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Educational Planning: The Asian Experience

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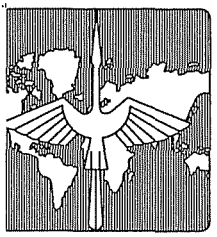

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1. *INTRODUCTION: EDUCATIONAL PLANNING THEORY*

This article intends to present a discussion of various approaches to educational planning against the background of the experience of the Asian countries.[1] It may be, however, that some of our arguments apply to other parts of the Third World as well.

In all developing countries, right from their independence, education was given an important role to play in the achievement of the developmental goals of nation-building and economic growth. As a result, ever increasing financial resources were put at the disposal of the educational sector and enrolments exploded at all levels.

The educational authorities, and more in particular the educational planners, were faced with the task of evolving and applying criteria by which to determine the total resources required for the education sector and the distribution of these resources over the various educational activities. In this difficult task they were given the assistance, often uninvited and certainly not always welcome, of other disciplines, most notably the economists.

The branch of the economic discipline which is now called 'economics of education' is generally supposed to have started with the studies of T.W. Schulz, E.F. Denison and others. These authors observed that better educated people earn higher incomes, allegedly because they are more productive. Educational outlays can therefore be considered as investment and the future additional income as returns on this investment. They came to the conclusion that a considerable proportion of the total economic growth of the USA can be attributed to the increased level of educational attainment of its population.[2]

This presented governments with good reason to supply educational facilities. Many governments even tried actively to stimulate the demand for education immediately after their countries had attained independence. This was partly because, in the struggle for liberation from colonial powers, independence movements had made promises of 'education for all'; after independence had been obtained, this right to education was often included in the constitution. In the new states education was seen as an important instrument that could contribute to the building of the nation, to the formation of national leadership and to the general upliftment of the population. The fact that economic analysis showed that education would also contribute significantly to economic growth made it still easier to justify the allocation of more and more resources to the educational sector.

On the demand side is the fact that, all over the world, parents regard school education as a major way of improving

the future opportunities of their children. To the extent that they can afford it and in accordance with the capabilities of their children, they will send them to school and keep them there. This is the drive behind the demand for education.

The question of the relationship between education and development is long standing and is still unresolved. A primary problem is that quantity and quality of education cannot adequately be separated: large quantities of poor education will not stimulate development, whereas small quantities of good education may. Another difficulty is that, although education and development are certainly correlated, it is not easy to determine the causal relationship. Does more education lead to development, or does development result in more education? Or does the relationship differ during the various stages of the development process, and between different countries?

Parents are not interested in these questions as long as they see their educated children earn high incomes. Only recently have doubts emerged in the public sector as to the effectiveness of education as agent for development. During the 1950s and most of the 1960s the assertion that education would stimulate economic development was accepted. In addition, there were strong political and social factors which favoured education, and this all resulted in rather expansionist policies in the education sector. Educational planning theory has labelled this philosophy the 'social demand approach to educational planning', a somewhat inappropriate term in that, under this approach, governments consider it their task to satisfy (private) demand for education as it emerges from the population.

The social demand approach seems a natural choice for democratic, non-socialistic countries where it is assumed that the citizen is sufficiently mature to act according to his own interest and preferences, and that satisfaction of the individual's needs will also enhance national well-being. Enrolments at all levels of education have rapidly increased as governments tried to accommodate the demand for education. But the social demand approach to educational planning has always been somewhat fallacious. An essential characteristic of such an approach is that the demand for education is autonomous; the government (the educational planner) has the task of creating facilities to accommodate the students. And here, in theory, the approach breaks down because when education is subsidised - and all governments subsidise education - demand is no longer autonomous but is dependent on the extent to which education is financially supported. The search for investment criteria in education then becomes the search for a rationale for public

subsidies. In the parlance of the welfare economist, education is a merit good which, from the national viewpoint, would be under-consumed if users had to pay the full cost-price. In addition to the benefits that accrue to individuals as a result of their education, there are benefits to the society as a whole in having a better educated population.

The so-called free choice of the individual, therefore, has always been a guided choice. Together with the strong demand for education and the rapid population growth, this has caused educational budgets to increase rapidly.

