II. This means our control over the 'trialling' must necessarily be looser. On the other hand we are naturally pleased that the units have received such ready acceptance.

In January 1972 we printed over one and a quarter million pages; by August we had produced 4,000 charts for schools, 800 illustrations, 600 photocopies, 200 slides and 150 overhead projections.

Curricular material is supplied free to all the pilot schools in the South Pacific. We have issued experimental science kits to supplement the use of simple, locally improvised equipment. In the case of some very isolated islands, such as in the Ellice, we have even had to provide string and cellotape, since these are not available locally. The whole emphasis of the science course is to encourage children to discover and find out things for themselves by doing, using their *own* eyes and hands and brains. To ensure that this is done it was essential to issue simple experimental science kits. Along with the science kits are sent pupils' booklets and activity cards. In our first in-service courses teachers were obviously reluctant to participate wholeheartedly in the spirit of the new science teaching which involved movement and talking by the pupils, working in pairs or in small groups. 'What is the visiting teacher (i.e. inspector) going to say when he sees children moving around the class?'

The solution was to invite the visiting teachers to the courses so that they could be familiarized with the new ideas and methods.

In addition to pupils' booklets and activity cards, all new curricular units are accompanied by teachers' guides and handbooks. This is essential to ensure that the teachers understand the philosophy behind what we are trying to do, can use the new techniques and methods with confidence and can put the materials to proper and maximum advantage. Teachers and pupils of the new social science course found it difficult at first to adapt themselves to 'role-playing' and 'miming'. Science teachers would often ask: 'What is the answer?'. It took quite some time to convince them that very often there is no specific answer—pupils are to record what *they see* or *do*. The problem of implementing the new curricula is compounded by the fact that in many cases, because of shortage of qualified teachers, teachers have to teach a subject they have never taught before, or perhaps never even studied at school. Because of the lack of background and experience of many teachers, the teachers' guides and handbooks that we distribute err on the side of giving the teachers far more information than might be normally desirable.

For social science, 'teacher training kits', consisting of tapes, slides and booklets, have been issued to the teachers in the pilot schools. To assist in the teaching of English language tape-recorders have been issued. These tape-recorders will also be used in the teaching of local drama, poetry, music, song, dance, etc.

All units sent out by us are usually accompanied by charts or slides. Also accompanying the units are sample test questions for the pupils. As a result of feedback from these questions we now have a reliable bank of suitable questions, which is at the disposal of Directors of Education in the region.

Perhaps the most important accessory that accompanies all the units we distribute are the evaluation sheets. It is only from the feedback that we get from these evaluation sheets that we are able to revise earlier units and to produce

further units that have the correct orientation and are not too difficult or too easy for the pupils piloting these units. English comprehension is a matter of major concern. To ensure that the language used in the units is suitable, all manuscripts in all subjects are first checked by our English language specialist.

In many countries, Fiji, for example, primary school work is done in English. In Tonga, it is done in the vernacular. When the children in Tonga start our Form I units they naturally experience difficulty in working comfortably and confidently in English. Tonga therefore uses the year between the end of primary and the start of secondary school as a year for consolidation in English language.

Just as important as feedback from the teacher is the feedback from the pupils, which is the real test. The whole business of curriculum development is for the benefit of children, and their comments get our careful consideration.

Providing schools with the new materials

As mentioned earlier, all the above material, books, charts, kits, etc., are issued free to all trial schools in the South Pacific. Some countries have extended these trials to many more schools than we could possibly supply materials to free. Tonga has worked out a satisfactory solution. In addition to the 500 copies of offset-printed materials that we supply free per unit to the pilot schools in Tonga, we supply any additional materials required by cheaply heat-stencilling these and sending them in bundles to Tonga. The schools in Tonga, extra to the ten pilot schools, then collate the pages themselves and in this way we are able to supply units at about 4 cents each as against the 15–20 cents for printed material.

Eventually a stage will be reached when the governments themselves will have to provide all their own school materials. We have now revamped some of our productions so that when the countries have to foot the bill themselves the cost will not be beyond their means. For example, in the first Form I basic science course pupils were provided with an expendable workbook in which they recorded their experimental observations and findings. But this involves new workbooks being provided each year. To prevent this, in our Form II course, whilst we still provide experiment or activity cards, no expendable workbook is supplied: the children record their results in an ordinary notebook which governments would issue anyway.

Provisions for training

The production and distribution of copious new curricular materials will avail little unless there are teachers who are able to use these materials as they should be used. Recognizing the need to acquaint teachers with the philosophy behind the new curricular materials and the need to familiarize them with the new techniques, the project takes a very active part in in-service courses for teachers not only in Fiji but throughout the South Pacific.

Our policy is that, whenever possible, before new units are trialled in schools those teachers who will be responsible for introducing these units be given a course so that units may be taught as intended. As has been mentioned earlier, in some countries far more than the original trial schools are now involved in curriculum innovation. We welcome this. But it is not possible, because of other commitments, for us to give in-service courses to as many as 150 teachers, which is the number for basic science for Fiji this year. Next year the number of teachers in Fiji who will need to be given courses in basic science will be over 400. What we do is this: the person or persons in the project who developed the unit(s) gives a one-week in-service course to all those teachers in the original trial schools who will be piloting the

unit(s). Also present at these courses are carefully chosen 'teacher trainers' or 'advisers' who observe and take part in this first course. These then undertake the task of giving in-service courses to all the additional teachers who could not be accommodated on the initial course. The project member concerned attends these supplementary courses for one or two days a week so as to assist the 'advisers' and generally see that everything is going well.

Because of the increasing demands to train more and more teachers, plans are afoot to make use of correspondence, radio and satellite communication media. This last medium is already in use. In April of this year, Mr. Hart, who is the project member responsible for social science, took part in a seminar, Social Science in the South Pacific, which was held with the University of Hawaii via the 'Peacesat' satellite which rides directly above us. Satellite communication with teachers in Tonga is in general use and it is hoped to conduct seminars with teachers in the Gilbert and Ellice Islands and in the Solomon Islands when these obtain satellite ground stations. Such a station has just been set up in the Cook Islands, which is the most distant country co-operating with us in the project. Unesco has offered to finance the setting up of additional satellite ground stations. This will make communication with teachers in the islands quite a simple, yet very effective, matter. It is also proposed to introduce closed-circuit television as a means of helping in the training of teachers.

The United Nations Development Programme and Unesco regard the training of local counterparts to members of the project as one of the most important functions of the project. To this end a sum of 60,000 dollars (U.S.) has been earmarked for local counterparts to go abroad for further training and experience. At the moment three local counterparts are abroad on Unesco fellowships.

Assessment and prospects for the future

So far I have discussed curriculum innovation at the secondary level. What about at the primary level? In fact, what should come first—curriculum innovation at the primary level or at the secondary? Or should this innovation be undertaken simultaneously? Arguments can be brought forward both for and against any of these points of view. In the South Pacific it was decided to begin at the secondary level. A United Nations mission has just completed an investigation into the desirability and feasibility of a primary curriculum development project. The mission has reported in favour of such a project, to start in 1974. But the final decision rests with UNDP and Unesco, with the governments who could eventually co-operate in such a venture, and depends on availability of funds and on the claims of other programmes for whatever funds are available.

We are now half-way through our project. We still have much to do. We are fortified in our task by the assistance and encouragement we receive from all quarters. We are gratified that we have succeeded in generating tremendous enthusiasm among the indigenous people to do something *themselves* to alter their out-dated and irrelevant curricula. Just as the good doctor is one whose patients can quickly dispense with his services, we hope to make ourselves redundant soon. The islands have excellent people who have been working very closely with us in this joint co-operative venture of curriculum innovation. We have the fullest confidence in these teachers and administrators to continue with the on-going process of curriculum development.

