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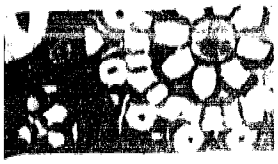
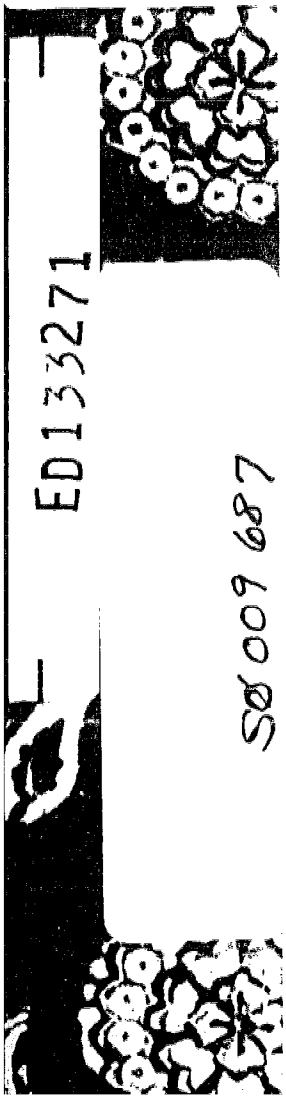
ABSTRACT

Reports on education in Thailand, Afghanistan, and the Philippines and reviews and reports of recent documents selected from the collection of the Unesco Regional Office for Education in Asia comprise this document. The first report, concerning educational reform in Thailand, presents recommendations of a governmental committee on curriculum, methods, administration, and equality. Afghanistan's attempts to increase opportunities for lifelong education, training, and literacy are described in the second report, followed by a discussion of national examinations for university admission in the Philippines. Reviews of recent publications on the following topics are presented: (1) social and educational reform in India; (2) science education in the Philippines; (3) the role of the university in Southeast Asia; (4) population and education in India; (5) rural development; (6) technical education in Bangladesh; (7) educational studies in the Republic of Korea; (8) education and development in Nepal; (9) teachers and changing curricula in Pakistan; (10) university adult education in Sri Lanka; and (11) education in Australia. An annotated list of documents related to Asian education and a summary of proposals for achieving universal primary education in India by 1986 conclude the document. (Author/DB)





Education in Asia

Reviews, Reports and Notes

Number 8 September 1975

Educational reform :
Thailand
Afghanistan

Proposals for reform in India

Science education - Philippines

The university and planning for development

Planning of education for rural development

Notes on Asian documents

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA
BANGKOK

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Education in Asia

Reviews, Reports and Notes

Number 8 September 1975

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA
Bangkok

This publication contains special reports on educational developments, together with reviews and reports of recent documents selected from the collection of the Unesco Regional Office for Education in Asia. We invite officials of Asian Member States, members of international organizations and all interested readers to send recent publications for possible review or mention in the next issue, as well as information on new education policies or major programmes.

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EDUCATIONAL REFORM IN THAILAND

by Michael Bennett

Introduction

Since the overthrow of the previous government through student demonstrations in October 1973 there have been increasing pressures for reform in all sectors of society, particularly in education. The government realized, however, that if the mounting pressures for ad-hoc and piecemeal changes in the school system were answered, this could easily result in a more confused and irrational educational situation than had existed previously. It was therefore decided that there should be an overall study of education in Thailand, and co-ordinated proposals made for the reform of all elements of the educational system at all levels.

Thus, in June 1974, the Cabinet appointed an educational reform committee. The members of this committee were drawn from renowned middle-level educators from the Ministry of Education, universities, and other government organizations. No ordinary members of the public, nor officials without high academic qualifications, nor people outside the government service were invited to become members of the committee. Despite the limited background of the members of the committee a wide range of different interests and orientations were represented.

Since the committee had to report within the lifetime of the interim government under which it was appointed it had to complete its task extremely rapidly—within a period of six months. Despite the shortage of time the committee did an extremely thorough job. Dozens of leading Thai thinkers (both radical and conservative) were interviewed, and hundreds of books, documents and research reports on the problems of the Thai education system studied. Ten sub-committees were formed, drawing part of their membership from outside the main committee; each of these sub-committees was charged with studying and making proposals on one particular aspect of the education system (e.g., equality, structure, teacher's role and status, administration).

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In December 1974, the committee completed its work, and submitted a 350-page report of its recommendations to the Cabinet. The Cabinet then distributed the report to all political parties competing in the general election which was held at about that time, and also sent the report to the National Education Commission (the government organization responsible for the overall formulation of education policies and plans)for its comments. The National Education Commission approved the recommendations of the committee, and thus the Cabinet of the new government (resulting from the general elections) instructed the Minister of Education to work out the details for implementation of the reform. It was also decided that the reform would be taken as the framework on which the Fourth Five-Year Plan for education would be constructed. Hence there is now a strong likelihood that the main recommendations of the reform committee will be implemented to the degree possible, depending on the time available and the strength of the respective sectors involved.

General thrust of the reform

Throughout the report of the reform committee there are certain recurrent themes. For example, the main emphasis of virtually all of the recommendations concerning the education system is towards greater equality, greater feasibility, greater relevance to the contemporary situation, and greater participation. It is also stressed that education is not an end in itself, but is rather an instrument for achieving social, economic, cultural and individual development goals. It is not claimed that a reform in education by itself can achieve very much, but that for education to achieve its full potential, its reform must be accompanied by reform in other parts of the complex socio-economic cultural system.

The committee also was extremely aware that at present Thai society is far from homogeneous, with the conditions and problems in the rural areas being very different from those in urban areas, with the situation in various regions of the country being quite different from that in other regions, and with various ethnic and religious minority groups facing problems and having needs quite different from those in the rest of the country. Thus it was realized that the present system of education, with its universal curriculum, would have to be considerably diversified and a large number of regional and local curriculum variations prepared. This is not of course to say that the committee ignored the national unifying role that the education system should play.

The committee felt that the government should attach greatest priority to providing an adequate basic education for all Thai people, and that there should thus be a very rapid expansion of pre-school programmes (particularly for children from depressed environments) primary school places, and of non-formal education programmes.

increasing proportions of scarce government resources should be devoted to ensuring that every Thai has an adequate and useful basic education, while those fortunate enough to find places in further education should (where their means allow) cover an increasing proportion of the costs of their education.

Finally, throughout the reform committee's report there is an emphasis on changing the teaching/learning process, away from an academic, fact-oriented, teacher-centred process, towards one in which there is much greater dialogue, greater physical involvement of the student, and where the teacher is seen much less as a 'Mr. Know-All', and more as a creator of effective learning situations.

Some important specific proposals

Most of the important specific recommendations of the reform committee can be classified under four main headings: structure of the system, administration, curriculum and methods, and equality.

a) Structure

The present structure of the Thai school system is 4-3-3-2. Currently only about 50 per cent of Thai children proceed beyond Grade IV and, if the structure remains unchanged, it would be 20 years or more before universal primary education (7 years) might be achieved. Since four years of schooling seems insufficient to enable children in more remote rural areas to become functionally literate—let alone to achieve many of the other objectives of primary schooling—the reform committee recommended that the length of the primary cycle be reduced from 7 years to 6 years, and that universal 6-year education be nationally implemented immediately. This proposal is combined with a recommendation that the length of the school year be increased from 180 days to 200 days thus allowing roughly the existing amount of learning—presently achieved in 7 years—to be completed in 6 years.

The committee did not feel that this structure should be inflexibly adhered to, however, and recommended that brighter children should be allowed to graduate in a shorter time, and children from disadvantaged backgrounds given somewhat longer.

The committee also recommended that the upper secondary stage be increased from two to three years since, because of high repetition rates, most students already on average spend about three years at this stage. Thus the new structure of the school system after the reform has been implemented would be 6-3-3.

Again at the second level, proposals were made to ensure great flexibility, with students being allowed to enter and leave school when they want, and graduating when they have amassed a sufficient number

of credits (which can be gained either through formal or non-formal education). Thus there will be nothing to prevent a student's graduating from lower secondary education if, for example, he attends a formal school for a year, drops out, studies on a part-time basis for two or three years, and then enters formal school again to complete the required number of credits.

The committee also recommended that the existing secondary vocational school system cease to exist, with vocational schools located near ordinary secondary schools being incorporated with these schools to form comprehensive schools, and those that are more isolated being turned into informal skill training centres. Thus, after the reform has been implemented, there would be a unitary, but diversified and flexible, secondary school system with a national structure of 3+3 years.

Finally under this section it should be mentioned that, in order to improve the overall qualifications of teachers, the reform committee recommended that the lowest levels of teacher training (lower secondary education and two years' specialized teacher training) should be abolished, and intakes into teacher education programmes be drawn from graduates of upper secondary schools. There would of course have to be some exceptions to this new policy in the more backward regions of the country where there are still inadequate numbers of upper secondary school leavers. In addition, it was recommended that all part-time evening pre-service training courses (at present a considerably larger number of students participate in these evening courses than in full-time courses) should be gradually abolished. The total effect of these two reforms will be to allow the teacher training colleges to concentrate far more on the practical aspects of teacher education, the provision of functional skills and knowledge, and problem-oriented in-service training, rather than on providing the academic background required by future teachers.

b) Administration

At present, the Thai education system is administered by three central-government Ministries, each responsible for one of the major levels, and there is very little room for local initiative in the operation of local educational institutions and programmes. Thus, in general, it can be said that on the one hand there is an insufficient degree of co-ordination in the administration of the different levels of education and, on the other hand, an over-centralization of responsibilities.

The educational reform committee therefore recommended that central responsibility for the administration of all levels of education should be transferred to the Ministry of Education which would then have overall responsibility for all formal and non-formal education at all levels from pre-school to university. It was also recommended that

operational responsibility (including control of budgets and employment of teachers) should be transferred to provincial educational committees (there are 71 provinces). Thus, for the formal school system at the first and second levels, the Ministry of Education (with its 12 regional arms) would only be responsible for overall policies, budgeting and planning, and for educational techniques (such as curriculum and materials development, educational media, establishment of evaluation methodologies and standards). Through this limitation of the authority of the central Ministry of Education, and the decentralization of operational responsibilities, it is hoped that not only will local initiatives for innovation be increased but also in the longer run the potential for real diversity in the education system might be exploited.

All existing post-secondary institutions including universities, teacher training colleges, technical colleges and nursing schools will fall under the responsibility of a State university bureau under the Ministry of Education. It is however intended that these institutions have considerably greater autonomy than they now have. Thus, the bureau will not have operational responsibilities, but will only be charged with overall policy and planning, co-ordination, and budgeting (through a university grants committee). Sub-university-level institutions (i.e. teachers' colleges, agricultural and technical colleges, and nursing schools) in each region will be grouped together to form community colleges which would be provided with technical assistance from the local university. The new community colleges would be charged particularly with providing training relevant to local conditions, and with providing support services for local-level pedagogical institutions in the regions.

Faculties of universities situated near each other in the same specialist area would be amalgamated (in the Bangkok region there are at least three universities with faculties in most specialist areas). This process, making universities more oriented towards specific fields (and concentrating their activities on one campus), will permit not just an improvement in quality, but economies of scale as well. In addition, some Bangkok universities are to be moved to the Provinces.

Finally, encouragement will be given to private organizations in the establishment and operation of higher education institutions, so that government can divert its resources to other more crucial educational areas where private participation is less likely to be forthcoming.

c) Curriculum and methods

Throughout the committee's recommendations on curriculum and methods there was an emphasis on making the teaching/learning process more functional, more efficient, more related to the students' socio-economic cultural environment, and more participatory.

At the first level it was recommended that the curriculum be divided into only four integrated subject areas: basic skills, life experience, work experience, and character education. In this way the child might no longer be deluged with more than a dozen different subjects. It is also proposed that only national core materials be produced at the central level, and that regions be given responsibility for producing materials particularly relating to conditions and problems in their localities. In addition, it is recommended that considerable use be made of community resources, that progressive members of the community be used as part-time teachers for subjects within their competence, and that a considerable proportion of teaching and learning take place outside the classroom.

At both the first and second levels of education the curriculum would be designed as terminal and have three basic orientations; namely, for individual development, for local and community development, and for national development. Also at both levels it is proposed that competitive, academic national examinations should be replaced by a process of school-centred formative evaluation designed to help both students and teachers identify learning problems—and take action to solve these problems.

At the second level the curriculum will be divided into a small group of compulsory subjects, and a much larger group of optional and extra-optional subjects, the latter group being designed to allow students to pursue in much greater depth particular optional subjects which interest them. Since students would no longer have to take all their courses in one school, but would be able to take some in one, some in another, some from skill-training centres, and some through non-formal study, this curriculum structure would allow almost unlimited flexibility for students in the choice of their particular course of study. It might for example even be possible for a student to gain credits for practical on-the-job experience if this is related to one of his optional or extra-optional subjects. As the student proceeds to higher grades, an increasing proportion of his time would be spent on studying his chosen optional subjects.