And the demand for education will not stop. Children now in primary school will soon be knocking at the doors of secondary schools, and by then the present secondary school students will be queueing for collegiate education. Population growth causes the stream of children who need education to grow each year.

1.1 Labour Market Considerations

In the history of development planning, early industrialisation efforts soon met with shortages of qualified manpower. On the initiative of the OECD in particular, a methodology was developed by which to forecast manpower needs and to plan the output of the educational system.[3] The intention was not so much to restrict the demand for education as to influence its distribution over the various types of education and fields of study in an effort to optimise education's contribution to economic development through coordinated training of the labour force. This approach is generally called the 'Manpower requirement approach to educational planning', and is based on a rigid interpretation of the relationship between the production structure and the occupational structure of the labour force, and between this occupational structure and educational qualifications. In both relations there are, in fact, substitution possibilities and flexibility.

Historically, the manpower requirement approach to educational planning was devised to solve or prevent shortages of qualified manpower which could form an obstacle to economic development. In many countries, however, the massive expansion of education since independence implies that shortage of educated manpower is no longer a problem to the planner. On the contrary, unemployment among the educated is a clear indication of a surplus of educated manpower.

As part of the total body of unemployed, the educated deserve special attention for two reasons. In the first place, the educated part of the population has a great

potential contribution to the development of the nation; to have this resource lying idle is a loss for the country. Secondly, the society has invested scarce resources in the education of these people and their unemployment puts the justification of this investment into question. Educational planners are now trying to formulate strategies with which this unemployment problem can be settled.[4]

Such an effort can only be effective if it takes place within the context of an integrated attack on the employment problem. Education's contribution to this attack will be mainly in solving the present mismatch between employment opportunities and the knowledge, skills, attitudes, values and expectations of school and university graduates. Schools will have to change their anti-developmental orientations against agricultural work and against manual work in general. This may be done by including vocational subjects and practical work in the curricula and by developing skills in students which will help them in future self-employment. A much more prominent role should be given to non-formal types of education which can respond rapidly to emerging needs and opportunities on the labour market. The manpower requirement approach to educational planning has failed because its basic assumptions did not correspond with labour market realities. This does not imply that the method is useless, only that it cannot be generally and exclusively applied. But the unemployment among the educated clearly indicates that the educational planner cannot afford to neglect labour market considerations.

1.2 Cost-Benefit Analysis

Cost-benefit analysis or rate-of-return analysis is a method to evaluate public sector investment projects and, in principle, can be applied to the education sector.

In the education sector, cost-benefit analysis can lead only to a partial evaluation of investment projects because the non-economic benefits, or benefits for which no monetary equivalent can be formulated, provide important criteria on which the investment decision depends. Basically, there are three types of economic benefits of education: (i) direct and future consumption effects; (ii) external economies; and (iii) future productive capacity. In almost all actual estimates of rates of return on investment in educational projects, the only benefit considered is the increased productive capacity of the successful participant of that type of education. Better educated persons everywhere earn higher incomes than the less educated; only part of that salary differential can

be attributed to innate abilities which enable the person to follow and complete more education and make him more productive. The rest is the result of his education. This is based on an interpretation of the labour market that allows for flexibility and substitution, and even incorporates the likelihood of unemployment.

This approach leads to the calculation of social and private rates of return on investment in the various levels of education.

What can the educational planner do with these rates of return? Social rates of return allow an evaluation of education as an investment from the public point of view. However, governments do not see education exclusively as an investment: it is a basic human right and has important social, cultural and political effects. Rates of return would suggest to the authorities that they should offer more of one type of education (with higher rates) and less of another type with relatively lower returns. However, the demand for education is so strong that governments have not the will or the power to bring these supply factors into their educational policies. Even if this were possible, it is questionable whether they would be advised to let themselves be guided by social rates of return. In Asia most graduates work in government service - up to 75% in some countries - as does a large proportion of secondary school leavers. Labour productivity in this sector is difficult to assess, but many observers have the impression that civil servants are overpaid. If true, this would artificially raise the rates of return on these levels of education.