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The lessons of Tokyo[1]

The first international conference on adult education (Elsinore, 1949) and the second (Montreal, 1960) represented successive stages in the evolution of adult education. Although generalization in a field so complex and diversified is hazardous, certain characteristics of each conference are worth noting. At Elsinore, where 54 of the 79 delegates and observers came from 14 European countries, the orientation of the conference was largely western European; non-governmental organizations were seen as having the main role in adult education, and the movement towards a more comprehensive, broadly-based approach was still in its early stages. Eleven years later, at Montreal, striking changes had occurred. With 51 countries represented, participation was much broader—Montreal was a *world* conference in a more real sense than Elsinore. More significantly, the concept of adult education had expanded, its definition had widened, and its essential role at the level of national policy was being increasingly recognized. As stated in the Montreal report: 'Nothing else will suffice than that people everywhere should come to accept adult education as a norm, and that governments should treat it as a necessary part of the educational provision of each country'.[2]

Although the above hopes were insufficiently realized in the following decade, the trend towards a broadening of the role of adult education, and an increasing recognition of its importance by governments, were evident in many countries.

In almost all areas of adult education, the 1960s witnessed expansion, diversification, and experimentation, with continued efforts, especially in the Third World, to link individual and community goals and to relate adult education programmes to national priorities. This was particularly characteristic of the Experimental World Literacy Programme, in which literacy was integrated with various types of technical or agricultural training in tailor-made, problem-oriented courses for groups of adult learners in development areas. In such programmes, adult education was seen as a component in the development process which would lead to a better life. In industrialized societies, economic growth and progress *per se* were being regarded with considerable scepticism by the end of the decade; nevertheless, whatever the social priorities, adult education was seen more and more as essential both for the individual and society, in view of the increasingly complex problems posed by accelerated change. At the same time, in many countries and from many points of view, the value and efficacy of the formal school system was being called into question.

The Tokyo Conference

The Tokyo Conference was significant from several standpoints. In its size and composition, with 365 official delegates, representatives and observers from 85 governments and 42 intergovernmental and non-governmental organizations, it indicated the stature now assigned to adult education. Conceptually, it consolidated and reaffirmed certain tendencies mentioned above. In particular, in stressing the major responsibility of *governments* for adult education, it confirmed the trend which had been obvious (although not always acted on) since Montreal. As stated in the Final Report: 'Governments must be committed to adult education and should accord it status equal to that of the formal school system'.[3]

Throughout the conference discussions, the richness, diversity and value of the contribution of non-government organizations was fully recognized; nevertheless, the clear-cut acceptance of government responsibility was evident.

Planning

Associated with the above was the emphasis on planning. The conference stressed that planning of adult education should be incorporated within global educational planning and with over-all development plans. The planning of school education raises extremely complex problems which are compounded by

1. See the 'dossier' on adult education in *Prospects*, vol. II, no. 3, 1972.
2. *Second World Conference on Adult Education*, p. 9, Paris, Unesco, 1960.
3. *Third International Conference on Adult Education*, p. 18. Paris, Unesco, 1972. For copies of the final report, readers may contact their National Commissions for Unesco.

any attempt to relate this planning, even partially, to social priorities. The planning of adult education is even more difficult, partly because of the diversity of the organizations concerned, and partly because of the wide range of programmes and learning opportunities which adult education furnishes. Here the questions are numerous, the answers uncertain. Should all adult education programmes be planned within over-all educational planning? Or should planning be restricted to those programmes primarily related to socio-economic development and employment? By what mechanisms can the various ministries and other organizations responsible work together? In different types of societies, what is the most effective mix between central and local planning? Since adult education should involve maximum participation by adult learners, how can planning be associated with suitable participation at each level?

The approaches to such problems will vary from one society to another. Nevertheless, most educators would agree that no clear answers yet exist. As governments play a larger role in adult education, these matters will require increasing study and experimentation. And since planning must include the idea of programme efficacy, of some assessment of benefits as well as costs, we may expect more emphasis on various types of evaluation, especially in projects related to socio-economic priorities.

Adult education and lifelong education

The Tokyo discussions and recommendations gave clear endorsement to the concept of lifelong education. During the previous decade, and even before, lifelong education has been the subject of extensive debate and theorization. But the discussion has generally not led to a confrontation with the main questions. At Tokyo, what was striking was the widespread recognition of lifelong education as the *framework within which all educational development must now be considered.* Clearly, the gap between theory and practice will be hard to bridge and really *effective* implementation of lifelong education will be a slow process. Nevertheless, considerable developments are already under way in certain countries. In the coming decade, we may expect far more studies and experimentation in this direction.

Here, adult educators will have a crucial role. Firstly, as a group they have probably given more thought to the implications of lifelong education than other professionals. Secondly, adult education itself will be particularly involved in the changing patterns of learning, work and leisure which lifelong education will bring about. Thirdly, the very way in which people at all levels *think* about education will change as they confront the issue of lifelong education, *not* as a vague theory but as a *concrete fact in their day-to-day lives.* We may anticipate new, more flexible relationships, varying from society to society, not only in curricula and methods, but in the organization and financing of education, and in all its relations with society. The search for these new relationships will raise many problems. Can study leave and sabbatical leave be progressively widened, ultimately to apply to all forms of work? How can *real* access to learning be provided for parents or for rural populations in low-technology societies? Within a lifelong education framework, what role can adult education play in the redesign of school curricula? In the research for an answer to these and similar problems, the challenge to adult educators will be to experiment, to research, to develop models, to write and to teach, so that new and suitable patterns may be developed.

The challenge of the educationally underprivileged

In stressing the relationship between adult education and cultural development, and in calling for a greatly augmented educative role for the mass media, the conference gave well-defined guidelines for the coming decade. But the over-riding theme, enunciated forcefully in the conclusion of the report, was the emphasis on the educationally underprivileged. The report stated:

'Experience shows that the provision of more education in most communities tends to favour most the already well educated; the educationally underprivileged have yet to claim their rights. Adult education is no exception to the rule, for those adults who most need education have been largely neglected—they are the *forgotten people.* It is the major task of adult education during the Second Development Decade of the United Nations to seek out and serve these forgotten people.'[1]

Few adult educators will disagree. Historically, adult education has been most available to and has been most utilized by professionals, by the middle classes or by those groups of workers with the skills and organization to demand or to take advantage of existing facilities. But in many societies the very adults who most need education do not receive it; in few cases are really suitable programmes available; studies and research on their needs and motivations are limited, and to a great extent they are alienated from the very educative forces which might pro-

1. ibid., p. 19.

foundly modify their condition. Here, creative and basic work must be done. By definition, this will be of a kind substantially different from what most adult educators are now familiar with. For instance, how can the *need* of the underprivileged be translated into *demand*? How are research resources for problems of the underprivileged to be increased? Should universities not play a more significant role in these areas? In what way can more and more programmes be designed which are really based on cultural, socio-economic and other factors pertinent to underprivileged groups? Finally, perhaps most essential, how is the participation of the underprivileged themselves to be obtained?

On the latter point the conference indicated the particular value of voluntary organizations. As stated in the summary and main conclusions of the report: 'The essential role of voluntary organizations and popular movements in adult education should continue to be recognized by governments. They are often able to reach and involve the educationally underprivileged when statutory bodies cannot do so.'[1]

It is evident that in most societies, if adult education is to affect the underprivileged to any significant extent, adult educators must re-examine existing methods and approaches and explore new ways of reaching out and extending their role. In this process, the flexibility of voluntary organizations should be noted. At the same time, although the active participation of the adult learner is widely accepted *in theory*, one normally finds only limited participation *in practice*. This is particularly pertinent if we consider such areas as planning and curricula development of adult programmes. Here new approaches, new ways of envisaging the participation of adult learners would be helpful. Again, since much of this involves work at the grass-roots level, the flexible, informal, relatively decentralized approach characteristic of certain voluntary organizations can be valuable.