Obviously for such a flexible system to work, considerable guidance has to be provided to students in selecting their courses of study. The need for adequate guidance services was stressed by the committee.

Finally, given the greater diversification and decentralization, and the fact that teachers will be carrying out their own evaluation (which will entail a need for some standardized achievement tests and grading of schools so that students can easily transfer) supervisory services will have to be expanded and improved, and the supervisor will have to be given much greater academic freedom so that he can truly become an educational leader in his locality.

d) Equality

Many of the proposals of the reform committee already discussed should help to increase equality of opportunity in the Thai education system. However the committee was so concerned with this particular problem (for example, at present only 6 per cent of university students come from farm families, even though this group makes up almost 80 per cent of the total population) that many specific proposals were made on the topic.

It was suggested that maternal and child care centres should be set up in slums and depressed rural areas so that children from these areas are not suffering from permanent mental or physical damage when they enter school. Also, for the 40 per cent of Thai children from families which a recent survey showed are living in absolute poverty, free school meals, uniforms and materials would be provided while they are attending universal compulsory education.

Great efforts should be made to change the budget and teacher allocation process so that the present gross inequalities in per-pupil resource allocation (at present a five-fold range in per-pupil budget allocations between rich urban and poor rural schools is not uncommon) are eliminated.

At the primary level, the government is to provide sufficient numbers of good schools for all children, so that there will no longer be a need for poor parents to try to send their children to private schools.

At the second and third levels of education (which at present are mainly the preserves of children from well-to-do families, and where there are high private benefits) school fees will be dramatically increased to cover 30 and 40 percent of the total costs respectively. An adequate number of scholarships would be provided for needy children. This increase in fees will allow resources to be transferred for improving low-quality basic education, establishing maternal and child care centres and supporting the school lunch and materials programme for needy students.

The abolition of competitive academic examinations (in which children from well-to-do families tend to perform better) should also help to reduce repetition and drop-out, and allow children to progress further up the school ladder. Similarly, by making the curriculum less academic and more practical, both the chances of some success and the benefits accrued of poorer children should be enhanced.

Finally, the committee stressed repeatedly the importance of non-formal education, the need to expand rapidly all programmes (particularly those directed to rural areas) and the need to drastically increase budget allocations for these activities as well as to make much greater

use of formal school and mass media facilities for functional non-formal programmes. Through these and other measures it is hoped to provide life-long learning opportunities for all Thais in all parts of the country, but particularly for those who have had limited formal schooling opportunities.

Conclusions

Due to the rush in which the committee had to complete its work there still remain several inconsistencies between the recommendations in different parts of its report. These have not been pointed out here, but instead only the author's own interpretation of the main parts of the reform has been stressed. Nevertheless, despite the fact that more analysis is still required in certain areas (particularly in respect of teacher education, higher education and educational resources), and despite the fact that perhaps insufficient attention was paid to the problem of priorities, it is generally accepted that the reform committee's work heralds a new educational era in Thailand. No longer will the school system be seen as an inflexible institution whose main function is to provide academic facts which are then tested for the purposes of social and economic status selection. Instead, education should now be seen as a process (which can take place in many different ways) whose function is to provide skills, knowledge, attitudes and ideas for individual, community, and national development.

Of course, the real problems of the reform are only just beginning to be faced: the problems of implementation. For the value of this reform (like any other plan or reform) is not so much the beauty and the relevance of its ideas and recommendations, but the extent to which these are implemented. The chances of implementation are however high, as the report of the reform committee has created a framework around which all progressive Thai educators can co-ordinate their action. This alone is no mean achievement.

EDUCATIONAL REFORMS IN THE REPUBLIC OF AFGHANISTAN

The Republic of Afghanistan has recently announced a series of thoroughgoing educational reforms designed to achieve the educational, social, economic and democratic objectives of the Republic. The reforms are based on the recommendations of a number of committees which were established under Presidential instructions, to define the aims and objectives for education in the country, to develop policy guidelines and to consider the establishment of a Supreme Council for Education.

The aims and objectives have been defined in terms of cultural values, training and upbringing, economic, social and political objectives, and administrative needs. They stress the need to develop the sense of self-reliance, moral values and appreciation of the national cultural heritage; to engender interest in and respect for work, both mental and physical, and to nourish the sense of social justice and social responsibility; and to promote the physical, mental, emotional, moral, artistic and social development of the students.

Among the main thrusts of reform are the following: primary education has been increased from 6 to 8 years as a complete cycle, with 6-7 years as the age of entry into the school system. In principle, primary education will be compulsory and free. In the 7th and 8th grades of the primary cycle, practical work and vocational training have been included. Some of those who complete the primary cycle will be selected, according to admission rules and manpower needs, for enrolment in secondary or vocational training. Those who are not selected will be provided opportunities for entering short-term vocational courses. Both these categories of skilled and semi-skilled literate workers will form an important part of the work-force.

The secondary cycle will extend over 4 years. In the final year, science and social subjects will be separated as preparation for higher education. A number of general secondary schools will gradually be converted into vocational schools. While vocational education in the secondary cycle will usually be of 4 years' duration, this would be extended or decreased according to the nature of the vocations being taught.

For the present, teachers for the primary cycle will be recruited from Grade XII graduates. In future years, the requirement will be raised to 14 years. Teachers for the secondary cycle will be recruited

from Grade XII graduates and provided with training at the teacher education institutions at the level of 'licentiate'. Regular in-service courses will be conducted to provide for the improvement of teachers' knowledge and abilities.

A number of studies and surveys will be conducted, focused on priority problems in the education system. A major curriculum reform programme is contemplated, attempting to make classroom learning relevant to social, cultural, economic and political needs of the society. The preparation of supportive teaching/learning materials such as textbooks and guides is a component of this programme.

After completing the period of secondary education, and passing the selection examinations at the university, the students will be separated into two groups - one for higher education and one for higher teacher education. Similarly, the graduates of vocational schools, after taking a special vocational test, will be enrolled in the technical colleges.

Opportunities for life-long education and training, and for literacy, are to be expanded by the Ministry of Education.

Parents' and teachers' associations are to be established with a view to effectively supervising student academic performance and promoting close relationship between schools and communities.

While the administrative structure of education will be based upon the principle of centralism, provincial directorates of education will be delegated requisite authority for the purposes of expediting activities.

Two new and significant national committees are to be established: the High Council of Education; and the Technical Board. The High Council will be chaired by the Prime Minister, with the Deputy Prime Minister, the Ministers of Justice, Finance, Education, Information and Culture, the First Deputy Minister of Education and the Rector of the University as members. The Council will:

1. Determine general objectives of education at different levels, including those of higher education;
2. Co-ordinate education objectives with the general aims of the Republic in conformity with the needs for social, economic and political growth of the country;
3. Formulate education policies of the State;
4. Adopt decisions in regard to formulation of rules and regulations for organizing educational activities of the country;

5. Scrutinize education plans of the Ministry of Education and of the University and take decisions thereupon;
6. Take decisions on general matters of education including those of finance;
7. Review decisions of the Technical Board of Education and the Technical Council of the University when the Minister of Education considers it necessary;
8. Take decisions on other matters which are referred to the High Council by the Ministry of Education;
9. Approve draft rules and regulations and by-laws.

The decisions of the High Council of Education are to be submitted to the Cabinet for approval in accordance with the provisions of the law.

The Technical Board will be represented by the First Deputy Minister of Education as President, with the Second Deputy Minister of Education, Deputy University Rector for Scientific Affairs, and Presidents of Primary, Vocational, Secondary, Teacher Education, Education Planning, Compilation and Translation and Inspection, as members. The Board will:

1. Determine, clarify and finalize educational curricula;
2. Formulate educational and training programmes;
3. Draw relevant rules and regulations and by-laws;
4. Perform duties referred to it by the High Council of Education and the Minister of Education;
5. Prepare reports and proposals for reforms in concerned fields and submit them through the Minister of Education to the High Council of Education;
6. Study and evaluate the work reports of the technical offices of the Ministry of Education in connection with the planned targets of education.

PROPOSALS FOR EDUCATIONAL AND SOCIAL REFORM IN INDIA

1. Naik, J.P. *Policy and performance in Indian education 1947-74* (Dr. K.G. Saiyidain Memorial Lectures - 1974). New Delhi, Orient Longman, 1975. 112 p.

2. _____. *Elementary education in India - A promise to keep* (Alternatives in Development: Education). New Delhi, Allied Publishers, 1975. 98 p.

Prof. J.P. Naik, whom the Foreword to the second book introduces as one of India's "foremost authorities on matters relating to education planning", has summarized his extensive insights in two refreshingly succinct and inspiringly pragmatic statements. The first among them constitutes two lectures delivered in September 1974 in memory of the late Dr. K.G. Saiyidain. The second is a monograph prepared within the programme of Alternatives in Development (Education) of the Indian Council of Social Science Research. With long years of exceptionally high-level participation in fashioning the education policy of the country, Prof. Naik displays a unique ability to identify, classify and elaborate the major problems of education in India and to offer radical solutions. Both these books stand out as readable, authoritative and timely publications on their subjects.

Unfulfilled hope

The first book is a survey of the evolution of Indian education policy from 1947 to 1974. Here, each policy is matched against the performance—and the resulting balance sheet although somewhat discouraging reflects, on the whole, the growing intensity of the national effort to develop education. Recalling the directive of the first Prime Minister of India to the effect that "great changes have taken place in the country and the educational system must be in keeping with them" and therefore "the entire basis of education must be revolutionized", Prof. Naik laments:

> ... This hope was unfortunately never realized. We did not attack the educational problem in its totality, but in an ad hoc and piecemeal fashion. We never provided education with the large financial resources it must have. We never put into education all that immense human effort

> which it always needs. We never tried to mobilize the community as a whole to support the expansion and improvement of education. Above all, we did not also try to introduce radical structural changes in society without which radical structural changes in education are not possible. Consequently, our overall achievements in education have not been impressive, except in a few sectors, and many of the basic educational objectives of a socialist society have still remained unrealized.

Constitutional directive on primary education

His incisive diagnosis of the problem begins from an analysis of the socio-political need to have the people of India "effectively organized and politically educated" in order to enable them to exercise the sovereignty which was transferred to them with Independence. The Constitution writers made appropriate provisions for this purpose and, as far as education was concerned, a Directive Principle of State Policy was incorporated to specify a ten-year time limit for total achievement of primary education up to age 14.

He argues that this directive has a significant corollary in that it embodies a concurrent responsibility as regards mass literacy. "Literate parents", he says, "are the best guarantee to ensure that a child is enrolled in schools, is given a proper home atmosphere for his studies, and is retained in schools for an adequate period". Proceeding to contrast the virtual neglect of adult education with what was done to provide universal primary education, he recounts the positive achievements in the form of numerical expansion in enrolments, teachers and schools. In spite of approaching this task on a "war-footing", the target of 1960 was not reached.

Mr. Naik offers three reasons for this : (a) prevalence of mass illiteracy; (b) non-introduction of radical structural changes beneficial to the masses ; and (c) insufficiency of resources for a costly education system which operated through full-time professional teachers. The system, he says, is built on the assumption that the average parent is well-to-do enough not to need the labour of his children until they are at least fourteen years old. He rejects a system which relies too heavily on full-time formal instruction on the grounds of its "inherent bias in favour of classes and built-in unsuitability for the education of the masses."

Successes and failures

The author's overall assessment of India's performance in secondary and higher education is also incisive" "We have some major achievements /e.g. the development of science and technology and the

large expansion of trained scientific and technical manpower/ to our credit. On the other hand, our failures in this field have been so glaring and significant that they have put the future of the entire educational system in jeopardy." He lists three failures:

1. failure to diversify and vocationalize higher secondary education;
2. failure to restructure secondary education at the time when it might more easily have been done; and
3. failure to check unplanned, haphazard and indiscriminate expansion of secondary and higher education.

He devotes considerable attention to the repercussions of the last-mentioned failure. While conceding that such expansion has always been socially beneficial and has helped somewhat in creating a more evenly balanced society, Prof. Naik stresses:

> Its deleterious effects on standards are obvious, and it has created an increasing and extremely difficult problem of educated unemployment which has snapped the motivation of students and created large stresses and strains within the system. It has also made the system far too big to be manageable and prevented the investment of adequate resources into more vital sectors like universal primary education or liquidation of adult illiteracy.

He finds it incongruous to accept a "dual system" consisting of some good institutions and a vast majority of sub-average institutions, primarily because it "gives an easy option to the ruling classes to secure good education for their children, either in the 'core' institutions within the system or by opting out of it (i.e. by use of private schools) without being required to undertake the more difficult task of improving the entire educational system."

Prof. Naik concludes his survey with the statement, "We now have a first-rate educational crisis on our hands." He contrasts the ever-increasing demands for resources and human effort with the apparent response. "On the financial side", he says, "the overall picture is disheartening.... On the human effort inputs side, the picture is even darker."

Prof. Naik does not choose to conclude on a gloomy note. He follows the survey of policy and performance with a formidable set of suggestions and proposals. These recommendations, with suitable modifications, would undoubtedly have application in other countries of the region and, together with others in the books, have been grouped together to make an appendix to the present publication.