Private rates of return are more useful and provide an important instrument with which to explain and forecast the size and direction of (private) demand for education. The individual is not interested in any discrepancy between his income and productivity, and economic factors may indeed be the most important reason for the individual to demand education.

All the theoretical approaches to educational planning discussed so far have implied a mechanistic and quantitatively-oriented manner of planning. The social demand approach measures demand for existing levels and types of schools, with established curricula and teaching methods. Any proposal to change this status quo may provoke protests from students, parents or teachers. The manpower requirement approach, implicitly at least, formulates some requirements for the content of education, since educational qualifications should answer to the particular needs of every occupation. In practice, contacts between industry and the formal education sector to determine the content

of vocational and technical education are almost non-existent. The cost-benefit approach calculates rates of return to established types of education and would give priority to that type or level of education with the highest rate of return. An alternative would be to try to change the structure, content and methods of teaching of low-return types of education so as to improve its economic performance. If this alternative were considered, the outcome of rate-of-return analysis would become undetermined and only ambiguous policy guidelines would emerge.

It is obvious that, even in theory, none of the three approaches has universal validity. Educational planning should represent a combination of the three, and attempts to this end are made. In particular, the social demand approach should not be forgotten in this integration of methods. It is generally considered to be naive to follow the demand for education. Real planning starts only when other criteria (labour market, rates of return) are introduced. But since most countries do not have political systems which enable the government to force students towards socially-desirable levels or types of education, there is a need to study the preferences of the students as manifested by their demand for education. If it is considered desirable to correct the individual demand for education, appropriate incentives will have to be provided.

2. *EDUCATIONAL PLANNING EXPERIENCES IN ASIA*

After this brief summary of educational planning theory, we shall now attempt to show how this theory is reflected in the practice of Asian countries.

It is important to stress that almost all Asian countries - many from an early date onwards - have periodically produced development plans which included chapters on education. Educational planning is therefore real and long-standing in Asia, and divisions or departments within ministries of education and/or sections in central planning agencies are charged with the task. Education was integrated into the national development planning effort at an early stage because of the suggested link between education and economic growth.

In 1959, Unesco convened in Karachi a conference of representatives of Asian Member States, who agreed on a common long-term planning objective of universal and free primary education of at least seven years duration, to be achieved by 1980.[5] Soon afterwards, on the request and with the cooperation of the Asian Member States, Unesco formulated a programme covering all levels of education.

This was discussed and accepted at the Conference of Ministers of Education and Ministers responsible for Economic Planning of the Asian Member States in 1965 in Bangkok and was published as the Asian Model.[6] It was then already realised that the Karachi Plan had been too optimistic, certainly for a group of educationally less developed countries. Achievement of the objective of universal primary education was therefore postponed until after 1980. The Asian Model also set target ratios for transition between the first and second and between the second and third levels of education. It was stated that a considerable proportion of students at the upper secondary level should be in vocational and technical schools (30-40%) and that at the third level more students should enrol in technical, technological and science subjects (up to 50-55%).

It is becoming clear that the targets of the Asian model in terms of enrolment ratios will not be reached by a fairly large group of countries, for two main reasons. Firstly, population growth was seriously underestimated in many countries; while the number of additional students enrolled may be relatively close to targets, the enrolment ratios are wide of the mark. Secondly, no progress has been made in the fight against educational wastage; entrance ratios may increase but retention does not sufficiently improve. Even further off target in an unfavourable sense, is the reorientation of students at the secondary and higher levels towards scientific and technical subjects: hardly any progress at all can be recorded.

2.1 The Demand for Education

The Karachi Plan and the Asian Model are important indicators of the Asian approach to educational planning, an essential characteristic of which is its expansionism. It is a 'more is better' philosophy which clearly reflects the popular demand for education in Asia.

The social demand approach to educational planning corresponds with the political realities of most Asian countries. Confronted with the massive popular demand for education, educational authorities can do no more than meet this demand as far as the available resources allow. To curb the demand or to influence its distribution over the various components of the educational system is a delicate affair likely to evoke immediate outcries of protest from the politically most vocal groups of the population. In addition, many Asian countries have a long-standing tradition of relatively independent private schools which are always ready to meet demands that the public sector leaves unanswered.