Training

The training of adult educators was given considerable attention by the conference. Certainly, many countries require more well-qualified high- and middle-level cadres; without such personnel, it is hard to see how there can be real qualitative and quantitative development of adult education. To train such cadres, universities can play an increasing role; another approach is to create *institutes of adult education* which might combine training, research and possibly documentation and diffusion of professional information. Such institutes, while concerned mainly with adult education, may well be conceived within the context of global lifelong education and should be related not only to the formal school systems, where they might have a stimulating and innovatory function, but also to the world of work and leisure. At another level, it is desirable that existing teacher-training colleges provide adult education courses within their curricula. This, a relatively simple matter, is widely accepted in theory but seldom implemented. It would provide large numbers of reasonably well-qualified personnel for adult programmes; the active integration within training colleges of school and adult education would also be a practical step in the direction of lifelong education.

Trends and priority needs

Finally, we may expect strengthening of certain additional activities in the coming decade. Some of these represent trends already established in the 1960s; others are obvious needs highlighted by the Tokyo Conference. They include:

- the formation in many countries of Boards of Adult Education to co-ordinate activities at the national level;
- the strengthening of both national and international statistical sources and documentation, to facilitate planning and the wider exchange of professional information;
- the expansion of functional adult education, particularly in the Third World, to help governments find solutions to developmental problems of various types. This is likely to include the generalizing of the functional literacy approach and its application to large-scale literacy programmes within a developmental context;
- the rapid increase, especially in the industrialized countries, of self-directed learning;
- the wider use of multi-media learning systems within a range of organizational frameworks;
- further emphasis, especially in developed societies, on education for changing life roles;
- the introduction, particularly in urban centres of highly industrialized societies, of more and more programmes concerned with the environment and the quality of life;
- expansion and experimentation with different types of post-secondary 'community' colleges;
- the development of information, guidance and counselling services to assist adults in selecting and pursuing appropriate learning experiences;
- more emphasis on *applied* research, where the needs are very great.

1. ibid., p. 18.

As the Tokyo Report states: 'Applied research must be concerned mainly with: (a) the economic and social benefits to be derived from investments in adult education; (b) teaching methods; (c) adult motivation, particularly in view of the challenge to attract hitherto unreachable adults or to sustain the interest of those already engaged in study; (d) intensive study of the barriers to learning.'[1]

To this one might add research in methods of financing, and in the efficacy of various types of adult education organizational patterns within different societies. It appears, in fact, that a very large number of problems related to management, financing, organizing, and planning will become increasingly critical as adult education expands *within a lifelong education framework*, and the solutions to these problems will demand far more study, research and experimentation than has hitherto been the case.

In short, the Tokyo Conference set the stage for adult education to develop, to expand, and to play a crucially important role in the re-shaping of education and of society which is now taking place. No one present in Tokyo could fail to be encouraged, excited and stimulated. Similarly, no one concerned with the follow-up of the conference, with the translation of ideas and recommendations into action, will have any illusions about the difficulties. But the creative and positive characteristics of the conference itself, the follow-up activities already under way in many countries, and, in particular, the remarkable support to adult education manifested by Member States in the seventeenth session of the General Conference of Unesco (October and November 1972) give solid grounds for optimism.

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1. ibid., p. 15.

The United Nations Conference on the Human Environment and its implications for Unesco

The United Nations Conference on the Human Environment, held in Stockholm from 5 to 16 June 1972, adopted the following resolution on education:[1]

Recommendation 96:

1. *It is recommended* that the Secretary-General, the organizations of the United Nations system, especially the United Nations Educational, Scientific and Cultural Organization, and the other international agencies concerned, should, after consultation and agreement, take the necessary steps to establish an international programme in environmental education, interdisciplinary in approach, in school and out of school, encompassing all levels of education and directed towards the general public, in particular the ordinary citizen living in rural and urban areas, youth and adult alike, with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment. A programme of technical and financial co-operation and assistance will be needed to support this programme, taking into account the priorities agreed upon according to the resources available. This programme should include, among other things:

(a) The preparation of an inventory of existing systems of education which include environmental education;
(b) The exchange of information on such systems and, in particular, dissemination of the results of experiments in teaching;
(c) The training and retraining of professional workers in various disciplines at various levels (including teacher training);
(d) Consideration of the formation of groups of experts in environmental disciplines and activities, including those concerning the economic, sociological, tourist and other sectors, in order to facilitate the exchange of experience between countries which have similar environmental conditions and comparable levels of development;
(e) The development and testing of new materials and methods for all types and levels of environmental education.

2. *It is further recommended* that the United Nations

1. See the 'dossier' on education and environment in *Prospects*, vol. II, no. 4, 1972.

Educational, Scientific and Cultural Organization, under the Man and the Biosphere Programme, the World Health Organization, the Food and Agriculture Organization of the United Nations, the United Nations Industrial Development Organization, and World Meteorological Organization and all the organizations concerned, including the scientific unions coordinated by the International Council of Scientific Unions, should develop their activities in studying desirable innovations in the training of specialists and technicians and, in collaboration with the United Nations Development Programme, should encourage the institution, at the regional and the international level, of courses and training periods devoted to the environment.

3. *It is further recommended* that international organizations for voluntary service, and, in particular, the International Secretariat for Volunteer Service, should include environmental skills in the services they provide, in consultation with the United Nations Development Programme through the United Nations Volunteer Programme.

European seminar on environment and education

The Ministry of National Education and the Ministry of Environment of the Government of France organized a European seminar on environment and education at Aix-en-Provence from 16 to 21 October 1972. Present were fifty representatives of sixteen European countries as well as representatives from Unesco and the Organization for Economic Co-operation and Development. The seminar divided its principal work into two commissions, one devoted to objectives and the other to strategies and means.

In the objectives commission, it was recognized that more content should be introduced into the present school curriculum related to problems of environment. The commission on strategies and means sat for a longer time than the objectives commission; however, there was no consensus on the strategies and means of making the school curriculum more relevant to the present environmental crisis. National representatives described thir efforts, some of which seem to have universal import and others, relation only to particular teaching situations. Like many conferences on this problem, the exchange of ideas is useful in distilling plans for further work, but obviously each country must review its own programme in terms of technical, intellectual and organizational resources. The report of the seminar will contain a large number of national case-studies.

It was agreed that content is region-specific and hence would vary even within a particular country from industrialized areas to agricultural regions, from rural to urban settlements. Of common interest are the types of methodology and the means and resources employed. Based on its interdisciplinary nature, there was a suggestion that regular seminars on environmental education, including field studies, be organized for school pupils. This can be managed without affecting the present timetable. As the question of students and teacher participation in decision-making is linked to political considerations in each country, no conclusions were reached on this issue, apart from the suggestion that the young should be made aware of diverse factors that compose environmental problems and should engage in a debate better to understand the problems.

The participants at the seminar came mostly from the teaching cadre, including inspectorate, and therefore discussions centred on realistic means and available resources within existing structures. It was pointed out that at a certain stage of preparing the young to face the problems of environment, there arose the matter of moral obligation, individual and collective, and civic sense. How far it is for educators to inculcate and how far it is for the public men, politicians, industrialists and administrators, to put up an image of moral stature—this could not be resolved at the seminar.