Integrated approach

The first measure he proposes for dealing with the critical situation is to adopt an integrated approach, which he defines as "a simultaneous effort to transform society and education in keeping with the national goals of socialism and democracy and the ultimate creation of an egalitarian and non-exploitative society based on justice, equality, freedom and the dignity of the individual."

To bring such an approach about, his suggestions are:

Step I - Revitalize and strengthen the planning process.

Step II - Restructure the overall plan priorities : i.e., a simultaneous reduction in consumption by well-to-do people, a massive effort at resource mobilization, structural changes (especially in agriculture and population control).

Step III - Involve masses of people in programmes of planned development.

He hopes that such an approach would make education and development two sides of the same coin. A slogan he proposes for the plan is : "Education through reconstruction and reconstruction through education."

Transformation of the educational system

The second measure that Prof. Naik proposes is to transform the structure of the educational system as well as the content of education. Here, he urges the adoption of a new structure for the national educational system, which, by combining formal, non-formal and hybrid forms of education, reflects the needs and aspirations of a developing country with meagre resources. The author lays stress on two important points :

a) The educational institutions should try to cater for the entire educational needs of the community around them - (i) through full-time instruction to the regular category of students, and non-formal and part-time education to suitable categories of other local residents ; and (ii) through the utilization of all the teaching resources available in the community.

b) The workers and the farmers are to be made the central focus of the national educational system.

Re-asserting the original proposition that mass illiteracy is a deterrent to educational development, Prof. Naik calls for greater emphasis on adult education, for which he suggests three main foci :

(a) upgrading vocational skills; (b) "techniracy"—i.e. a basic knowledge of science and technology relevant to work, health, family planning and other aspects of life; and (c) citizenship—i.e. a process of conscientization similar to that of Paulo Freire. For out-of-school youth he adds two more foci: (d) physical education; and (e) participation in local community service programmes.

While recommending the expansion of a hybrid form of education similar to what Bellagio III Preparatory Meeting in May 1975 proposed to call the "Basic/First Cycle of Education",* Prof. Naik has strong reservations on the linear growth of secondary and higher education. He wants the further expansion of the existing formal system of full-time secondary and higher education halted almost totally because of class-bias and costs. He further recommends changes in wage-policies to reduce the gap between white collar and middle-level vocational jobs and delinking university degrees from employment with the government.

A significantly radical proposal relates to reducing the existing gap between facilities provided on the one hand for elementary (primary) education and on the other to secondary, college and higher education. He says,

> The facilities we now provide at the elementary stage will have to be considerably upgraded; and, at the same time, those at the secondary and university stages will have to be correspondingly planned on an austere basis. For instance, single and functional buildings, without the use of cement or steel, should be accepted as a policy for all stages of education; and there should be no attempt to preach, on the one hand, that a primary school does not need a building and can be held under a tree, while luxurious buildings are constructed for universities as if their intellectual and academic status is proportional to the height of the Senate towers.

Motivating students and teachers

The third measure that Naik proposes for dealing with the tasks of education is to ensure that "the students are properly motivated and the teachers are enthused and deeply involved in programmes of educational reconstruction." To illustrate the problem of student motivation,

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* Defined as "A highly functional concept of education, which encompasses formal, primary level schooling and non-formal instruction, aimed at expanding and improving opportunities for the kinds of learning fundamental to life and work, so as to meet as soon as possible at least the minimum needs of all."

he refers to a study conducted by Jadavpur University, which revealed the following picture:

> In the undergraduate course (pass degree) in Arts, Science and Commerce, only 8 per cent of the students were interested in getting a degree which, they thought, would help them to get a job. The proportion of motivated students increased to 36 per cent in the honours courses and to 61 per cent in engineering courses. But even at the postgraduate stage in arts, science and commerce, the proportion of properly motivated students was as low as 22 per cent. The syllabi were obsolete, unrelated to present-day problems and had remained unrevised from 6 to 25 years. The students often did not have the prescribed textbooks, and more than 50 per cent of them did not have even the easily available and recommended reference books. As many as 75 per cent of the students were dissatisfied with teaching methods and 85 per cent with the examination system. About 75 per cent of the students found that the use of English as a medium of instruction was a partial or a great barrier to their understanding of problems and development of deep interest in their subject."

With regard to teachers he draws the attention to service conditions detrimental to motivated performance of their functions (poor salaries, indiscriminate postings and transfers, unlawful cuts in remuneration, insecurity and other adverse conditions.

Elaboration of issues and detailed background

If the first book of Professor Naik reviewed here outlines his thinking on problems and prospects of Indian education—a few bold strokes on a broad canvas - the second book is a detailed analysis of the first level of education in which the issues are elaborated and a documented background for his thinking presented. It is appropriate that one proceed from the first to the second book because an initial understanding of the total picture is invaluable to appreciate the forceful line of argument in relation to the development of elementary (primary) education.

In a remarkably innovative manner the book begins with what Prof. Naik chooses to call "The Educational Charter." In this he spells out his concept of a "radical and egalitarian programme of educational reconstruction." The points he emphasizes are as follows:

1. One-third to one-half of working time in all educational institutions at all stages shall be devoted to active participation in programmes of social service and national development.

2. The most urgent reform needed is to transform the present educational structure with the introduction of a large non-formal element.

3. The distortion of benefits must be immediately corrected and, on grounds of social justice, the masses must get the full benefit of the educational system.

4. Radical policies have to be immediately devised at the secondary and university stages to counteract the evils of an unplanned and haphazard growth of secondary and higher education which makes the richer classes the main beneficiaries of ... prestigious institutions.

5. To be successful, however, educational programmes need not only funds but sustained hard work, an ethical atmosphere, and cultivation of proper values by the entire academic community.

The "Charter" proceeds to list supporting measures to be simultaneously adopted in other spheres; i.e., a direct attack on social and economic inequalities (reduce the level of living of the top 30 per cent of the people while providing minimum needs of the masses; an egalitarian wage-incomes policy; simple clothing which does not show great disparity; participation in national and social service involving manual labour by all from the Prime Minister to the janitor).

Against the back-drop of this Charter, Prof. Naik develops a Programme of Action, which, as Chapter III, constitutes the bulk of the book.

Evolution of innovative alternatives to traditional model of primary education

The traditional model of the public education system, as defined by Prof. Naik, is characterized by a single-point entry to Grade I at the age of six years, sequential promotions, full-time institutional instruction by professional teachers, division into levels as primary, secondary and higher, each level having as its major objective the preparation of a pupil for the next higher level. Having declared such a model as "obviously meant for the upper social classes and too costly to admit of any large-scale expansion," he proceeds to look for a new model more relevant to conditions of India.

A very interesting exercise undertaken by Prof. Naik in this connection is to trace the evolution of a variety of models which various Indian educators had proposed over the last seven decades. In the process, he identifies and describes at length five models. These models have been summarized on pages 23-24 for the reader, who may compare with amazement the various bold attempts to hit upon an ideal

formula in an environment which is socially and culturally too complex for simple solutions to such an enormous problem.

1. Gokhale-Parulekar Model (1910-12)
   - four-year compulsory education for all children
   - objective : mass literacy
   - curriculum : simplified and limited to the three R's
   - age of admission : 7-plus
   - major cost-reducing factor : large pupil/teacher ratio and double-shift system
   - major criticism/cause of failure : non-acceptance of the concept of high pupil/teacher ratio.
2. Mahatma Gandhi's Basic Education Model (1937-39)
   - 7-8 years of compulsory education
   - objective : transformation of individual value system through preparation for socially useful productive work
   - curriculum : integration of school and community by developing education through a craft
   - major cost-reducing factor : self-sufficiency, in that proceeds from work would cover up costs
   - major criticism/cause of failure : non-fulfillment of the concept of self-sufficiency (no reduction in financial liability of Government)
3. Rajagopalachari Model
   - compromise between models 1 and 2
   - major cost reducing factor : schools not to set up facilities for teaching crafts ; education to be built around family craft. 3-day schooling leaving 4 days per week to work with parents
   - major criticism/cause of failure : creation of a dual system for urban and rural areas ; emphasis on caste and traditional occupations.
4. Acharya Vinoba Model - One-hour School
   - one hour of schooling at dawn, leaving the rest of the day for work
   - curriculum : to be linked with agriculture and village life
   - (no record of any try-out)

5. Education Commission Model (1964-66): Neighbourhood School

   - one school for all in the community
   - multiple entry and part-time education
   - objective: social integration in a class- and caste-ridden, inegalitarian and hierarchical society
   - curriculum: broadly that of basic education with work experience involving participation in socially useful productive work based on science and technology
   - major cost-reducing factor: compelling rich, privileged and powerful classes to take an interest in public education
   - not implemented yet.

The progression of thinking on the structure and content of primary education in India, so-illustrated in a historical sequence, enables Prof. Naik to proceed to the next step of spelling out his own model. Although he does not claim it to be so, the structural reforms he proposes do in fact constitute a model.

Programme of action

It is important to note that Prof. Naik's main emphasis is on structural reforms to change the four major characteristics of the present school system: namely, (a) single-point entry; (b) sequential character; (c) full-time instruction; and (d) exclusive utilization of professional teachers.

The pattern of education emerging out of his discussion is one in which non-formal educational programmes and mobilization of all persons in a community as resource personnel are the principal features. Through such a structure, he proposes to combine learning and working in such proportions as would prepare the learner for his life in the community. He envisages a core curriculum of "literacy (or language skills), numeracy (or mathematical skills), 'techniracy' (or scientific and technological information and experience), work-experience (or experience of socially useful productive work), health and physical education, development of artistic skills, and participation in programmes of community service." For qualitative improvement he makes an eight-item proposal consisting of (1) improvement of curricula; (2) improvement of textbooks and other teaching and learning materials; (3) adoption of dynamic methods of teaching; (4) examination reform; (5) improvement in general education and training of teachers; (6) improvement of supervision; (7) encouragement to initiative and experimentation on the part of schools and teachers; and (8) involvement of

students, teachers, and members of the community in programmes of qualitative improvement of primary education through a system of institutional planning and school complexes." Hand-in-hand with primary education, he urges the development of Adult Education.

What should interest an educational planner, in particular, are Prof. Naik's views on educational financing. For the purpose of reducing the cost of primary education to manageable proportions, he urges, as the most effective methods, the following:

1. Increase in the pupil/teacher ratio by the adoption, if necessary, of the double shift system in Classes I and II;
2. Reduction of teacher costs by introducing the system of volunteer teachers or local helpers wherever possible;
3. Introducing a larger programme of part-time education combined with the multiple-entry system;
4. Reduction in the expenditure on buildings through use of local agencies and materials;
5. Reduction the cost of textbooks, and teaching and learning materials, by providing them free of charge to all children on the school premises during working hours.

The cogent and forceful arguments of Prof. Naik leave the reader of these two books convinced that a multi-pronged attack on the problem of education has to be launched in India. Most remarkable, what he tells of India has a valid relevance to most Asian countries.

It is necessary to emphasize, however, that the radical nature of his recommendations matches the complexity and enormity of the problems and that Mr. Naik, far from being a visionary, is actually talking of an educational system which is beginning to take shape in India as well as in several of her neighbouring countries.

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SCIENCE EDUCATION IN THE PHILIPPINES

Philippines. University, Science Education Center. *The progress of science education in the Philippines: 1963-1973* [by] Dolores F. Fernandez. Quezon City, 1974. (monograph No. 2)

This monograph, based on a lecture for the Professional Chair in science education, College of Education, University of Philippines System, gives an account of the progress of science education in the Philippines during the decade ending 1973. The first part of the monograph provides an overview of the various developments in the field of science education at the first and second levels of education with special reference to its organization and structure in the context of the Asian region. The third level of education is treated only insomuch as it relates to the education of science and mathematics teachers. The second part of the monograph is concerned with some general considerations about the qualitative aspects of science education, relating to those areas which require further study and development in the Philippines situation.

A study of 21 Asian States shows that in the Philippines the enrolment ratio at the first level is already 112 per cent, exceeding the 100 per cent mark due to the excess in attendance of over-age pupils. At the second level the ratio is 44 per cent, third highest among the 21 Asian countries studied. The study also shows a higher holding power found in the secondary schools than in the primary schools. This shows that the Philippines provides an almost complete primary education and that secondary education is widespread and highly valued.

Science teaching starts from grade I. At the second level in the academic stream, about 40 per cent of the instructional time is allotted for science subjects as against 60 per cent and 80 per cent in lower and upper secondary 'science stream' courses in countries providing streaming at that level. It has to be noted, however, that a large number of students in the 'academic stream' enter university but do not study science, whereas the 'science stream' students in other countries will pursue science-related studies in university.

The amount of time allotted for science/mathematics studies is changing in the Philippines. According to the new allocation, three hours per week in the first two years of secondary education will be devoted to Science 1 and 2. Chemistry and Physics will be offered for five hours per week at the third- and fourth-year level.