The social demand approach can only be properly understood against the background of educational romanticism which sees education as a more or less sacred activity that improves people, no matter what is taught or how the teaching is organised. This romantic attitude is present all over Asia and, like most sanctities, is related in an unfortunate way to socio-political inequalities.

In some parts of pre-colonial Asia temples and mosques offered practical education and their significance surpassed the religious domain. The colonisers replaced this with the European school system with its elitist character, western values and exclusive orientation towards urban, civil service and commercial activities. This educational system served the colonial powers well, and was taken over by the independent states as a principal instrument for nation building and national development. To a great extent it has supported these objectives, aided by the enthusiasm of almost the entire population who considered education to be the main road for their children on the way up or, in cases of rural poverty, on the way out. It is still quite common to see Asian villagers construct their own schoolbuildings and even to recruit and maintain their own teacher from their meagre means; examples of community support for education can be found in many Asian countries.

But the western-type, urban-oriented, and selective educational system cannot provide education for the masses of the poor agricultural societies. Its hierarchical structure, high costs, and its bias in favour of privileged socio-economic groups, go far towards explaining the non-participation and the drop-outs among the poor, particularly the rural poor. This selective character of the educational system does not reduce the demand; on the contrary, everyone wants to have a go.

A brief survey of the growth of enrolments by level of education in selected Asian countries is given in Table 1. The explosion of student numbers at all levels is striking, but the rates of growth differ by level. Table 2 presents the growth rates by level of education for two periods: the 1950s and the 1960s. In none of the countries and over neither period is primary education the fastest grower. In the 1950s either secondary or higher enrolments increased most rapidly, while in the 1960s secondary education led in most countries. The rate of growth of primary enrolments is considerably lower, which is not surprising in countries which have achieved or almost achieved universal primary education. Unexpectedly, the same holds true for countries which are only at the beginning of the road to universal primary education (Afghanistan, Nepal), and for other

countries which still have a good way to go (India, Indonesia, Iran, Thailand). Enrolment ratios are presented in Table 3.

A decline in the growth rate can be observed for all levels in almost all countries, if the two periods are compared. In *absolute terms*, however, the expansion of enrolments was generally much greater in the second period, and the pressure which these enormous numbers have laid upon the educational administration and inspection systems may well be imagined.

It is interesting to note that, in both periods, the educationally less developed countries (Afghanistan and Nepal) show quite impressive growth rates for all levels of education, though these high rates partially reflect the low absolute levels from which these countries started.

A number of countries (Indonesia, West Malaysia and Thailand) experienced growths of primary enrolments during the 1960s which were hardly adequate to cope with the population increase; progress towards universal primary education could not be made.

The figures in Table 1 conceal wide differences in the participation of males and females. Only the Philippines has an equal sex distribution of enrolments at all levels of education. Most other countries have fairly equal participation at the first level of education (unfavourable exceptions are Afghanistan, India, Iran, Nepal), but at the second and third levels female students are increasingly under-represented. In the South Asian countries (Iran, Afghanistan, Pakistan, India, Nepal and Bangladesh), traditional attitudes and values prevent the participation of girls in the education process. This has a major impact on other developmental activities (e.g. family planning, health and child care). It is urgently necessary that a feasible solution be found to this problem. So far the major strategy followed is to appoint female teachers to teach girls, but when almost all the female half of the population is uneducated (as in Afghanistan and Nepal), the recruitment of girl students for teacher training becomes difficult.

The low rate of growth of primary enrolments is somewhat unexpected in view of the high priority given to the goal of universal primary education as expressed in the Karachi Plan, the Asian Model and many national educational policy documents. This is partially explained by the fact that the 'non-schooling gap' (i.e. the difference between total school-age population and those actually enrolled is made up of problem groups such as girls, children from remote areas, backward families or underdeveloped regions. To bring primary schooling to such children involves

Table 1. Growth of enrolment, by levels of education in selected Asian countries since 1950