With information on several types of experiences and methodologies, it has been suggested that a 'cell' for exchanging information among European countries be created in the French Ministry of National Education. It has been recognized that much spade work has to be done before a real breakthrough can be made in school education to produce an understanding of the environmental crisis.

P. C. BANDYOPADHYAY

International Copyright Information Centre

Developing countries suffer from an acute shortage of books which constitutes a serious obstacle to the advancement of education, science and technology as well as culture.

In order to remedy this situation, an International Copyright Information Centre whose primary purpose is to facilitate for developing countries access to works protected by copyright, was established at Unesco in 1971.

The main functions of the Unesco Copyright Information Centre are:

1. To collect copyright information on books that can be made available to developing countries on terms as favourable to them as possible, as well as the methods of use of certain or all of the enumerated titles;
2. To arrange for the transfer to developing countries of rights ceded by copyright holders;
3. To help in the development of simple model forms of contracts for translation, reprint and other rights required by developing countries;
4. To study ways and means of securing copyright and other rights as well as methods of financing the rights required where foreign currency is not available;
5. To promote arrangements for the adaptation and publication of works, particularly those of a technical and educational nature;
6. To encourage the formation of national copyright information centres in both developed and developing countries where such centres do not exist and, where necessary, act as a link between them;
7. To provide assistance to developing countries for the organization of training courses for translators and covering all aspects of the publishing industry, for the provision of fellowships and equipment, for the joint publication of technical works, and for bringing together pedagogical authorities to develop adaptations of works.

The Centre is attempting to establish an inventory of the various problems raised for developing countries by access to copyrighted works, which tentatively may be grouped in four main categories of difficulties:

1. The collection of data whether it be a question of bibliographic information, the selection of appropriate titles or the identification of copyright owners;
2. International relations in the field of copyright and notably the conduct of negotiations for the purpose of obtaining the necessary authorizations for reproduction, translation, adaptation, etc.;
3. Translation and adaptation possibilities when faced with the scarcity of translators and/or adaptors, fully qualified both on the linguistic level as well as from the viewpoint of their specialization in the disciplines covered by the works to be translated or adapted;
4. Of an economic origin: obstacles of a financial or economic nature (customs duties, importation tariffs, transportation costs), or arising from currency regulations.

Each of the above-mentioned difficulties is at present being studied in depth in order to create within the Centre mechanisms capable of resolving them in an appropriate manner.

Elections to the Unesco Executive Board

Unesco's Executive Board which is now composed of forty members has elected Mr. Fuad Sarrûf of Lebanon as its new chairman, following the Organization's General Conference.

Born in 1900, Mr. Sarrûf studied at the American University in Beirut and was its vice-president for fifteen years from 1952. As a man of letters he had a brilliant career, publishing thirty works in Arabic.

Between 1927 and 1952 he was successively editor of the magazines *Al-Muqtataf* and *Al-Mukhtar* and a correspondent of the Cairo newspaper *Al-Ahram*.

Editor of the American University's Centennial Publications from 1964 to 1970, Mr. Sarrûf was a founder-member, then secretary and vice-president of the Egyptian Association for the Advancement of Science (1930–52). Former corresponding member of the Cairo Arabic Language Academy, he is also a member of the Lebanese National Research Council.

Mr. Sarrûf is chairman of the Lebanon National Commission for Unesco and has been a member of the Executive Board since 1966.

The Board also elected five vice-chairmen: Mr. Gabriel Betancur-Mejia (Colombia), Mr. Tooryalay Etemadi (Afghanistan), Mr. Josef Grohman (Czechoslovakia), Mr. Ilmo Hela (Finland), and Mr. Blaise Senghor (Senegal). Mr. Bernard J. E. N. de Hoog of the Netherlands was elected chairman of the Board's Programme and External Relations Commission and Mr. Hector Wynter of Jamaica chairman of the Finance and Administrative Commission.

On the other hand, Mr. Toru Haguiwara (Japan), President of the seventeenth session of the General Conference, as well as Messrs. Ferdinand N'Sougan Agblemagnon (Togo), Hamad Alkhowaiter (Saudi Arabia), Kurt Blankopf (Austria), Leon Boissier-Palun (Dahomey), Chang Wei (China), Federico García Capurro (Uruguay), Yuda Komora (Kenya), Side Marjanovic (Yugoslavia), Pablo Neruda (Chile), Nikolaï Todorov (Bulgaria), were elected to the Executive Board.

Two Unesco science prizes awarded

Two international prizes, the Kalinga Prize for the Popularization of Science and the Unesco Science Prize, were awarded by the Director-General of Unesco, in a ceremony on 22 November at Unesco House in Paris.

The Kalinga Prize for the Popularization of Science was awarded to Dr. Pierre Auger, the French physicist.

Dr. Auger writes regular articles in the popular press on scientific subjects. He is also well known as a broadcaster and is vice-chairman of the Radio Programmes Committee of the French Radio and Television Service. He has lectured extensively to the general public in France and abroad.

As Director of Unesco's Science Department from 1948 to 1959, Dr. Auger was involved in the creation of CERN (the European Organization for Nuclear Research) at Geneva. In 1959 he edited the Unesco report to the United Nations *Current Trends in Scientific Research*. His other publications include a popular work on cosmic radiation and *L'homme microscopique*.

The Science Prize, to reward scientific achievements of specific value to developing countries, was shared this year by the Soviet Union's leading soil scientist and an Austrian group responsible for a new and cheaper way to make steel. Each received $2,000.

The winners are Dr. Viktor Kovda, corresponding member of the Academy of Sciences of the U.S.S.R., and a group of nine scientists (Dr. Herbert Trenkler, Dr. Hubert Hauttmann, Mr. Adolf Rinesch, Mr. Fritz Klepp, Mr. Kurt Rösmer, Mr. Otwien Cuscoleca, Mr. Wolfgang Kühnelt, Mr. Felix Grohs, and the late Dr. Theodor Suess) who developed the L-D steel production process.

Book reviews

From aid to re-colonization: the lessons of a failure, by Tibor Mende. Paris, Éditions du Seuil, 1972. 25 F.

It is always with impatient curiosity that one takes up a book by Tibor Mende. As an observer of the contemporary scene, he is admirably well informed about the nature of the efforts made by the so-called developing countries during the past twenty years. His early studies on India and his description of the Chinese People's Republic are still held by westerners to be among the most original of contemporary works.

In his latest book, published in the spring of 1972, he draws up, as it were, a balance-sheet of the effort already made and of the response—or perhaps lack of any responsible and rational response—on the part of developed countries to the new demands of the Third World. More recently, as an international official in one of the United Nations institutions specializing in the key problem of trade and exchange, the author has painted a picture of the recent past and has given us a glimpse of what may be expected to happen in a future which, if it follows the trajectory of the past, hardly provides grounds for optimism.

In Tibor Mende's writings there is always a certain element of detachment, cynicism, and caustic irony occasionally tinged with cruelty. We are never quite sure, even those of us who have the good fortune to know him personally, whether this is the reflection of an extremely sensitive personality concealing its true nature behind a sarcastic manner, or whether the explanation lies instead in a profound feeling of despair inspired by the inability of the men he observes to take up the challenge of the world in which they are called upon to act. 'The lessons of a failure' is no exception to the rule, since we find in it a biting and sometimes cruel description of the behaviour of the principal actors on the world stage, whether they belong to the affluent countries or to countries benefiting from what is called international 'aid'.