Discussing the teacher qualifications, Dr. Hernandez emphasizes that the Philippines primary school teacher receives a higher level of training than in many other Asian countries; the Government requires a bachelor's degree of its primary school teachers. The degree requirements include 6 hours of science and three hours of mathematics for all teachers. An additional 18 hours is possible for those who opt for specialization. At the second level, the requirements for the education of teachers is the same, both for lower and upper secondary grades, which is not the case in many Asian countries.

Referring to curriculum reform movements of the early 1950s in science education, the author indicates that the first-generation projects (e.g. U.S.S.C.) produced mostly by scientists served fairly well the needs of the elite, who are most likely to proceed in the specialization of science, but did not fully meet the needs of the majority of students enrolled in secondary school science. Referring to the 'second wave' of science teaching reform projects starting in the 1960s, some of them in developing countries, the author describes the establishment of the Philippines Science Education Center (UPSEC) and other organizations with their objectives and functions. She points out that these projects had the advantage of learning from the mistakes of earlier projects and this was reflected in a serious effort to involve practising teachers from the start in several aspects of curriculum development and broadening of the target population.

As a result of the revised secondary education programme of 1973 for the Philippines, and in order to relate the process of learning more closely to the Filipino child and his environment, the newer curriculum projects are moving towards:

a) inclusion of population education, environmental education and conservation education;

b) inclusion of humanistic science which focuses on the applications of science and technology to everyday living, and the use of knowledge to solve problems;

c) consideration of necessary and relevant attitudes and concepts existing in the community about what is being learned in science education; and

d) consideration of possible consequences of action leading to a sense of social responsibility.

Discussing the role of organizations in the advancement of science education, the author describes the role of the National Science Development Board (NSDB), which co-ordinates all the activities in science education carried by UPSEC and a network of science teaching centres. The unique activity of the NSDB not shared by research councils in other countries is its close attention to science education. The

paper then describes the roles of Unesco, UNICEF, SEAMES and RECSAM in the improvement of science education in the Philippines.

Comparing the situation with the different functions performed by various science teaching centres all over the world, the paper indicates the functions which are being performed by the Science Education Center (concerned mainly with curriculum development)and how others which are not covered by it are being taken care of by other organizations in the country. The author emphasizes the need for "a harmonization of efforts" put into the non-formal science education programmes by various organizations to avoid "wasteful fragmentation resulting from great diversity of sponsorship."

The last portion of the first part of the monograph deals with the Science Education Project of the Philippines (SEPP). To bring about improvement in schools, the paper stresses the need to have an organized group action rather than piecemeal efforts through individual or group projects undertaken separately.

The teacher education component is the heart of SEPP and comprises of three phases, the first being an 18-month teacher education programme in the University of the Philippines. The strength of this academic programme lies in providing experiences in the use of curriculum materials produced by local development projects in science and mathematics, thus ensuring the integration of curriculum materials with the teacher education phase. The second phase which is implemented in Regional Science Teaching Centres (RSTC's) is a six-week summer institute conducted by participants of Phase One for teachers in their region. The third and last phase takes place in actual field conditions in schools where participants of the Phase Two programme organize two or three-day workshops for teachers to orient them to new materials and teaching methods. This is an innovative model of organized group effort which the author has very rightly emphasized.

The curriculum development efforts in most Asian countries, including the Philippines, pertain mainly to the structure of subject matter, and deeper insight into learning patterns and capabilities of children. The author emphasizes the need to pay attention to the problem of the learning of science in a non-technological society and in a foreign language, for which studies are needed. Reference has been made to some studies undertaken in this direction.

In discussing teacher education, the paper draws attention to the severe criticism one finds of many of these programmes, and the falling enrolment in the pre-service programme in the Philippines. There is a need to revamp teacher education programmes at the local and regional levels and a more urgent need to innovate new structures and methods in teacher training. Discussing the main problems in teacher education, the need to provide experiences in concepts such as mastery

learning, individualized instruction, criterion-referenced measures of evaluation, planning, organizing, implementing experimental programmes and research skills is discussed. Furthermore the need to sensitize teachers to traditional concepts of reality and causality obtaining in the community in which the school operates is a necessary component of teacher education but a difficult one to meet.

In discussing research in science education, the paper points out that the few researches conducted in the Philippines have been either empirical or developmental and that not much attention has been paid to philosophical, historical or comparative research. A number of very interesting questions and issues have been raised for which some answers can be supplied by the results of research. These questions and problems cover the areas of curriculum, teaching/learning and teacher education.

The concept of integration in the context of science education is viewed in its various aspects - disciplines, organization of education, curriculum development. There is need to move away from the confines of disciplines in the direction of integration particularly for science at the school levels and the education of the teachers who teach at these levels. This is being reflected in the 'Revised Secondary Education Programme 1973' of the Philippines.

The paper ends with the conclusion that various phases of science education in the country have been adequately co-ordinated and even integrated through the efforts of various implementing and funding agencies and, if the present plans work out, it will lead to a full implementation of the national and integrated programme covering the three levels of education and encompassing curriculum development, teacher education, equipment development, evaluation and dissemination.

THE UNIVERSITY AND DEVELOPMENT PLANNING

Yip Yat Hoong, ed. *Development planning in Southeast Asia: role of the university.* Singapore, Regional Institute of Higher Education and Development, 1973. 281 p.

The first of three volumes of a Unesco-assisted study by the Regional Institute of Higher Education (RIHED) on the role of the university in development planning in Southeast Asia, this publication contains an introduction and four country studies from Singapore, Malaysia, Republic of (South) Viet-Nam and the Philippines. The second volume in the series is due to contain similar studies on Indonesia, Khmer Republic (now Cambodia), Laos and Thailand. The third volume is to incorporate a comparative analysis of the eight countries.

RIHED has been deeply conscious of the role of higher education in national development, and a workshop on the subject was held in July 1971, followed by a series of national seminars (Phnom Penh, Khmer Republic, in December 1971, Bangsaen, Thailand, in March 1972 and Hué, Rep. of Viet-Nam in November 1972). The review of the role of universities in national development undertaken in these workshops proceeded on an initial assumption that the universities, as a whole, did not do enough in this field. The lack of effective co-operation between universities and national agencies in the development process was viewed with concern. Reasons for this situation were found to be assignable to both universities and government agencies:

Universities:

a) numerical shortage of staff, particularly in view of rapid growth of enrolments;

b) shortage of qualified and experienced staff to undertake research, consultation or training relating to national development;

c) inadequate resource allocation for research and training;

d) inability of academic staff to appreciate adequately the context of development goals and problems.

Government agencies involved in development planning

a) hesitance to give academicians access to confidential information;

b) lack of foresight which leaves little or no time for research prior to decision-making.

The general conclusion reached by the first workshop after the first cursory examination of the problem is that there is call for optimism. As most universities were manned by relatively young and inexperienced academicians, the relations between universities and Government Agencies were expected to improve substantially over the years—as the university personnel gained more knowledge and experience in development and the officials with advanced educational qualifications in Government Agencies developed confidence in academicians. But this necessitated, the workshop agreed, a positive course of action. The main guidelines suggested were as follows:

a) Development planners to be sensitive to the need for consultation and research;

b) Universities to scrutinize their concept of what is "academically respectable" and be flexible regarding course contents;

c) Universities to give adequate recognition to academic staff members serving as consultants conducting applied research projects or training programmes for Government Agencies, and to allow the younger staff members to gain experience by encouraging them to undertake such activities;

d) University staff members to enhance their acceptability by not asserting "academic freedom" indiscriminately and by not expecting "optimum" implementation of their scientific and technical solutions regardless of other considerations;

e) An institutional framework to be developed to enable Universities to undertake research and training activities for Government Agencies.

The purpose of the case studies which are embodied in the volume under review is to go beyond this exploratory phase and to understand the problems in greater depth in relation to specific national contexts. Carried out in a common standardized framework, the case studies consist of four main sections, followed by a selected bibliography and statistical appendixes. The main sections deal with: (a) historical background; (b) development objectives and strategy; (c) major problem areas; and (d) role of the university.

The last five sub-sections of the fourth main section form the substance of the study and comprise the following:

- Survey of university resources available for development planning purposes;
- Extent of university involvement currently prevailing in the formulation and implementation of development plans;

- Types of contribution the university could make towards development planning (training, research, consultation);
- Factors preventing a closer co-operation between the university and the government;
- Recommendations for alleviating these problems and bringing about a closer working relationship between the university and the government for development planning.

The case studies in this volume are on the following countries: Singapore, by Lee Soo Ann; Malaysia, by David Lim; Republic of Viet-Nam, by Nguyen Truong; and the Philippines, by Vicente B. Valdepeñas Jr. All four studies contain a wealth of historical and statistical data. It is important to note how each country has developed its own method of ensuring increasing co-operation between universities and Government Agencies in the sphere of development planning.

The volume begins with Singapore, which presents a very encouraging picture. The four institutions of higher education are being adequately pressed into service, says the report. The reason why enough use is not made of academic staff for consultation is given as their "youthfulness which will be overcome in the process of time." But the observation with which Lee Soo Ann concludes the study is worthy of note:

> An active role by the four institutions presupposes that they have nerve and vitality of their own... It is important that each of the institutions develop its alumni, tradition and well-wishers so that each can forge its unique contribution towards development planning. The contribution of those who have served both in the university and in public service is therefore vital in this respect for they would be able to see problems from both sides of the fence.

The case study on Malaysia, on the other hand, reports on the ability and the availability of academicians to conduct research and act as consultants for development planning purposes but regrets that they are not involved to the extent expected. To quote, "If co-operation between the universities and the government is small in the field of research, then it is negligible in the field of consultation." The lack of institutional arrangements is adduced as the main reason. The fear entertained by politicians that academicians cannot be trusted with classified information is also given as a further reason. A third reason offered is that the university staff in Malaysia is paid well enough not to be motivated by monetary needs. The author compares the position in relation to Thailand, Indonesia and the Philippines, and recommends that the universities take the initiative. He says:

> Academics should not expect the government to make

> the initial official move all the time. As suggested previously, the process of getting greater university involvement in government research activities can be facilitated by academics submitting detailed research proposals to the government after informal discussion with senior government officials. There is a large degree of inertia in any bureaucratic machinery and the academics must do what they can to lessen it.

The case study on the Philippines also presents a somewhat gloomy picture and emphasizes that universities and colleges should take immediate action if they are to "avoid further real criticism of their being irrelevant sanctuaries for learning several archaic sciences." Vincente B. Valdepeñas Jr. says "If the Universities and Colleges continue to keep their distance from the processes of national development planning as they have done in the past and still generally do today, they then run the same risk of turning out too many graduates with the wrong skills as they have been doing since 1946." The main reason given for the universities' failure to participate in research training and consultancy activities is that they do not possess adequate financial resources. The second reason adduced its political. He says "University professors are generally loathe to work on tasks, the meaning and direction of which are subject to so much political vacillation." He recommends that, in the face of political ambiguities, universities should probably concentrate on the problem-solving type of development planning.

Through these case studies, as well as the workshops, RIHED has drawn the attention of both universities and government agencies to a significant opportunity which the former had missed and a substantial input that the latter have failed to utilize adequately.

UNIVERSITY EXPANSION IN SOUTH-EAST ASIA

Amnuay Tapingkae, ed. *The growth of Southeast Asian universities: expansion versus consolidation;* proceedings of the workshop held in Chiang Mai, Thailand, 29 November - 2 December 1973. Singapore, Regional Institute of Higher Education and Development, 1974. 203 p.

This publication may be introduced as a companion volume to the collection of thirteen essays which the Asian Regional Institute of Higher Education and Development (RIHED) published one year earlier under the title "Development of Higher Education in South-East Asia: Problems and Issues."* It embodies the proceedings of a regional workshop held to discuss the problems of rapid expansion of higher education institutions and to consider the alternatives of the selective higher education approach vs. the mass higher education approach in the context of South-East Asian economic and social conditions. It was designed to explore a concept of "consolidation" as an alternative to expansion of facilities for higher education.

The publication commences with eight country reports on problems of university growth. Indonesia speaks of the "catastrophic consequences" of a "worsening situation in higher education." Malaysia describes how the university and University Colleges Act of 1971 rationalized the establishment and management of institutions of higher education. Singapore reports on how it has been able to direct and regulate the growth of higher education so as to achieve a satisfactory balance between the supply and demand of manpower. Thailand stresses the emergence of 'student power' as a new dimension in higher education and pinpoints controlled expansion, rather than consolidation, as the dominating requirement of Thai higher education. The Philippines expresses the government's keenness to improve the quality of higher education and reviews the steps so far taken such as the institution of the National College Entrance Examination and the moratorium on the establishment of new universities and colleges.

While these eight country reports deal with the general situation in each country, three special papers by Koesnadi Hardjasoemantri, Lim Chong Yah and Amara Raksasataya deal with three policy alternatives in higher educational development in relation to the experiences of

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* Reviewed in *Education in Asia: reviews, reports and notes*, No. 6, September 1974.