COUNTRY	YEAR	FIRST LEVEL	SECOND LEVEL	HIGHER EDUCATION
Afghanistan	1950	91 414	6 024	376
	1960	175 664	16 231	1 679
	1972	604 783	155 668	9 817
Burma	1950	387 523	50 369	3 333
	1960	1 543 807	225 584	19 855 (6)
	1973	3 386 000	910 000 (1)	51 811 (5)
India	1950	19 154 457	4 530 763	423 326
	1960	33 631 391	11 367 220	1 049 864
	1970	59 350 000	20 390 100 (1) (3)	3 112 404
Indonesia	1951	5 318 014	266 373	6 457
	1960	8 955 098	767 800	108 000
	1971	13 528 950	1 921 698 (4)	241 800
Iran	1951	650 355	82 097 (1)	6 067
	1960	1 436 169	299 807	19 815
	1972	3 445 528	1 596 791	86 572 (2)
South Korea	1950	2 669 494	436 175	36 385
	1960	3 621 267	875 249	101 041
	1972	5 775 880	2 437 748	228 967
Malaysia (West Malaysia only)	1950	578 452	36 127	243
	1960	1 130 537	165 250	8 071
	1973	1 538 611	555 462 (2)	21 184 (2)
Nepal	1955	59 594	14 777 (1)	915
	1960	124 921	41 444 (1)	4 730
	1970	389 825	115 714 (1)	17 025
Philippines	1950	4 082 759	483 933	...
	1960	4 199 636	670 338	352 753
	1970	6 968 978	1 719 386	757 613

COUNTRY	YEAR	FIRST LEVEL	SECOND LEVEL	HIGHER EDUCATION
Singapore	1951	128 499	11 332	1 958
	1960	283 018	60 928	10 285
	1973	345 284	173 109	18 010
Sri Lanka	1952	1 105 052	300 608	4 276
	1960	1 642 881	598 135	6 682
	1971	1 693 000	1 006 000 (1)	16 112
Thailand	1955	3 162 517	148 029	23 555
	1960	3 935 549	327 710	50 630
	1973	6 380 400	885 014 (5)	125 551 (5)

(1) General secondary education only
(2) 1971
(3) 1969
(4) 1970
(5) 1972
(6) 1961

Source: Progress of education in the Asian Region, Second Statistical supplement (Unesco Regional Office for Education in Asia, Bangkok, 1975).

Table 2. Average annual growth rates of enrolment by levels of education in selected Asian countries (in percentages)

COUNTRY	PERIOD	FIRST LEVEL	SECOND LEVELS	HIGHER EDUCATION
Afghanistan	1950-60	6.7	10.4	16.1
	1960-72	10.9	20.7	15.9
Burma	1950-60	14.8	16.2	17.6 (1950-61)
	1960-73	6.2	13.5 (1960-71)	9.1 (1961-72)
India	1950-60	5.8	9.6	9.5
	1960-70	5.8	6.7 (1960-69)	11.5
Indonesia	1951-60	6.0	12.5	36.8
	1960-71	3.8	9.6 (1960-70)	7.6
Iran	1951-60	9.2	15.5	14.1
	1960-72	7.6	15.0	14.3 (1960-71)
S. Korea	1950-60	3.1	7.2	10.8
	1960-72	4.0	8.9	7.1
W. Malaysia	1950-60	6.9	16.4	41.9
	1960-73	2.4	11.7 (1960-71)	9.5 (1960-71)
Nepal	1955-60	16.0	22.9	38.9
	1960-70	12.1	10.8	13.7
Philippines	1950-60	0.3	3.3	....
	1960-70	5.2	9.9	7.9
Singapore	1951-60	9.2	20.6	20.2
	1960-73	1.5	8.4	4.4
Sri Lanka	1952-60	5.1	9.0	5.7
	1960-71	0.3	4.8	8.3
Thailand	1955-60	4.5	17.2	16.5
	1960-73	3.8	8.6 (1960-72)	7.9 (1960-72)

Source: Calculations based on data of Table 1

Table 3. Enrolment ratios* by levels of education in selected Asian countries, latest year available

COUNTRY	YEAR	FIRST LEVEL	SECOND LEVEL	HIGHER EDUCATION
Afghanistan	1972	22	7	55
Burma	1969	85	20 (1)	160
India	1969	84	24 (1)	516
Indonesia	1970	71	12 (1)	110 (2)
Iran	1971	77	30	389
South Korea	1972	105	49	678
West Malaysia	1971	92	34	225
Nepal	1970	26	9	151
Philippines	1970	109	49	1988
Singapore	1973	102	51	1063
Sri Lanka	1969	106	43 (1)	127
Thailand	1972	84	21	324

(1) General secondary education only.