The essential quality of the work lies in the author's analysis of past experiences, cursory though it is at times, and in his often bitter awareness of their significance. He does not fail to describe the great mistakes made both by the governments of the industrialized countries and by the authorities of the developing countries when, towards the end of the forties, the deep-seated imbalances (regarded at the time as mainly economic), which exist between the inhabitants of the northern part of the globe and the remaining two-thirds of humanity mostly living in the southern zone, were exposed to the full light of day.

However, despite this record of the errors committed and this indictment of the principal actors for their collective hypocrisy, there is a kind of leitmotive running through all the chapters of this book and its tone is an essentially moral one.

Already in this introduction, Tibor Mende suggests that the cure for the bad relations between the 'haves' and the 'have nots' is to work out 'arrangements for maintaining a tolerable situation'. This means nothing less than the discovery of a 'new dimension of tolerance'. What attitude could be more generous but at the same time more lacking in precision? In his introductory remarks, Tibor Mende, after analysing the various arguments in favour of giving commercial, strategic and moral support to developing countries, reaches the conclusion that the development of a new type of relationship between the two categories of human beings referred to above is the only chance of achieving world-wide harmony. According to him, the first step in the direction of mutual tolerance ought to be taken by the wealthy nations. From the very start, therefore, the author's vision of the world is discernible; he divides the world into two parts and considers that the solution to all the ills afflicting us must spring from a moral decision taken by those who, because they are wealthier, must accept the full weight of the responsibility which goes with this historical 'privilege'. There the attitude, again, is generous, but it is more difficult to defend the credibility of the arguments in the name of the historical process. It is true that the news services and communications network at the disposal of modern man are of a complexity and variety never yet equalled. It is also undeniable that we are living in a 'world-village' whose inhabitants are becoming daily more aware of the nearness of their neighbours. It does not seem, however, that at the 'operational' level—the one where political attitudes are translated into action—moral considerations carry the most weight.

Just as it is impossible to reduce any given political act to a single motive, whether it be economic or moral, tactical or strategic, so can there be no question of accepting the proposition that history has shown us that the great changes have only come about as a result of the emergence of a new type of morality. It is much more likely that the accepted practice of this

world-village, the course of events, the intimacy of contemporary life, are generating a new form of solidarity composed partly of the defence of vital interests and partly of a moral consciousness potentially capable of developing by degrees into a form of friendship or even a new type of love that may possibly come to prevail among larger groups of members of the human race than has been the case in the past. On the other hand, when Tibor Mende defines the typical relationship between underdevelopment and aid to underdevelopment as a state of ruthless and hostile bipolarity, does he offer us a convincing prospect of the advent of a new moral order? It would hardly seem so when we observe, as he does, the widening gap between the two worlds. The remedy consisting in the construction of a bridge between these two poles in order to stop the gap from widening would demand precisely that this bipolar approach to the relationship be corrected and replaced by the vision of a world system in which the difference in level between each component nation and its neighbour would be apprehensible and not unalterable. Let me explain what I have in mind. France could be said to be underdeveloped in comparison with the United States, the same could be said of Greece in relation to France, or of Israel as compared with Denmark, or yet again of present-day Japan in comparison with the Soviet Union. Similarly, it could be said that Mauritania is underdeveloped in relation to Gabon, Libya in relation to Kuwait, Burma as compared with the Dominican Republic, and so on. Of course, this linking process could be continued until we found that a bridge is already in existence today which leads from Chad to the United States through the gradation of living standards; but, if the process was viewed from a strictly linear standpoint, we should have done nothing but reproduce an extremely tendentious image which Tibor Mende quite rightly criticizes; the fallacy consists, of course, in placing Chad on the trajectory of the United States at the level not only of the *per capita* income but also, implicitly, of the way of life. The criterion of *per capita* income is obviously inapplicable to a psychology of underdevelopment. In this respect, Tibor Mende ably expounds the dangers of relying upon the facile mystique which fails to distinguish between economic growth and development. No, what we mean is a 'coherence of discrepancies' in relation to the set of implicit or explicit parameters peculiar to 'development'. And here there are no sharp cleavages, but a gradual process. This is what Tibor Mende has chosen to ignore, so much easier is it to caricature the clash between rich and poor.

Tibor Mende devotes the first part of his book to a kind of historical analysis of the phenomenon of underdevelopment and to the encounter, which he qualifies as 'distorting', between the developed and underdeveloped nations. He situates this encounter at the level of a system of exploitation originating in the colonial bargain. We find a moral tone here which already predisposes us to feel a sense of guilt. It is clear that as soon as he starts to discuss the concept of the difference between growth and development, the author, as we have already said, has come to grips with the crux of the matter which is that of the type of society in which men find themselves.

This historical analysis is rather simplistic, of course, as it does not appear to tackle the issue of the real nature of the political forces within the underdeveloped countries which might explain, as Tibor Mende points out elsewhere, the maintenance or growth of an oligarchy intent on exploiting natural resources without troubling to consider the question of their distribution. Having thus presented the development problem, the author reviews the history of aid and very judiciously exposes the alibis provided by its evaluation in terms of quantity. He considers it worth while to go once more over the ground covered by works which are abundantly quoted, such as the report of the Commission presided over by Lester Pearson and other works regarded as a reliable professional analysis. He explains to what extent the social structures of the developing countries in themselves have been found, here again, to be obstacles to progress. He goes on to describe the ineptitude of the measures taken by the rich countries when they set about findings ways of improving the lot of the underdeveloped countries. He shows in great detail that the transposition of the experience of the Marshall Plan did not represent a challenge to any feature of the existing order, while aid—by definition—has the effect of laying a 'veneer' over a certain type of society. According to him, the western countries, in agreement with the recipient countries, have opted for the *status quo* instead of giving their attention, at the outset, to the problem of the paradox inherent in the desire to combine growth in the western manner with the maintenance of traditional values and structures. He gives an admirable analysis of the cost of being generous and of being assisted and outlines what he considers to be the historical motives for aid. He then makes some original remarks about the notion of the 'mercenaries of the *status quo*' and in this connexion he develops the idea of collusion, based on their complementary interests, between a certain category of representatives of countries giving aid and a thin stratum of leaders in recipient countries.

In the chapter devoted to this subject of mercenaries, Tibor Mende considers various aspects of the conduct of people in power who strive to perpetuate,

at all costs, the structures of the former occupying authorities, and he alludes in the same chapter to education problems. He refers to certain studies and surveys which reveal to what a great extent education in most developing countries reflects the industrial urban world of the west in the nineteenth century instead of an essentially rural society going through a period of transition. He considers, *inter alia*, the argument of employment. It is here that he runs into difficulty and unfortunately fails to be convincing. He attempts to show that university education is ill adapted to the real needs of the communities which it should serve. He says, for example, that of the 600,000 university graduates in Latin America, only 3 per cent are employed in the agricultural sector, while this sector accounts for 46 per cent of the total labour force. These figures are certainly spectacular and undeniably correct, but the conclusion he reaches is tainted with a serious error arising out of the assumption that there should be a precise arithmetical relationship between the size of the working population and the number of cadres. In most of the developing countries, which are predominantly agricultural, there is a notorious shortage of agricultural cadres. When universities produce graduates in agriculture, it so happens that only a minute fraction of the total number actually find employment in this field. This is due to traditional land tenure structures, the restricted terms on which agricultural funds are allocated and the rigid nature of rural extension work, and these factors explain why technical cadres are used so little. The environment's capacity for absorption bears no relation to the author's superficial view of the situation. Fortunately, he quotes, later in the chapter, a study by Guy Hunter which shows how unrealistic it is to hope to achieve a revolution in education unless a revolution in the economy modifies the demand for trained personnel. This does not mean that the riddle of the chicken and the egg has been solved, but it demonstrates the rule that there is continual interaction between education, which can gradually influence the environment, and the environment, which obviously determines the economy's capacity for absorbing the products of the education system. Reciprocity is an essential factor in this type of relationship.