Indonesia, Singapore and Thailand respectively. The situations selected for examination are:

1. The experiences of Indonesia resulting from the policy of consolidation embodied in the Basic Memorandum on Higher Education of 1967, e.g., (a) Development of "consortia of faculties" to serve as advisory boards to the Minister in designing nationwide development programmes in each of the five fields: agricultural sciences, science and technology, medical sciences, social sciences and humanities, and education and teacher training; (b) Selection and development of five universities as centres of excellence; (c) Co-ordination among private universities through the Institute of Private Institutions of Higher Education; (d) Institution of an 'Open-door' system with non-degree programmes; (e) Master plans for the development of individual institutes.
2. The experience of the University of Singapore in setting up higher entry criteria to each Faculty, based on a common point-system for the whole university, as a measure of checking rapid and unplanned expansion which adversely affects quality of education.
3. The workings of the Open-door University Policy of Ramkhamhaeng University of Thailand and its impact on both academic performance and student power.

The multi-directional discussions in the eleven papers are ably summarized by Charles F. Keyes assisted by Susan Miller. The points graphically demonstrated are:

a) Too rapid expansion can lead to:
   - deterioration of quality;
   - graduates' not always being best suited to manpower needs;
   - creation of unwieldy institutions;
   - political activism among students.

b) "Consolidation" relates to rational planning directed towards the articulation of higher education with the national goals of a society.

c) The structure of higher education might be rebuilt to reconcile the advantages of the mass education approach with those of the selective higher education approach.

An interesting idea put forward is that "something of a division of labour might be accomplished with government-supported universities emphasizing selective higher education,and private colleges and universities emphasizing mass higher education."

NATIONAL EXAMINATIONS FOR ADMISSION TO UNIVERSITY - PHILIPPINES

Introduction

On 9 March 1973, the President of the Philippines, Ferdinand E. Marcos, promulgated Presidential Decree No. 146 requiring all high-school graduates seeking admission to post-secondary degree programmes having a minimum of four years' study to pass a national 'college entrance' (or university admissions) examination. The objective is imbedded in the purposes of national development; it seeks the highest quality of education not only in the third level of education but hopefully down the educational ladder; it hopes ultimately to maintain a healthy and viable balance of all types of workers in the manpower stock of the country. The Philippines is thought to be the only country with this type of national admissions policy.

This policy was one of the educational reform measures recommended separately by the following: the Presidential Commission to Survey Philippine Education (PSC Education Survey Report, 1970), the Department of Education and Culture (DEC recommendations, 1959 through 1972), the Higher Education Research Council (HERC Report, 1972) and some private national associations (e.g. the Philippine Psychological Corporation).

The new system of admission is expected to ensure the training of those persons best qualified academically to pursue higher education. A second outcome should be a better allocation of students to programmes with higher manpower priority. The policy was necessary because of the emergence of some glaring socio-economic weaknesses:

1. the acute imbalance between the number of college graduates and the number which the labour market can absorb;
2. the general open system of admission to colleges and universities contributing to the swelling of college enrolment;
3. the great need for trained middle-level manpower as well as the great need for well-trained professionals (notwithstanding the oversupply of graduates in the fields of education, liberal arts and commerce).

Implementation of Presidential Decree No. 146

To successfully carry out the State policy and objectives spelled out in PD 146, the President of the Philippines has empowered the

Secretary of the Department of Education and Culture to promulgate Rules and Regulations for its implementation. As a result, there are organized in the DEC two instrumentalities which are carrying out the objectives of the Decree. These are the National College Entrance Examination (NCEE) Advisory Board and the NCEE Centre.

The First NCEE : the 1973-74 Testing Programme. The first NCEE, which was a combination of mental ability tests and subject proficiency tests in English, Mathematics and Sciences, was administered to 332,000 students desiring to enrol in first-degree or the equivalent type of professional courses of at least four years' duration. The number excludes the 571 foreign and Filipino students who completed their secondary schooling abroad and wanted to enrol in Philippine colleges and universities. For that sub-group a Special NCEE was administered on 23 June 1974.

When the policy was implemented for the first time, there were many misgivings and anxieties generated by students, parents, concerned citizens and even educators. The public then was uncertain about how the policy was going to affect them. Clarifications were given through educational conferences, mass media and also clarifications of the extent, scope and applicability of the policy. There is even now the need to foster in the public a positive attitude towards testing. Some educators think that testing, especially on a national scope, is a threat to education, not because the tests are faulty but because the basic theories and principles of educational and psychological measurement are somewhat misconceived. Although there may have been educational crimes committed through the misuse of tests, those committed because of the failure to use tests could be far more destructive to the welfare of students and of society.

The Second NCEE : the 1974-75 Testing Programme. The second NCEE, which was a parallel to the first, was administered on 24 November 1974 to about 400,000 students simultaneously all over the country. The Department of Education and Culture through the NCEE Centre utilized the 125 Division/City Superintendents as Local Examination Committee Chairmen in all parts of the Philippines. The operational machinery included about 35,000 examiners and proctors representing both the public and private schools in 1,127 examinations centres distributed in all parts of the country, each headed by a Chief Examiner.

Each student examinee is charged an amount of five pesos (₱5.00). The remaining expenses are borne by the government with a yearly national appropriation.

The Third NCEE : the 1975-76 Programme. The third NCEE will be administered to about a half million students in November 1975 and

the technical staff of the NCEE Centre are at present developing the materials for it. As an attempt to reduce to a minimum differences in test performance due to variations in curricular sophistication, school facilities, and cultural biases, the subject matter component of the previous NCEE will not be included.

It is interesting to note that, while many countries in the Asian region and elsewhere are moving away from entrance or school-leaving examinations of all types - internal vs. external or objective vs. essay— the Philippines appears to be proving that the examination as such is a valid education exercise. There are States or localities in the United States of America that continue to use traditional external examinations or are even reviving the practice of internal testing, particularly as part of the "back to basics" movement begun in the State of California. Also, several country-wide standardized tests are used as qualifiers for a selective admissions system to public and private universities and colleges. Here in Asia, Singapore and Sri Lanka have continued external examinations for their own school-leaving General Certificate of Education (GCE). Results of this examination influence the acceptance of the secondary-school graduate in university.

PLANNING EDUCATION FOR RURAL DEVELOPMENT

Ahmed, Manzoor and Philip H. Coombs, ed. *Education for rural development; case studies for planners*, prepared for the World Bank and UNICEF, New York, Praeger Publishers /1975/ (Praeger special studies in international economics and development)

That the main effort in development at both the national and the international levels has in future to be focused on the rural areas of the developing countries is now no longer in dispute. The question currently under discussion is how best this effort might be made. The statistics are dramatic enough; about 85 per cent of the 750 million poor are considered to be in 'absolute poverty'. Three-fourths of these are in the developing countries of Asia and 80 per cent of these three-fourths live in rural areas. In total, somewhat over 300 million of those in 'absolute poverty' in the Asian region are engaged in agriculture as their principal occupation.

Rural poverty is found not only in the highly productive irrigated areas of the region but in the dry zones as well. It is characterized by small holdings of less than two hectares, many of which are fragmented, by uncertain tenancy of land, by squatting, by sharecropping, by swiden (or transient) cultivation and by illiteracy. Nor is the situation improving, for the rural population is growing by more than two per cent per year with a consequent worsening of the person/land ratio. Evidently, without a concerted effort in rural development, rural poverty will remain pervasive.

It is against this background that "Education for rural development' was written, although the statistics have been taken from another source. The 17 case studies are presented in two parts, the first comprising nine studies of programmes for basic general education; the second, eight studies of employment-related education. The material in Part I was designed to provide data for UNICEF, while Part II was for the World Bank and formed, no doubt, one of the background documents used in the preparation of the Bank's Sector Policy Paper, "Rural Development", on which a note is to be found under 'Notes on Asian Documents' in this issue of 'Education in Asia'.

"Education for Rural Development" is wide in coverage and the studies penetrate deeply into the background, organization, implementation and costs of a large number of rural development projects in: Afghanistan, Colombia, Cuba, India, Indonesia, Jamaica, Kenya, Republic of Korea, Mali, Nigeria, Philippines, Sri Lanka, Tanzania, Thailand and Upper Volta.

The analytical framework adopted for the studies reflects, despite the emphasis on education, a comprehensive view of rural development, equating it with the fundamental transformation of rural societies - social, economic and political. The book will thus be of interest not only to those involved in the field of education, but also to specialists in a wide range of other disciplines. As to the projects themselves, they represent an interesting mix of Government- and privately-sponsored enterprises, three of which appear to have originated and continue in operation due to the enthusiasm and dedication of individuals who have taken initiatives on their own.

The editors, themselves authors of four of the studies, identify from the widely diverse projects reported in the book a limited range of learning objectives, including general education (literacy, numeracy, change-motivation, development orientation); general education plus occupational orientation and training; improvement in family life; training in rural farm and non-farm skills; training for management; training for leadership.

The activities in each of the various projects described are mainly in the area of non-formal education, although some can best be described as hybrids, falling between and exhibiting some of the characteristics of both formal and non-formal education.

The book has three features that make its contents useful and raise it above the level of a mere compendium of the case histories of interesting rural development projects in the Third World. First, the quality of writing is such that the reader is soon absorbed in, and begins to feel almost a part of, the scene about which he is reading. The accounts of the Jombang Project in Indonesia and of Bambara society in Mali, for example, take one very quickly into the heart of the situations described and thus to a ready appreciation of the particular rural development problems described.

Second, the studies follow a not-too-vigorous but easily identifiable and common pattern of presentation. One can thus simply compare, for example, the cost of the rural mobile skill-training programme in Colombia with that of the mobile training schools in Thailand. Closer examination of comparative costs in the book indicates that this is perhaps an area of weakness in rural development programmes for, of the 17 studies, only five provide clear data of a type indicating that cost planning and control were built into project designs from the start.

Finally, the authors of each of the studies have provided what are variously described as appraisals, conclusions, lessons or comments concerning the projects about which they have written. In some ways this is the most important feature of the book for it is here that those who plan programmes for future rural development may readily benefit from the experience which has been gained by others in their field.

PLANNING TECHNICAL EDUCATION

(Case Study: Bangladesh)

Ritzen, Jozef M. and Judith B. Balderston. *Methodology for planning technical education;* with a case study of polytechnics in Bangladesh /by/ Josef M. Ritzen /and/ Judith B. Balderston. New York, Praeger /1975/. 161 p.

More than any other branches of the educational spectrum, technical and professional education programmes are aimed directly at supplying manpower to perform certain jobs and to fill certain occupations. The goals and objectives of technical and professional training are therefore relatively more concrete and more easily quantified than other segments of the educational system. Thus—once manpower requirements are known—it is possible to define in rough terms the planning process for technical and professional education to meet these needs.

Between the allocation of resources (investments in education) and the satisfaction of manpower requirements, three stages are to be distinguished: (1) financing of education; (2) student flow; (3) employment. These three stages require different lines of inquiry and different tools for analysis. For an integrated planning effort the analysis must be woven into a more comprehensive decision model. This is the main focus of the book and is found in a detailed chapter setting out the model. Other chapters deal with each of these stages separately, while the appendix provides the background of the 'case' used to exemplify these methods; polytechnics in Bangladesh. Bibliographical notes at the end of each chapter and extensive tables, charts, graphs and formulae supply additional sources of information on the subject.

An important component of this model is a management information system. The data produced by this structure should enable administrators at either the central co-ordinating point or the school site (principals) to arrive at better decisions concerning expansion or contraction of enrolment capacity, improvement of internal efficiency, relevancy of the training for jobs, as well as the cost effectiveness of the training. For the planner, the management information system is also a prerequisite for improving any models or techniques used.

A second component is a policy explication framework. Since the focus is on technical education the policy explication framework is mainly concerned with manpower targets, which lead to the third component—manpower forecasts. A last component of the decision model is a method for deriving optimal investment decisions for technical education. This method relies heavily on the framework of student flow-and-demand projection developed for the other components. The solution of this optimization problem is achieved with the technique of quadratic programming. A final chapter discusses the scope and limitations of the tools developed. The usefulness of these planning techniques for policy purposes is explored in cost-benefit terms, and suggestions are made for further research.

The intention of this study is to contribute to the methodology of planning educational systems, while touching on some of the most pressing problems encountered in the real world. Analysis of what happens inside the school (teaching methods, curriculum, administration) and examination of the relationship between job content and training are among those subjects that are essential for proper planning and require further study.

The authors express the hope that their book will stimulate others to contribute to knowledge and understanding in this field. Their extremely well conceived, researched, organized and documented book, although technically complex (as is the topic itself), should certainly do so.