(2) Public Education only

Source: Progress of Education in the Asian Region, second statistical supplement (Unesco, Bangkok 1975)

* Enrolment ratios for the first and second level present total enrolments of those levels as percentages of the corresponding age-groups of the population. For the third level of education it is more difficult to identify an age-group; therefore the number of students per 100,000 population is given.

tremendous effort, non-conventional methods and supporting services, and consequently high costs. At the same time, there is a rapidly increasing demand for secondary and higher education from the politically more vocal groups of society. Planning experts have also called for more emphasis on secondary and higher education based on manpower requirement considerations.

Recognition of the need to gear educational output to manpower needs is reflected in quotations from official documents. For India:

> the structure of education should be in close relationship with a broad manpower plan which ensures that at completion of every stage of education there should be avenues of fruitful employment[7]

and for Malaysia:

> ideally the number of students completing education at different levels should correspond to the demand for manpower at those levels.[8]

Similar statements can be found in the planning documents of other Asian countries. Does this mean that educational planning has been turned over to the manpower planner? Far from it. There is a wide gap between policy awareness and the way in which the educational system functions. Education was, and to a great extent still is, pursued for self-fulfilment and academic distinction. Its principal purpose has been to produce good citizens with the essential skills of literacy and numeracy and with a general awareness of the cultural heritage. Evaluation was based on internal examinations measuring academic knowledge. To this system manpower planning addressed the call for more vocational, technical and scientific education. The priority given to technical and vocational education at the second and third levels of education, as expressed in the consecutive development plans of countries such as Indonesia, Iran, South Korea, Pakistan, Sri Lanka and Thailand, reflects these manpower considerations. The technical/vocational targets at the secondary and tertiary levels of education as expressed in the Asian Model are another case in point. In general secondary schools the science stream was to be emphasised. The implementation of these policies met with serious difficulties: the lack of qualified and experienced teachers for technical/vocational subjects; the lack of financial resources - technical/vocational/scientific education is very expensive; the lack of status of vocational and technical education particularly at the secondary level, and the consequent lack of enthusiasm shown by students for such schools. Science education was introduced or strengthened in the general academic schools. Science development centres emerged in most Asian countries.

Science education also suffered from lack of qualified teachers and of laboratory facilities and supplies, and has therefore remained bookish and of low quality in most countries.

In Pakistan, the effect of the introduction of science and vocational subjects in public high schools and colleges has been neutralised by the increased numbers of students in Arts and Humanities in private institutions.[9] It has also proved very difficult to link the programmes of the secondary technical schools to the needs of industry; in some cases, industrialists prefer to recruit graduates from general secondary schools because they have not learned the wrong things.[10]

An impression of the development of technical and vocational schools (including teacher training institutions when existent) at the secondary level is given in Table 4. No progress has been made since 1950, and almost all countries are still far from attaining the Asian Model targets mentioned above.

Given the unsatisfactory records of both the academic and the vocational/technical secondary schools, many countries have tried to create a new type of school called comprehensive or multipurpose or development school, which would combine academic and vocational subjects in teaching and practical work experience. Graduates from such schools would be prepared for immediate employment as well as for further studies. The comprehensive school experiment in its variants in different countries has universally proved to be a very expensive type of education, and has nowhere been expanded beyond the pilot project phase.

In view of this record of vocational and technical education at second level, it is not surprising to hear from manpower planners that most Asian countries are short of middle-level technicians for industry and agriculture. The existent non-formal educational activities in this field (on-the-job training, evening courses, etc.) are not sufficient to fill the gap.

At the tertiary level, also, it has proved impossible to channel a greater proportion of the students into scientific and technological directions, although a few countries have made some progress. The general conclusion must be that the call of the manpower planners for a technical/vocational bias in education has been left unanswered by most Asian countries.