Farther on, the author attacks corruption, the flight of capital, the armaments trade and the brain drain. Here again we gain an impression of a profoundly moral attitude on the part of the writer. Having criticized the rich countries, he considers it normal and natural to be equally frank and occasionally harsh with the poor countries, criticizing behaviour which he regards as being incompatible with a development policy. While he is justified in drawing attention to certain attitudes of leaders of developing countries, he seems to attribute to them alone all the faults he analyses, whereas to the best of our knowledge, corruption, the flight of capital, the armaments trade and the brain drain (from England to the United States for example) are phenomena which, it might be argued in the last analysis, are just as much in evidence in developed countries. What, then, is Tibor Mende really saying? It is that if there is a will to achieve development, it must be accompanied by an effort to observe high standards of conduct and to mobilize moral forces in the service of development. He follows in the noble footsteps of Gunnar Myrdal who, in his recent book on underdevelopment, also criticized wars of religion and corruption. It seems that here Tibor Mende, in his well-meaning desire to be just and fair by criticizing the underdeveloped countries as well as the others, has forgotten a fundamental point, which is the organization of societies as taught by the historical process. In the sixteenth and seventeenth centuries, few voices were heard to criticize the wars of religion in France as being the main causes of the retarded economic growth of the country. It is true that historians did so several centuries later but, at the time when these events were taking place, did anyone question the nobility, honour and other virtues associated with the defence of a faith or form of ideology? Tibor Mende suggests that although corruption may, in some cases, be a manifestation of a moral standpoint differing from that of westerners, the fact remains that it has a harmful effect on growth and development. Similarly, his criticism of other pernicious and, in his eyes, reprehensible factors reflects a moralizing view of what the State should be—a virtuous State, responsible to an idealistic degree, and ready to tackle the problem of development.

In the second part of his book, the author looks for a 'favourable wind' and attempts to base an aid and development policy on fundamental needs. The historical basis of the misunderstanding is due, according to him, to the irresistible expansion of the west which imposed its superiority and raised a lasting barrier of incomprehension between north and south. This theme is developed on original lines in the first two chapters of this part, where he suggests a set of criteria to measure the diversity of development, shows the rich complexity of societies and compiles a list of essential needs which are renewing the very concept of development. These two chapters of the work are remarkable: they illustrate the ability to grasp problems which is characteristic of Tibor Mende. We see man close to the soil in the intimate picture of the exploited peasant and in that of the well-meaning bureaucrat, and it is here that the fundamental problem of relations between countries is

raised. The book gradually progresses towards Tibor Mende's personal vision of what he calls 'quarantine'; this is the idea that the underdeveloped countries, which are weary, disgusted, exploited and increasingly inclined to turn in on themselves, are tempted by a policy of voluntary quarantine. It is difficult to say whether he is in earnest when he deals in the last chapters with this temptation, and with the institutions and intentions of a new system for giving aid, so unconvincing are the examples which he sets before our eyes. What is in fact extremely interesting is that the chapter on the temptation of voluntary quarantine contains excellent arguments for demonstrating the impracticability of such a solution in the contemporary world. The examples of Guinea, Cuba and Burma are obviously unlikely to convince us of the effectiveness of this quarantine policy.

Impressed by the quality of the analysis, struck by the moral force of the arguments and anxious to find an answer to the questions raised by the author, the reader feels that he has finally arrived at the possible solutions in Chapter XIII. This chapter contains a comprehensive review of the proposals formulated years ago by UNCTAD, the Commission on International Development and the Pearson Commission, all of which, in one way or another, have recommended an improvement in the terms of trade, an increase in the volume of aid, more attention to the importance of long-term and low-interest loans, subsidies to facilitate the payment of interest, the settlement of conditions for repayment of debts, the supply of knowledge, services and research facilities, the transfer of technological equipment, etc. These proposals are not very original nor very ambitious.

There is one new idea, however, namely, that the system of direct aid should be replaced by methods which would consist simply in 'abstaining from doing harm', and it is at this point that Mende the preacher proposes to counter the flight of capital, the sale of armaments, the discriminatory practice of invisible services, the brain drain, and so on.

If the reader is disappointed by this traditional list of remedies, he remains convinced of their intrinsic value. Indeed, if only half the recommendations enumerated by Tibor Mende were implemented without delay, relations between the Third World and the industrialized countries would undoubtedly change.

The disappointment has other causes. The proposals made by Tibor Mende follow almost shamefully in the wake of his vitriolic analysis of world relations, and of the procedures and habits adopted with regard to aid. To set the discussion going again—after this bleak list—he offers us the great consolation of the epilogue where he proposes the creation of new social forces and convinces us of the altruism of contemporary youth. He again speaks of collusion, but based this time on interests which are not sordid but generous and should bring into being a new world and a stable and peaceable international social order.

What conclusion can we come to after reading such a book, unless it is that the author, profoundly moved by the injustice prevailing in relations between countries and by the exploitation of its victims, ends by presenting us with a choice between a Utopian vision which can only materialize as the product or consequence of a new type of relations, and a series of palliatives which fall much more naturally into the category of everyday, bureaucratic tactics than into that of measures dictated by a firm political will. The great value of this work obviously lies in its critical analysis. Its great defect consists in the fact that it has not avoided a recapitulation of the uninspired list of well-known proposals and has thus been driven, by a reflex action, to describe a Utopian vision incapable of motivating decisions, which the author offers as proof of his inveterate optimism.

It is easy to criticize such books; it is much more difficult to write one which makes an original contribution to the subject and it is perhaps only on this score that serious criticism can be levelled at Tibor Mende. He has played on a feeling which is common in the contemporary world and has been thoroughly analysed and described with professional skill by other writers and, as a journalist, he has been unable to resist the pleasure of 'working up' this sense of disappointment and the disillusioned attitude of those seeking to grasp the problems of our time. He has in fact done no more than add one stone to the edifice being built up by the joint efforts of development specialists. His stone is by no means a cornerstone. It is a modest contribution and adds little that was not already known; furthermore, it is of no use for another type of edifice which ought to be built by people who are not development specialists. We may wonder what a trade-unionist docker in England, a mason in Bolivia, an engineer in Mexico, a painter in Madagascar or a secretary in India could get out of this exercise. Probably nothing—since the everyday problems with which these people are coping have nothing to do with the general problems discussed by Tibor Mende. He has therefore addressed himself to the community of specialists and to those who are disturbed to see from reading newspaper headlines that the poor countries are becoming poorer while the rich countries are taxing their citizens more heavily.

The real solution is to establish natural relations between States. New centres of gravity for industrial production and exports are beginning to be found

throughout the world, because it is in the interest of the rich countries to improve the pattern of distribution of their manpower and natural resources. When the developing countries are in a position to export manufactured goods and thus establish terms of trade on an equal footing with countries where there is a genuine demand for them, a new type of relationship will be born, the intimacy to which we referred earlier will develop, and a new spirit of solidarity will prevail. When that day comes we shall really see a new type of morality appear on the horizon. But to imagine that this is what the author has in mind, and that by slightly improving our procedures we shall arrive at the generous and tolerant world which Tibor Mende has described would be to display a naïvety at variance with his caustic and cynical tone.

S. LOURIÉ
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School is Dead. Alternatives in Education, by Everett Reimer
New York, Doubleday & Co., Inc., 1971.