INDIA: POPULATION AND EDUCATION

National Staff College for Educational Planners and Administrators, New Delhi. *Growing multitudes and the search for educational opportunity*, report of the National Meet of Experts on Population Dynamics and Education held at New Delhi, 28-31 October 1974. New Delhi, 1975. 528 p. mimeo

The main purpose of the 'Meet', for which this is the final report, was to explore the multi-dimensional relationship between population and education and to consider ways in which educational development could respond to the challenges of uncontrolled population growth. The report is divided into three parts, the first of which gives the main particulars such as the objectives, names of participants, titles of discussion papers and a summary of the main conclusions and recommendations. The second part is the report proper and is essentially a record of the main presentations and discussions of the Meet. The third part reproduces the different papers presented and includes a number of documents used as background material.

The Meet was organized in pursuance of the following recommendation made by the Regional Seminar of Experts on Population Dynamics and Educational Planning held at Bangkok 10-18 September 1973:

> "/that/ Member States be assisted to organize national workshops for demographers, educational planners and administrators to work together on better harmonization of sectoral policies and objectives and on the design of integrated development projects in the field of population and educational development."

The main objectives were as follows:

1. to examine different aspects of the relationship between population dynamics and education.
2. to identify and delineate areas of high priority for further inquiry and research in this field, and
3. to make concrete recommendations towards promoting a clearer understanding of the relationship between population dynamics and education among educational planners and administrators.

Among the topics discussed in the papers were:census, literacy and educational attainment; migration; women's education and family planning; child care; population education; non-formal education; training of educational administrators and medical personnel; research. The conclusions of these discussions are presented in detail and could serve as guidelines on these subjects. The following resolution was a result of the various conclusions (p. 52)

> /Resolved/ that the National Staff College for Educational Planners and Administrators, New Delhi, may invite Unesco and other International agencies to promote and develop regional co-operation among the Asian countries in the growth of population education through (i) the organization of studies and research in the planning and administration of population education; (ii) the training of personnel for the purpose; and (iii) the provision of clearing-house facilities and dissemination of information. The National Staff College, in co-operation with the National Council of Educational Research and Training and other appropriate agencies in India, may offer facilities for this purpose on a regional basis.

Besides providing a well-organized source book of information on this subject, for use in India and abroad, this document also serves as a review of the status of work in the field of population dynamics in India as of late 1974.

REVIEW OF EDUCATIONAL STUDIES IN THE REPUBLIC OF KOREA

Korean National Commission for Unesco. *Review of educational studies in Korea* /Seoul/ 1972. 129 p.

This book is intended to be the first in a series of abstracts as a part of the educational programmes of the Korean National Commission for Unesco. The Preface states that, in addition to providing information concerning research studies in the Republic of Korea to educators who need it, it is hoped that the publication will stimulate further educational research. A total of 19 papers were selected for abstracting, from among the many study papers written between 1970 and 1972. They are arranged here in alphabetical order by author in each of two parts. Papers selected fall into such general areas as comparative education; history of education; history of educational administration; school administration and finance; teacher education; higher education; educational planning; child development; educational psychology and measurement; curriculum; and educational methodology.

Many papers on education in the Republic of Korea (as well as some on education in North Korea) have been written in Korean in recent years, but few are found which are written in English and which are also good enough for permanent publication. Papers included in this book, although published in abstract form, have been written in English and some of them may be of particular interest to Asian readers. Several abstracts deserving special attention are: Study of differences in viewpoint about teachers as conceived by teachers and parents; Higher education in North Korea; Correlates of administrative styles and personality traits of school administrations in simulated situations; A study on adjustment problems of college students; An experimental study on structuring the classroom environment for development of achievement motive; A study on number concept formation in Korean children; An experimental study on the change of self concept; Learning Skills Development Project for Educational Retardates in Middle School; and Education Development Project - Teaching-Learning Model.

Review of each study paper abstracted is not attempted in this publication. Inquiries regarding the abstracts published as well as information regarding other articles may be addressed to the Korean

National Commission for Unesco, Seoul. For the benefit of readers, however, the study on 'Differences in viewpoint about teachers as conceived by teachers and parents' is selected for special review here.

This study was undertaken in order to: (1) assess different opinions existing between teachers themselves and parents as to the problems of their role and the duty being performed by primary school teachers, (2) find differences existing in the view of the teacher's role and duty as conceived by teachers themselves according to sex and professional career, and (3) find differences existing in the view of the teacher's role and duty as conceived by parents according to their academic backgrounds and occupations. Differences in view of the teacher as conceived between teachers and parents revealed the level of significance and the percentile was calculated by frequency of response to each item.

Regarding the findings of the study, it appears to be intended to demonstrate that parents have a more traditional and conservative view of the teacher's role than do teachers themselves. In the question of teaching methods, a majority of teachers (69.2%) emphasized self-controlled learning by children while many parents (here, the figure given is 31.5% but may have been the converse, or 68.5%) prefer learning depending upon the teacher's direct explanation and control. In guidance, more than half of teachers (54.3%) put emphasis on attitude as a factor of learning, but among parents only 24.7% considered attitude as significant, and 24.5% favoured discipline.

The Republic of Korea, like other Asian countries, has been undergoing rapid social changes in recent years. A new or follow-up study may need to be made on changes of role and competencies of Korean teachers as conceived by teachers and by parents, in view of the changing structure of Korean primary education with its relation to socio-economic development.

EDUCATION AND DEVELOPMENT IN NEPAL

Mohsin, Mohammad and Prem Kasaju, ed. *Education and development.* Kathmandu, National Education Committee, 1975. 174 p.

This publication contains a series of papers on education produced to mark the coronation of His Majesty King Birendra Bir Bikram Shah Dev of Nepal in 1975. It is divided into three main sections:

- Education and national development;
- Manpower, education, and economic development; and
- Views and reviews.

Education and national development is composed of four papers, the first of which is a survey of Nepal's attempts at educational renovation, and deals with the problems of education in relation to the constraint of traditionalism. Dr. Mohsin discusses the practical aims of the National Education System Plan, and emphasizes the importance of curricular changes as a vital element of the plan. He says:

> It stipulates complete departure from the inherited system of education in the sense that overall emphasis of the Plan in disseminating knowledge is on beginning from specific to general, from practical to theoretical and from applied to pure. As the present national motto in the education sector is "Education for Development" and also, as an overwhelming number of students will be terminating their formal studies at the lower and intermediate levels of education, the Plan is primarily addressed at rendering educational curricula relevant to their life-experience. The major thrust at each specific level is to equip its recipients with knowledge, orientation and skills that may be of immediate and practical assistance to them in harmonizing themselves with, not alienating from, their immediate material and cultural environment. Keeping this in view, the new education-mix integrates education with skills, and learning with apprenticeship.

In his opinion, the Plan is functioning well, and has: "... already started to disturb the status quo that the decades of indecision and inaction have sustained. . ." The Plan is still in its early stages of execution. The importance of avoiding the stagnation and inactivity

which can result from over-emphasis on bureaucratic procedure and lack of public understanding is stressed.

The other three papers in this section deal with educational administration, school-level vocational education, and the National Development Service.

The section Manpower, Education and Economic Development begins with a review of manpower needs by Dr. Harka Garung and discusses, among other problems, the need of the country to produce a large number of technical personnel, especially in the fields of engineering, medicine and agriculture. In 1970, only 24 per cent of the country's school teachers had received any professional training, and only 9 per cent were graduates. Teacher shortages, by 1974, were estimated at 3,605. Certain parts of the country suffer more than others in this respect; Kathmandu Valley, for example, contains 73 per cent of the country's science graduates, and even 45 per cent of all agricultural graduates, and the doctor/population figure in this area is one-to-2,854, while the average for the country is one-to-32,800. The writer suggests two solutions to this imbalance; to offer incentives to middle-level technicians to move to 'areas of pioneer development', and the provision of improved urban amenities outside the already overcrowded cities, thus enabling the relocation of groups of professional people who would move into the improved areas at the same time, providing a nucleus which would later attract other trained and educated personnel to the same area.

Other papers in this section deal with the statistical relationship between the level of education and the level of economic development in different regions, and health manpower development in Nepal.

The final main section, Views and Reviews, contains papers on English teaching in Nepal, a survey of educational statistics, and 'relevance' in education and national development.

There are also appendixes containing educational data for Nepal and a chart showing the structure of the education system.

PAKISTAN: TEACHERS AND CHANGING CURRICULA

Pakistan. Ministry of Education. *The changing role of the teacher and its influence on the preparation for the profession and on in-service training.* Islamabad [1975]. 78 p.

This document is the report presented by the government of Pakistan at the 35th Session of the International Conference on Education IBE/Unesco, Geneva, September 1975. It describes the objectives of the educational reforms of 1972, and how they are being implemented, emphasizing the implications of the changing role of the teacher, and which innovations are being introduced—and how. This latter list mirrors the shift from general education to agro-technical education and is of interest to those involved in educational innovation. It includes: introduction of science from Class I: introduction of agro-technical subjects from Class VI; integration of content with life situations and environment; use of inquiry-oriented teaching; increased use of audio-visual materials; laboratory-oriented and integrated science programmes; project approach in the learning of agro-technical studies to create learning situations; curriculum revision in line with modern developments emphasizing the process of learning and based on national needs; preparation of teachers' guides and teaching kits for primary schools. The other points relate to the establishment of various national units and centres, for the purpose of carrying out these innovations.

The report of the National Committee on primary teacher education curriculum 1974 is also included. It notes general and specific recommendations and gives detailed information on the schemes of study for primary and secondary teacher training programmes. Figures for the requirements in number of teachers 1975-80 are given in this section.

Another chapter gives facts and data for secondary teacher education, including industrial and agro-technical branches. Information on Masters' Degree training programmes and teacher training institutions is presented in this chapter as well.

There are also several pages devoted to the use of so-called instructional technology, teaching kits and supplementary information.

The rest of the document comprises annexures giving various specific information regarding the education system of Pakistan. This

should serve as a very useful reference guide for anyone interested in the subject: general background information; teachers and teacher education; elementary (primary) education; secondary and intermediate education; adult and continuing education; scheme of studies for the secondary school examination and proposed scheme for intermediate classes and examinations. Tables at the end of the report provide statistics on such aspects as the number of educational institutions, enrolments, and numbers of teachers in various educational institutions by type, level and sex.

This document thus provides a compendium of handy well-presented information on education in Pakistan and serves as an excellent reference source for those concerned with the topic.

THE ROLE OF THE UNIVERSITY IN ADULT EDUCATION, SRI LANKA

Sri Lanka. University. Agency for External Examinations and Extension Services. *University adult education in Sri Lanka; report of a National Seminar, Colombo, 28 April-3 May 1975.* Colombo, 1975. 25 p. mimeo.

The University of Sri Lanka, in joint partnership with the Sri Lanka National Commission for Unesco and the Sri Lanka Foundation Institute, conducted a National Seminar in May 1975 to formulate a national strategy for university adult education in Sri Lanka, taking into consideration the country's needs, resources, possibilities and priorities. Other objectives of the Seminar were:

1. to discuss the conceptual aspects of university adult education;
2. to promote a better understanding of the place of adult education in the university curricula;
3. to motivate both the authorities and the faculty members for a greater sense of commitment and involvement in university adult education;
4. to promote a feeling of professional identity among those engaged in adult education in the university;
5. to evaluate the current programmes of university adult education;
6. to create a greater awareness of the national efforts in other Asian and Pacific countries, and their common as well as particular problems; and
7. to examine the possibilities for regional co-operation.

A primary theme that had characterized the deliberations of the Seminar was that "it would be difficult to justify the continued existence of a university which insulates itself from the present crisis of learning." The Seminar conceived of this crisis as caused by many people opting out of education just at the moment when today's technologically developed, complex and rapidly changing world poses an urgent imperative on continuing education to improve the quality of human relations and life.

Considering the tardiness of universities to provide dynamic leadership in evolving a 'learning society', the Seminar felt that a factor which inhibited the university adoption of the life-long learning concept was a reluctance to introduce problem-oriented teaching programmes which invariably demand an interdisciplinary approach. After an analysis of what has so far been done by the University of Sri Lanka in relation to continuing education, the Seminar concluded as follows:

> The University of Sri Lanka has continued to consider that its main obligation is to full-time under-graduate and graduate students, following regular courses; and any obligation to the rest of the community, if at all, has so far been only marginal. It is timely therefore that the university should seek new directions to meet more adequately the persistent needs of the adult community.

The Seminar made a series of recommendations aimed at making the University of Sri Lanka "usefully integrated with the community" and to "develop positive attitudes towards national development." It urged the creation of a National Council of Adult Education at the national level and a University Council of Adult Education at the University level. In identifying the clientele for programmes of adult education, priority was assigned to:

a) organizations involved in specific fields of activity, e.g. trade unions or co-operatives; and

b) the rural sector, drawn from development societies.

A variety of courses was suggested with due notice taken of the need to stress group work with two-way flow, workshops and work projects rather than formal lectures. The Seminar also considered ways and means of ensuring the motivation of learners and teachers.