In the book which bears this grim title, Reimer, who is a specialist in human resources and a faithful disciple of Ivan Illich, makes a merciless attack on organized schooling. His study is three-pronged: firstly, an analysis of the economic problems raised by the present education system; then a study of the nature and role of institutions in the post-industrial society; lastly a calling in question of the psychological and educational tenets on which school as an educational structure is founded.

A dangerous method leading to reactionary conclusions

In Reimer's opinion, the greatest danger facing humanity is the total absorption of individuals by institutions. Under all economic and political systems, men have become simply cogs in the vast machinery of production and consumption controlled by a privileged minority. Through this progressive change, man loses what is most precious to him: his freedom, his spontaneity, his creativeness.

Organized schooling plays an essential part in this complex of institutions. It is school, in fact, which confers social status and which selects the dominant and the dominated in readiness for their integration into a hyper-hierarchized society based on competition between individuals. Even worse, school trains pupils in submission to all other institutions. The educational monopoly of school is merely one aspect of the monopoly of technology since the logic of technology requires that everyone—leaders as well as subordinates—shall be moulded by the educational system so as to be able to play the game of competitive consumption. The conclusion to be drawn is simple: if man is to be set free from technological domination, the first step must be to destroy school.

What is immediately striking about Reimer's criticism of school is that it is perfectly abstract, being historical and purely formal. There is too great a difference between education as it existed under the Nazi régime in Germany and the education offered by Freinet, for example, for it to be permissible to speak of the role of the educational institution without giving a specific analysis of a specific situation. To claim that organized schooling is a synonym for indoctrination and that it is the graveyard of spontaneity and creativeness becomes meaningless when the author avoids the fundamental question whether the analysis as a whole is applicable to all organized schooling or only to a particular conception of it within certain political systems. When such an essential institution is at stake, one is justified in demanding a minimum of methodological exactitude.

As we have seen, in Reimer's view, organized schooling is the determining factor in the way modern society functions and, more generally, society is nothing but the reflection of its institutions. We find in these points of view a complete reversal of the real interdependence that exists between school and the outside world. It is not organized schooling that is wholly responsible for the creation of inequalities and social classes; it is the economic system itself, of which school is only to some extent the reflection and the perpetuating agent.

Organized schooling is not neutral. As an instrument of socialization (and therefore of the assimilation of certain cultural standards and a certain system of values), it shapes (or attempts to shape) men in the image of a society. Consequently, the problem no longer derives from school itself but from the models determined by the political nature of any given society. It is thus mistaken to link the destruction of organized schooling *as such* with profound social and economic changes.

To oppose individuals to institutions is a bogus

problem, and, from this point of view, Reimer is merely echoing a vastly over-simplified Rousseauistic point of view. The real question is: who controls these institutions, and what interests do they defend?

To this superficial view of the relations between society and institutions is added a highly questionable conception of history, according to which all ills result from the development of science and technology; individuals are cut off from their natural environment and subjected to the infernal logic of the production-consumption cycle.

It is indisputable that most people are excluded from decision-making and planning bodies, that they have scarcely any direct possibility of genuinely controlling economic development and subordinating it to real human needs. This, however, is due to the social structure and not to development in itself. It is paradoxical that Reimer should see fit to utter a lofty condemnation of development at a time when technological discoveries and the growth of productive forces would make it possible, on the basis of a change in production relationships, to free millions of men from alienating and exhausting factory work, in the case of the most 'fortunate', and from obsession with the daily struggle for survival, in the countries of the Third World.

From the 'revolutionary discoveries' in education to the irresponsibility of the proposed 'solutions'

In Reimer's view, school, whatever its role as an institution, fails in its particular task which is that of educating or, in other words, of enabling people to learn a certain number of techniques to acquire skills to develop various kinds of knowledge. The reason for this is simple: the pupil is asked to learn a skill, to practise it with someone else, and to learn how others have learnt it. The teacher, however, cannot assume all these functions. Reimer therefore suggests a model whereby this process can be effectively carried out, consisting of a fourfold network of services and persons. To begin with, libraries and museums today constitute a real collective memory and they house valuable records. Anyone wishing to educate himself would thus refer to these centres, which would be genuinely open to all. Secondly, people would turn to professionals who would act as skill models. Next there would be work shared with other learners who would be one's real peers, with whom it would be possible to share instruction in an effective way. Lastly, people would go in search of teachers who, by their experience, would facilitate the use of the basic educational resources. The role of the pedagogues would be to design really effective individual educational programmes. Compulsory schooling would be abolished, of course, in order to free the child from his artificial status.

We thus find the child set free by true methods of education. How, though, is equality of opportunity to be ensured? Everyone would have a lump sum of money, to be spent as he wished on his education throughout his life. In this way, everyone would, under a system of contracts, pay the person who would teach him a technique or pay the professionals and teachers whom he chose, etc. Reimer nevertheless hastens to add that the effectiveness of this system implies the replacement of competitive relationships by co-operation and, to achieve this, consumption must be voluntarily reduced, possessions shared, the environment preserved and relationships of a more human kind established with other people.

It is difficult to reply point by point to such a profusion of sleight of hand solutions relating not only to educational problems but also to social and political problems. We shall confine ourselves to a few fundamental questions among them.

Reimer holds that childhood as such does not exist; it is an artificial status created by the technological society. The author brings off a remarkable performance in dismissing all the findings of child psychology to arrive at this revolutionary conception of the child as an 'adult in miniature'.

But Reimer's most surprising contributions deal with the conception of education. This would appear to consist simply of acquiring knowledge. It might be objected that he bases his opinion on a quotation by Paulo Freire, who describes education as 'becoming critically aware of one's reality', but it should be pointed out that it is the first idea which provides the clue to the solutions proposed. From this point of view, Reimer can be accused of objectively allying himself with the most conservative ideas on the conception of education. To us it seems, on the contrary that the acquisition of knowledge is a secondary matter in comparison with the acquisition of the ability for logical and abstract thought, the learning of a method of analysis and work and, above all, the development of the child's personality. This is possible only in an appropriate material and human context (the school and the teacher) and following a process whose speed matches the pace of the child's psychological development. Reimer seems simply to forget that one of the essential tasks of the educationists and genetic psychologists whom he so condemns has been precisely to correct that maladjustment between development of the intellectual functions and school curricula which was formerly so much in evidence, and to identify the most important moments in a child's maturation in order to enable

him to develop his talents to the full. Reimer offers no solution to this basic question, since the child's progress is not regularly followed by qualified staff, and if he so wishes he is completely free to begin his 'education' at the age of 25 after having been left to his own devices during the decisive years of his intellectual development.

According to Reimer, nature and games are the chief channels of education. Without challenging their importance, it is obvious none the less that they cannot take the place of a central methodology. It would, moreover, have been desirable for the author to have given more details on this matter.

It is, however, on the problem of equality of opportunity that the author's ideas appear most farfetched. To begin with, granting the same amount of money to all children, or even a sum inversely proportional to the family's income, is no solution to the problem. The poorer child, or the young peasant, is handicapped to a very large extent because of the intellectual poverty of the environment in which he lives. Secondly, if compulsory schooling is done away with, would there not be a risk that the worst-off families would completely abandon educating these children which would only aggravate the inequalities already existing? Finally, how can children outside large towns be offered the full range of techniques that they might be tempted to learn? To put it bluntly, the application of the 'solutions' proposed would in fact lead to excluding the great majority of people from education.

And what of the teachers? Contrary to what might be expected, they do not disappear but their role is changed into that of museum curators and keepers of equipment, instructors subject to the law of supply and demand, or intellectual guides paid by their followers. The museum curators may, of course, become 'skill models'.