AUSTRALIA: EDUCATION TODAY AND TOMORROW

Australian National Commission for Unesco. *Australia in the world of education today and tomorrow.* Canberra, 1974. 171 p. Xerox

This document is a report on the proceedings of a seminar on "Learning to Be" organized by the Australia Unesco Committee for Education and held in Canberra, October 1974. As such, it gives a unique though partial view of Australian education today and provides a range of perspectives on future developments in education in the country. The report makes it apparent that the educators in Australia are beginning to talk of national problems of education instead of dealing with State problems in isolation and trying to find compromises for them. The report also indicates that, in broad terms, the new directions in Australian educational practice would accord with the "social tendencies and resources" outlined by the Unesco-sponsored International Commission. The constraints and qualifications of this accord were stressed by the seminar, however—the most obvious being the existing educational system and the others relating to the constitutional issues surrounding the control of education, the overlap between institutions as well as between programmes and what is described as the inherent conservative attitude of the educators.

The "Learning to Be" in the Seminar title is of course taken from the title of the recent Unesco publication "Learning to be: the world of education today and tomorrow," the report of an International Commission on the Development of Education which was established by Unesco under the chairmanship of Professor Edgar Faure of France.

The Australian report includes papers given by the principal speakers; i.e.,

1. "Major Trends in Education in Australia," by the Hon. Kim E. Beazley, M.H.R., Australian Minister for Education.
2. "An Overview of 'Learning to Be'", by Dr. F. Champion Ward, member of the International Commission.
3. "World Trends in Education", by Professor Lionel H. Elvin, Visiting Professorial Fellow, Canberra College of Education.
4. "Learning to Be - Trends, Congruence, Constraints", by Professor Hugh Philp, Seminar Director.

It also contains statements prepared for the seminar by (1) the Australian Universities Commission, (2) the Commission on Advanced Education, (3) the Schools' Commission, (4) the Australian Pre-Schools' Committee, and (5) the Australian Committee on Technical and Further Education. Interspersed commentaries present the statements about "Learning to Be" in the Australian context which emerged from various group discussions. Professor Philp then summarizes the papers and the seminar.

Two of the recurring themes of "Learning to Be" are the 'democratization of education' and life-long education. Toward greater 'democracy', recommendations are made for wider variety in the school complex and for such on-again-off-again ideas as the non-graded school. Community learning is recommended as one approach toward life-long education, and there is wide agreement that specific types of community organization as well as private enterprise should take greater responsibility in this.

Dr. Ward, who was a member of the International Commission itself, outlines the approach which they adopted. He refers to the plight of children who no longer have "obvious utility in the family" (perhaps contributing to their becoming 'rebels without a cause'). "In their case," he says, "unless their education provides some form of participation in real processes. . . the young will live in a sort of linear hothouse for twenty-odd years." The Commission also thought that "ways in which support for education could be decentralized ought to be explored." Finally, they concluded that to achieve life-long learning would require "a mixture of formal and non-formal education and a considerably broader and more diversified view of what learning is and of where and how it occurs."

Professor Elvin, a former Unesco Department of Education Director, takes issue however with the Commission report as containing statements which are "too sweeping and superficial," while recognizing that the Commission "could not go into their problem as thoroughly and penetratingly as an independent scholar might." He cautions against broad generalizations and exhortations to change everything everywhere with regard to education, calling attention both to successful partial change in developed as well as developing countries, and to unsuccessful effort to change things too drastically on too large a scale. As an example of the latter—television teaching viewed optimistically as a means to overcome teacher shortages—he refers to an unsuccessful U.S.A. experiment with television teaching in American Samoa and concludes that "the use of really suitable television programmes can be an aid to the teacher (and the best of such programmes are very good, though not adapted to every culture), but cannot be a substitute for the teacher and will not save the budget money."

The Australian Minister for Education, the Honourable Kim E. Beazley, M. P., describes several major trends in Australian education, mentioning for instance that the Commonwealth government had committed over two hundred million Australian dollars in a programme of teacher education and stipulated that teachers' colleges should be autonomous. He points out that in a world which is unstable with a future less certain than previously, "people must learn not just to be, but also to understand. . . to involve themselves constructively." Later in his statement he proceeds to examine some of the essential elements of reform and change given on p. 233-234 of "Learning to Be" in the light of Australian needs and developments.

The 'syndicate groups' formed for work in the Seminar go about this same kind of examination in analytical fashion. Syndicate group 3, for example, faces up to fundamental issues very squarely, reporting as follows:

> First, the group asked whether "Learning to Be" is a document about education or about society, and in the light of the strength and complexity of the challenges posed in the Chapter we questioned the strength of education to act as a change mechanism in society. . . The persuasive influence of the mass media and /their/ attitude to responsibility /were/ discussed.
>
> Second, "Learning to Be," and indeed much of the work of Unesco, depends upon the assumption that individually or collectively, man is a co-operative, idealistic, altruistic, non-aggressive, non-acquisitive and selfless being. Yet the evidence of history and of contemporary events belies this assumption. For instance, specifically in relation to international relations, neither the donation nor the acceptance of aid is a disinterested affair divorced from the realities of politics.

In his summary of the Seminar activity and reports, Professor Hugh Philp discusses four main, recurrent themes: (a) nationalism; (b) the philosophy of 'needs'; (c) participation in decision-making; (d) diversification. He finds reason for optimism, referring particularly to the "passion for equality" (de Tocqueville's phrase in "Democracy in America") which runs through the statements submitted to the Seminar by Australian commissions.

Frequent misspellings, omitted words and other typographical errors in the book hamper reading what is nevertheless a refreshingly introspective report. Another national seminar has recently been held in Australia, and readers may look forward to being further stimulated by the report of this seminar when it becomes available.

NOTES ON ASIAN DOCUMENTS

The following brief annotated list of documents related to education has been compiled by making a selection from entries in recent Accession Lists of the Unesco Regional Office Library and Clearing House.

Asian Development Bank. 7th Annual Meeting of the Board of Governors, Kuala Lumpur, 25-27 April 1974. *Summary of Proceedings.* Kuala Lumpur, 1974. 217 p.

This report includes a two-page Summary of Proceedings and 14 Appendixes comprising some 200 pages. The appendixes include various addresses and statements by, for example, the Prime Minister of Malaysia, the Chairman of the Board of Governors, the President of the Bank and the Governors for 39 of the member countries. Further, the appendixes contain reports and resolutions adopted by the Board of Governors which give financial statements, allocations of net income and the budget for 1974. A report on the progress of an Asian Development Fund, in which 14 developed member countries have agreed to participate, appears in Appendix 7.

Asian Programme of Educational Innovation for Development (APEID). *National Centres of educational innovation participating in APEID: Directory and Calendars for 1975.* Bangkok, Unesco Regional Office for Education in Asia, 1975. 133 p.

This document contains concise information on 30 institutions for educational research and development and planning which have been formally associated with APEID. These institutions are situated in 14 Asian countries (India, Indonesia, Iran, Japan, Khmer Republic, Republic of Korea, Laos, Malaysia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Republic of Viet-Nam). The information is organized as follows:

a) A brief general statement about the centre which explains its position and significance in the educational and administrative systems of the country;

b) Internal organization and staffing, including the names of key personnel and their departments; and

c) Functions of the centre.

Also included are calendars of the main activities of each centre for 1975. Regional co-operation for educational innovation is the main objective of APEID. The purpose of the publication is to increase awareness of the functions and activities of the national institutions participating in APEID, as a means

for strengthening mutual collaboration and sharing of experiences and data among themselves and with other institutions. The contents of this documents will be augmented yearly, and information on new Centres and annual calendars will be included.

Henderson, Norman K. *Educational problems and research; a Hong Kong introduction.* Department of Education Research Unit, University of Hong Kong [n.d.] (Educational studies and research paper No. 1) 77 p.

This is the first publication by a new Research Unit of the Department of Education of the University of Hong Kong. The book was published in order to introduce the series through a general inquiry into the Hong Kong education system based on an up-to-date scrutiny of the local educational structure and an informed appraisal of its more pressing current problems and research needs. The document points up major educational problems and research issues of Hong Kong in the light of the community's total requirements. By highlighting those problems and issues, it attempts to assess the current status of Hong Kong Education—"what it really is like, and especially what exactly are its problems: how may they best be met in the particular circumstances of the colony, and what are the implications for research? This purpose is bound up with the wider one of publicizing important school problems so that Hong Kong people may see and come to understand, through the resulting discussion and argument, their own social problems and long-range school tasks." Brief as the book is, it covers the range of topics related to education at the first and second levels. An attempt is made to outline the particular social and cultural aspects of these problems and issues and, as many of the problems are encountered in other countries, the book should be useful to readers throughout the Asian region.

Lim, David. *Economic growth and development in West Malaysia, 1947-1970.* Kuala Lumpur. Oxford University Press, 1973. 346 p. Bibliography p. 311-346

This volume analyses the socio-economic factors which affect the growth of the West Malaysian economy and attempts to evaluate the implementation of the diversification programme of the Government. The author, a Lecturer of the Faculty of Economics and Administration, University of Malaya, recognizes that Malaysia has attained considerable structural changes and success in overall objectives of development programmes, particularly when compared to the situation of some developing countries. He points out, however, that the unemployment problem has worsened and there has been no significant improvement in the relative economic position of the Malays--a major underlying factor calling for further socio-economic change in Malaysia.

Statistics used to substantiate the views of the author are generally recent and impressive. He concludes that implementation of the Second Malaysia Plan 1971-75 should help to improve employment concepts that are "still very Western-oriented." A substantial bibliography and an index complement a well-documented text.

Malaysia. Ministry of Education. Educational Planning and Research Division. *Education in Malaysia 1974.* Kuala Lumpur, 1975. 98 p.

This publication gives a concise overall picture of education in Malaysia. In three parts, it covers the status of education in Peninsular or West Malaysia, the State of Sabah and the State of Sarawak. It is published to inform the general public in Malaysia as well as professionals in the field of education of the basic policies and the trends in Malaysian education. For Peninsular Malaysia, for instance, it covers such items as the education structure; the organization, administration and planning of education; educational finance; curriculum development; teacher education; school inspection; examinations, health education and school guidance. Similar topics are covered for the other two States. The last previous edition of this title was published in 1970. Education statistics for 1973 and, in some cases, 1974, are given in this issue.

Regional Consultation Meeting on the Asian Programme of Educational Innovation for Development, 2nd. Tokyo, 26-31 May 1975. *Final report.* Bangkok, Unesco Regional Office for Education in Asia, 1975. 1 v. (various paging)

The Asian Programme of Educational Innovation for Development (APEID) is reviewed annually by high-ranking officials from the participating Member States in Asia, who meet at the invitation of Unesco in their personal capacities. This report summarizes the deliberations, conclusions and recommendations of the Second Regional Consultation Meeting, held in Tokyo on 26-31 May 1975. It reflects recent trends in educational development in Asia, recounted by the participants of the Meeting, and the progress made under the Asian Programme in the period January 1974-May 1975. Specific recommendations of the Meeting for the implementation of APEID in 1975-1976, the expansion and strengthening of its institutional framework, and the modalities of its projects are recorded. Since the Second Regional Consultation Meeting examined in greater detail the activities in two Programme Areas—Curriculum Development and Management of Educational Innovation—the working papers on these activities have been reproduced in the report as appendixes, together with the Progress Report of APEID.

Reynolds, P.D. *English language teaching and textbooks in Hong Kong.* Department of Education Research Unit, University of Hong Kong [1974] (Educational studies and research papers No. 3) 65 p.

Divided, like Gaul, into three parts, this book focuses, first, on general problems of the textbook in teaching English as a second language. The focus is then sharpened to examine more closely the place of the English language textbook in Hong Kong, the author concluding that, "Language teaching in Hong Kong will remain textbook-centred and the most practical thing, in the circumstances, is to pin our hopes on a continuing improvement of the textbooks used." Those interested in the teaching of English as a foreign language will find the first part of

the book of absorbing interest for its detailed and critical analysis of the problems faced in using textbooks; problems which are not, of course, confined to the teaching of language alone. The survey, with which the book concludes, highlights the difficulties of publishers in providing a wide range of textbooks for a small market-- a difficulty faced in many multi-lingual Asian countries today.

SEAMEO-RECSAM, Penang. *Pilot Project on Concept Learning in Science and Mathematics of Southeast Asian Children: Report on Phase One.* Penang, 1974. 212 p. (mimeo)

This lengthy report is a new instalment in a series of yearly reports on RECSAM's Pilot Project on Science and Mathematics Concept Learning of Southeast Asian Children. The pilot project described in this report approaches the problem of "what and how to teach science and mathematics to children from the child's side... How does he learn science and mathematics concepts?"

The report has four parts. The first part gives salient points in Jean Piaget's theory of cognitive development, its significance in teaching and relevance to SEAMEO countries in their science and mathematics curriculum development and teaching programmes. The second part gives the report of the pilot project and partial findings of Phase One of the project, aims and activities of the RECSAM 1974 course on studies in learning primary science and studies in learning primary mathematics. The third part gives an overview of the experiments--the clinical method, standard procedures, preparation for investigation and how to conduct the investigation. The fourth and final part of the report contains the detailed procedures and materials, typical responses and recording sheets for nine Piagetian experiments on (1) conservation of substance (solids and liquids), (2) conservation of weight, (3) conservation of volume, (4) classification, (5) conservation of perspectives, (6) conservation of number, (7) seriation of sticks, (8) conservation of length and (9) conservation of area. Some selected readings by participants and a selected bibliography are included in the appendix and will be helpful to those who wish to investigate Piaget's theories in depth. The report thus provides a glimpse of some of the data the project aims to get in order to determine what young children understand in Asian countries and the ways in which this understanding changes as they grow older. It will be of interest to individuals or research groups who may wish to replicate Piaget's experiments and evaluate the findings of this pilot project in the context of their own countries.