We certainly think that efforts must be made to bridge the gulf between the school world in the broad sense of the term, and the working world. But this does not mean that all power should be given to business executives, whose lively interest in education and very special abilities in this field are, in any case, so well known!

Reimer condemns early specialization but at the same time allows complete freedom to choose the 'skill to be learnt' at any age. Admittedly, a contradiction more or less does not bother him.

Economic determinism and its consequences

Reimer's 'analysis' starts from the premise that there is a growing lack of proportion between the results of education and the rising curve of financial investment in it. He also maintains that there is no country in the world which can afford the education its people want in the form of schools.

These are two obvious untruths supported by no specific data—and for very good reason. What is more surprising on the part of an economist, however, is that he considers investment in education as investment without return and not as investment profitable in the long run even from the economic point of view.

In addition, the 'realism' of the 'economic analysis' is accompanied by a fair amount of irresponsibility as regards the solutions put forward. The 'four networks' of services and persons proposed, for example, take no account at all of the planning necessary even for matching the number of graduates to the real economic needs.

Reimer fails in his efforts to find a solution to the crisis of schooling because he does not understand its real causes. By reversing the interdependence between school and society, he is led to conclude that the fundamental reasons for the crisis lie in the institution itself. On these premises, he goes on to write 'education fiction'. This is a fashionable trend, particularly among certain occupational groups obviously connected with education, who could, however, do more to improve the external effectiveness of education systems by linking them more closely to economic and social needs if they limited their efforts to their own sphere of competence and refrained from intervening in the field of educational activity proper. In any case, it is Utopian to set out to design new paths for education if its enduring aims and objectives are forgotten, if no account is taken of the special psychology and the specific nature of the child, and if, in fact, the distinction between information and education is lost.

J. BLAT GIMENO

Some recent Unesco education publications

New trends in chemistry teaching, Vol. III
Edited for Unesco by E. Cartmell,
Deputy Director of Laboratories,
Department of Chemistry, University of
Southampton, United Kingdom
(The teaching of basic sciences series)
Composite English/French.

Presents papers originally published in 1969, 1970 and 1971. These are grouped into sections: the Periodic Table, bonds and structures; Energetics and kinetics; Chemistry, industry and the environment; Nuclear science; Selected topics, etc. Separate introductions precede each section to indicate the content and the level at which the various topics are discussed.

27 × 21 cm, 325 p.; figs., illus., tables
1972 (ISBN92–3–001001–4) £2.35; 28.00 F; $7.00

Educational cost analysis in action: case studies for planners
An IIEP research project directed
by Philip H. Coombs and Jacques Hallak
Unesco: International Institute
for Educational Planning

Most countries, whether industrialized or developing, are currently facing increasingly pressing financial strain in meeting their enormous and urgent needs in the field of education; consequently, all means must be explored to improve the efficiency of educational systems so as to get the best value from existing resources. Experience has proved that an indispensable technique for this purpose is analysis of the costs of education, and these three volumes include twenty-seven case studies carried out by the IIEP during a major research project on this subject.

24 × 15.5 cm, Vol. I, 360 p.; Vol. II, 271 p.;
Vol. III, 347 p.; figs., tables
1972 Each volume: £2.35; 28.00 F; $7.00

Curricula and syllabi in hydrology
A contribution to the International
Hydrological Decade
(Technical papers in hydrology, 10)

A review of existing syllabi for undergraduate and post-graduate studies in hydrology is combined with detailed standard syllabi for courses in general hydrology and on specialized subjects. A list of hydrological subjects is included.

27 × 21 cm, 74 p., tables
1972 £1.35; 16.00 F; $4.00

Growth and change: perspectives of education in Asia
(Educational studies and documents,
new series, 7)

Follows on the Third Regional Conference of Ministers of Education and those Responsible for Economic Planning in Asia, convened by Unesco in co-operation with the United Nations Economic Commission for Asia and the Far East (ECAFE) at Singapore from 31 May to 7 June 1971.

After reviewing the economic background, it examines progress made in education throughout the region between 1960 and 1970, and proceeds to consider various policy issues common to the different countries of Asia, together with the question of planning for reform and development, better learning, etc. The final section deals with specific problems concerning education and development in rural areas; adult education and literacy; science education; technical education and training. Gives a picture of the advances made and the problems still remaining to be solved which will be of interest also to a broader public consciousness of the key role which education plays in today's world.

28 × 21 cm; 85 p.; diags.; tables
1972 (ISBN92–3–101009–3) 65p; 8.00 F; $2.00

The TEVEC case: an experiment in adult education using the multi-media system
By Raymond Lallez, Head of the Pedagogical Centre,
École Normale Supérieure,
Saint-Cloud, France
(Unesco: International Bureau of Education;
Experiments and innovations in education, 1)

The first publication in a new series which will offer the educationist and research worker individual case

studies contributed by specialists to the IBE's continuing investigation of the nature of educational innovation. This study of the educational television project in Quebec highlights the concrete and practical aspects while also aiming to stimulate sustained reflection on the whole range of processes which interact during the planning, implementation and development of a new educational project.

21 × 15 cm, 64 p.
1972 (ISBN92-3-101007-7) 35p; 4.00 F; $1.00

Sports facilities for schools in developing countries An inventory of experience and proposals for future projects

By F. B. Scriven
(Educational studies and documents, new series, 8)

Reviews the present situation in regard to economic problems facing many developing countries wishing to provide facilities for practising physical education and imported games. Outlines the type of handbook which should be prepared to guide the design and installation of sports facilities in the future. Indicates the research, publications and pilot projects which could be profitably undertaken. Valuable to all those concerned with providing economical facilities for sports and physical education in developing countries.

27 × 21 cm; 39 p.; illus.
1973 (ISBN92-3-101049-2)
30p; 4.00 F; $1.00

Population growth and costs of education in developing countries

By Ta Ngoc Châu

The rapid population growth over the last twenty-five years in developing countries means that schooling in these countries can be provided only at the cost of an effort proportionately much greater than that made by industrialized countries, which have different population characteristics. This report of an IIEP research project, which includes four national case studies, shows the effect on education costs of population growth, given various assumptions as to the future trend of fertility and mortality.

24 × 15.5 cm; 313 p., figs., tables
1972 £2.35; 28.00 F; $7.00

Film

The Ivory Coast experiment. (Colour, 16 mm, 13 min 45.)

The Ivory Coast programme to bring primary education to all the country by means of television is the subject of a film made by Unesco in co-operation with the Ivory Coast Radio-Television and the Secretary of State for Primary Education. It shows how television is being used in primary education in the Ivory Coast with the help of four countries and six international Agencies.

Already in 1972 over 20,000 children were being taught by television in 447 classrooms, starting with gymnastics at 8 a.m., going through reading and writing, new maths and classes of basic education or expression, where they work with paper, paint or clay, paint collective murals, etc.

There is a teacher-training programme each Wednesday evening and at 5.15 every afternoon, the *Journal des maîtres*—news of what other teachers are doing and thinking.

Equally important is the process of feedback —educators travel throughout the country to see what the village chiefs feel, what the parents, teachers and children think of the new experiment. Earlier education methods gave drop-outs, made for a break between town and village, old and young, tore people from their roots. Television is trying to remedy this.

The film is available from the Division of Visual Information, Unesco, Place de Fontenoy, 75700 Paris.

Erratum

In the previous issue (vol. II, no. 4) a printing error changed the meaning of the last sentence (p. 444) of the article by Mr. Blat Gimeno. Obviously, in the context of the article, it should read '. . . developed countries . . .'. The same article was inadvertently left out of the index for Volume II, and should be inserted after Binder, as follows:

Blat Gimeno, José. Should We Abolish the Schooling of Children? 442

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