Tan, Kim Huon. *Role of the universities in development planning: the Khmer Republic case.* Singapore, Regional Institute of Higher Education and Development, 1974.

This 50-page booklet, besides providing a compendium of information and statistical data on the economy, the population and the educational system of the Khmer Republic, lists the familiar problems, obstacles and constraints which hamper development. Concerning the title question, a few positive contributions of

higher education to development (and development planning) are mentioned: some research done by professors and graduate students; seminars and public lectures organized by universities; extension courses; and the use of professors as experts. In spite of this, the lack of liaison and co-ordination between the universities - all of which are under the exclusive control of the Ministry of Education - and the other Ministries (including the Ministry of Planning) together with the scarcity of human and other resources, considerably restrict the scope and the efficiency of the contribution of the universities to national development. This study was published before a change in political regime which may considerably alter the statements of the country's problems.

United Nations Children's Fund. East Asia and Pakistan Regional Office. *Review of the situation of children and youth in the East Asia and Pakistan region.* Bangkok, UNICEF, 1974. 77 p.

This document provided the background material for the UNICEF Annual Regional Staff Conference held in 1974. It concentrates on some broad issues of policy and methodology which affect the design of an effective programme for the children and youth in the EAP region (Bangladesh, Burma, Hong Kong, Indonesia, Khmer Republic, Republic of Korea, Laos, Malaysia, Pakistan, Papua New Guinea, Philippines, Singapore, Thailand, Republic of Viet-Nam). The document has two parts. Part One deals with the general demographic situation, general problems and constraints affecting the delivery of services for children and youth, availability of resources and some policy implications which emerge from the problematic situation throughout the region. The second part provides a series of latest regional statistical tables relevant to the situation of children and youth.

World Bank. *Rural development: sector policy paper.* Washington, D.C., 1975. 89 p.

A deliberate shift in the World Bank's policy over the past five years has resulted in activities in the rural areas related mainly to lending for agriculture, and the Bank is now the largest single external source of funds for direct investment in agriculture in developing countries. This changed philosophy has resulted in increases in projected net output well above the five-per-cent target suggested by the Bank's President in 1973 and reflects recognition of the need to assign high priority to food production as well as to the reduction of poverty in rural areas.

The Bank's lending programme for the period 1975-1979 is about 7,000 million dollars for projects costing some 15,000 million, with half of the loans to be allocated for agriculture and half for rural development. The programme would, it is hoped, reach a total rural population of 100 million, during a period in which the numbers of rural poor are expected to increase by 70 million. The framework within which future rural development programmes will, it is hoped, be planned at country level is characterized by improved central leadership and co-ordination, greater decentralization and participation at the

local level, expanded programmes of research and training and, finally, the establishment of effective group organizations, such as farmers' associations and co-operatives.

Zaki, W.M. *The People's Open University; the concept, programme, structure and physical facilities.* Islamabad, People's Open University, 1975. 71 p.

This volume written by the Vice Chancellor of the People's Open University, Islamabad, Pakistan, describes the concept, programme, structure, and physical facilities of that institution. The curriculum focuses on practical, part-time training and education. The primary constituency which the University wishes to serve is the mass of adults, particularly in rural areas, who must continue to earn their livelihood while they study. It is stated and supported by some data that, by using a correspondence format supplemented by radio, television and other media, more students can be effectively reached at a lower cost than through the conventional university programme. Entrance standards are very flexible and, although the People's Open University was created only in 1972, enrolment may soon exceed 100,000.

PROPOSALS FOR ACHIEVING UNIVERSAL PRIMARY EDUCATION IN INDIA BY 1986

(From two recent publications of Prof. J.P. Naik, reviewed on p. 16-25 in this publication)

1. The traditional model of the elementary (or primary) education system should be radically modified on the following lines to make due provision for the education of the children of the masses:

a) The single-point entry system should be replaced by a multiple-point entry under which it will be open for older children of 9, 11, or 14 to join schools in separate classes specially organized for their needs.

b) The sequential character of the system must go; and it should be possible for older children to join the prescribed courses at any time and also to complete them in shorter or longer periods.

c) The exclusive emphasis on full-time institutional instruction that is laid down in the present system should be replaced by a large programme of part-time education which should be arranged to suit the convenience of children who are required to work.

d) The exclusive emphasis on the utilization of full-time professional teachers should go. An attempt should be made to utilize all the teaching resources available in the local community; and the services of part-time local teachers, and even of senior students, should be fully utilized for promoting instruction in the elementary schools.

e) There should be no rigid demarcation between primary schools and pre-schools. Girls who are required to look after young children should be encouraged to bring the children to the school. They could be taken care of in pre-school or crèches attached to the primary schools which are managed by the girls themselves, by turns, under the guidance of the teachers. This will provide a valuable service at a minimal additional cost and assist materially in the spread of education among girls from the poorer families.

These major structural changes should be carried out on a priority basis. For the total educational system, the structural changes he has proposed are as follows:

(1) At the primary stage, there should be multiple points of lateral entry. In addition to the regular entry in Class I at the age of 5 or 6 years, there should be special classes organized for older children in the age-group 9-11 or 11-14 who may be entering schools for the first time. These should ordinarily be on a part-time basis and of a condensed character so that they would make a student functionally literate in a short period.

(2) At the middle school stage, there should be, in addition to full-time courses, part-time courses for those who have completed Class V or the functionally literate who cannot continue to study further on a full-time basis.

(3) At the secondary stage, in addition to the full-time courses and night high schools, there should be adequate provision for part-time courses. Private study should also be encouraged by throwing open all the Board examinations to private candidates.

(4) A very important programme to be newly developed in the system is that of non-formal education in the age-group 15-25 which would be promoted, to the extent possible, through the existing institutions. It will have to be largely a programme of part-time education which may, whenever possible and necessary, be interspersed with short-term full-time courses.

(5) In addition to the existing full-time courses of vocational education at the school stage, there should be large facilities for on-the-job training of workers through programmes of part-time education of sandwich courses. It should also be possible for a person to transfer himself from general to vocational courses and vice versa and carry his credits with him.

(6) At the university stage, the facilities for part-time education (like evening colleges) or correspondence courses should be increased and a National People's University (on the lines of the Open University in the U.K.) should be established. Private study should be liberally encouraged by throwing open all university examinations for private candidates.

(7) Programmes of education should be developed on a large scale.

2. We need not make any special effort on expanding the formal system of education, although the natural demands for its expansion should be fully met.

3. Special and intensive efforts should be made to spread elementary education on a non-formal basis and especially among the poorer sections of the people and among girls. The largest expansion in the Fifth Plan should be in this sector. This will take two major forms: (a) special literacy classes of 18 to 24 months' duration should be organized for all children in the age-group 11-14 who are not attending schools or have not already become functionally literate; and (b) part-time classes should be organized on a voluntary basis, for all children who have completed Class V (or have become functionally literate) and who desire to study further but cannot do so on a full-time basis. These modifications will increase substantially the contribution of the elementary education system to literacy.

4. The new educational system these changes will create may be described as follows:

(a) Every child will be free, as at present, to join the system in Class I at about the age of six, and continue, on a full-time basis, till it completes Class V or Class VIII. But this will not be the only exclusive channel of education.

(b) Children may join, not in Class I at about the age of 6, and on a full-time basis, but later, at any time in the age-group 9-14, on a part-time basis, in special classes and become functionally literate in 18-24 months. Children who have dropped out before becoming functionally literate may also join these classes and become functionally literate.

(c) Children who have completed Class V, or have become functionally literate under (b) above, and cannot continue to study further on a whole-time basis, may still continue their studies, if they so desire, on a part-time basis in Classes VI-VIII.

(d) Every effort will be made to bring all children in the age-group 11-14 (who are not attending schools nor have become functionally literate) in special part-time classes described in (b) above during the next ten years so that, beyond 1984, no child shall reach the age of 15 without being literate.

5. Programmes for the qualitative improvement of elementary education are a supreme end in themselves. They also form an essential adjunct to the success of the quantitative aspects of the programmes as well, because a parent will not send his child to school unless he sees some relevance and significance in the education it imparts and a child will not continue in school unless it finds it interesting and useful.

6. The programmes of qualitative improvement in elementary education, form a 'package deal' in the sense that they are mutually supporting. The best results are, therefore, obtained if they are implemented

together. These include (1) improvement of curricula ; (2) improvement of textbooks and other teaching and learning materials ; (3) adoption of dynamic methods of teaching ; (4) examination reform ; (5) improvement in general education and training of teachers ; (6) improvement of supervision ; (7) encouragement to initiative and experimentation on the part of schools and teachers ; and (8) involvement of students, teachers, members of the community in programmes of qualitative improvement of elementary education through a system of institutional planning and school complexes.

7. The core curriculum in elementary education should include literacy (or language skills), numeracy (or mathematical skills), technirracy (or scientific and technological information and experience), work-experience (or experience of socially useful productive work), health and physical education, development of artistic skills, and participation in programmes of community service. It is of utmost significance that these different subjects are taught in an integrated fashion and are closely related to the immediate social and natural environment. An important point to be remembered is that attempts to increase the curricular ad at the primary stage (Classes I-V) often prove to be counter-productive because of the large numbers involved and he inadequacy of resources. It may, therefore, be strategically advantageous to simplify the curriculum at this stage and to emphasize functional literacy. The process of deepening the curriculum may advantageously begin at the upper primary or middle school stage (Classes VI-VIII) and be intensified further at the secondary stage.

8 It is necessary to develop non-formal programmes of teacher-education in a big way. This will cover not only the pre-service and in-service education of professional teachers, but also orientation of the large number of non-professional teachers who would be recruited for programmes of non-formal education.

9. For improvement of supervision, the traditional approach has been to increase the number of supervisors. It would be far more profitable to decrease the number of supervisors and to counter-balance its effects by improving their quality, and especially by increasing the freedom of schools and teachers and involving the teachers themselves in supervision. A practical method for this purpose would be to develop the programme of school complexes recommended by the Education Commission.

10. There is an urgent need to make the entire system of elementary education elastic and dynamic and to move in the direction of conferring autonomy on all educational institutions. A further step in the same direction would be to adopt the system of institutional planning supplemented by district plans.

11. It is necessary to emphasize the human and institutional in-puts necessary to develop programmes of qualitative improvement. It is equally necessary to create a climate of dedicated and sustained developmental efforts in the school system as a whole and to encourage experimentation and innovation on the part of schools and teachers.

12. The chances of the programmes of providing universal elementary education will be greatly increased if direct programmes to spread literacy among the idles are simultaneously launched. Special effort should also be made to spread functional literacy among the out-of-school youth in the age-group 15-25. These programmes should be centred round five foci: upgrading of vocational skills; techniracy; citizenship; physical education, games, sports, and recreation; and participation in programmes of service to the local community or for national development.

13. On the basis of the existing model, the total cost of a programme of universal elementary education comes to about 3.5 to 4.0 per cent of the national income and is obviously beyond our reach, even on the most optimistic assumptions. It is, therefore, essential to reduce the overall cost of the programme by the following means, among others:

a) Increase in the teacher-pupil ratio by the adoption, if necessary, of double-shift system in Classes I and II;

b) Reduction of teacher costs by introducing the system of volunteer teachers or local helpers wherever possible;

c) Introducing a large programme of part-time education combined with the multiple-entry system;

d) Reduction in the expenditure on buildings through use of local agency and materials; and

e) Reduction in the cost of textbooks and teaching and learning materials by providing them, free of charge, to all children on the school premises during working hours.

The adoption of these measures may reduce the overall cost of the programme to about 2 to 2.5 per cent of the national income. To raise resources of this order is far from easy, but it is at least feasible.

14. It will not be possible for any State Government to raise all the resources required for a programme of universal elementary education. It is, therefore, necessary to introduce a Central grant earmarked for elementary education on the basis of equalization.

15. The common school system of public education should be created and the concept of the neighbourhood school should be adopted at the elementary stage.

16. The chances of the success of universal elementary education would be considerably improved if a simultaneous direct attack is mounted for reduction of social and economic inequalities by making the minimum needs programme the core sector of all our plans.

17. Every State should set up a working group to prepare State and district plans for the provision of universal elementary education in a period of ten years, broadly on the principles recommended here.

18. The widest publicity should be given to the new strategy suggested here for providing universal elementary education and to win for it the support of teachers, administrators, and members of the public.

19. There should be a special machinery at the Centre, in the States, and even at the district level to look after the vigorous implementation of this programme.

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