One reason for this failure is the inability of manpower planners to provide definite figures as to the number of required technicians and high level technical manpower, without which it is difficult to really make a case (though even when detailed requirements were calculated

Table 4. Development of vocational and technical education at the second level. Enrolment in vocational/technical schools (including teacher training institutions at that level) as percentage of total secondary enrolments

COUNTRY	YEAR	PERCENTAGE
Afghanistan	1951	48
	1972	6
Burma	1960	3
	1969	2
India	1950	5
	1965	5
Indonesia	1951	34
	1970	35
Iran	1960	6
	1972	6
South Korea	1950	13
	1972	16
West Malaysia	1950	27
	1971	3
Philippines	1950	7
	1970	6
Singapore	1951	3
	1973	11
Sri Lanka	1952	2
	1969	2
Thailand	1955	33
	1972	25

Source: Based on data from Progress of Education in the Asian Region, second statistical supplement (Unesco, Bangkok, 1975)

Note : The figures for Afghanistan, India, Indonesia, Iran, Sri Lanka and Thailand include enrolment in teacher training institutions. In other countries there is either no teacher training at this level or no data were available.

they were received with scepticism). Illustrative is the case of engineers in India. At an early stage it was realised that India's development efforts were hampered by the lack of highly qualified engineers. A plan was drawn up and five Institutes of Technology and fifteen Regional Engineering Colleges, all of high quality and very costly, were established. They met with some initial success, but nowadays jobless engineers and under-utilised engineering institutions are all too common. Why? Mainly because economic growth was less than expected and so, consequently, was the demand for engineers.[11] In addition, planners had probably over-reacted and created admission capacity in engineering that, once a certain backlog in demand had been cleared, was in excess of the needs of the labour market.

The problem of educated unemployment is not restricted to engineers or to India. Many other Asian countries face this problem, e.g. South Korea, Malaysia, Pakistan, the Philippines and Sri Lanka. In many other Asian countries educated unemployment is an emerging problem.

Unemployment among the educated underlines the importance of including labour market considerations in educational planning. Some people may say that employment is not the only objective that education seeks to attain, the following quotation from Sri Lanka's most recent five-year plan seems to show that this attitude is changing.

> It raises the question of the purpose of education. In this connection it often used to be said that education is an end in itself in that education raises the cultural and intellectual level of the population and thereby enables the enjoyment of a fuller life. It has to be recognised that the ultimate purpose of economic development itself is to enable people to lead a better, fuller and more satisfying life. If indeed that had been the ultimate outcome of massive investments in education there would be no cause for alarm. However, experience has been entirely different. The failure, if not the inability, of the economic system to provide a meaningful and productive role for the output of the educational system has resulted in fear, frustration and despair rather than a net increase in social satisfaction.[12]

The serious problems which Sri Lanka faces with regard to educated unemployment are also reflected in the report of an ILO-mission to that country within the framework of the ILO World Employment Programme. It was observed that Sri Lanka has a long history of welfare policies which is reflected *inter alia*, in a widespread

educational system. However, with its white-collar orientation and its examination-dominated teaching, this system imparts the wrong attitudes and expectations. Proposals therefore include: (i) more pre-vocational and work-oriented courses in the school programme; (ii) less emphasis on achievement examinations, more attitudinal tests; (iii) introduction of subjects in the curriculum to prepare for self-employment, and (iv) the interruption of schooling between the second and third levels for a few years of work experience. These proposals should be considered in conjunction with a series of economic policies, in particular with proposed labour market, industrial and agricultural reforms.[13]

Other Asian countries also face this problem of fighting the inherent hierarchical structure of educational systems, in which each level of education is considered mainly as preparation for the next higher level, rather than as a preparation for purposeful and practical work.

In conclusion, the efforts of manpower planners to influence educational policies in Asia have had only limited success. Their methods have over-stressed the statistical capacities of most countries and their major suggestions for educational policies have run counter to popular preferences. The manpower requirement approach to educational planning was mainly concerned with preventing or solving shortages of qualified manpower, whereas an over-supply of manpower, including educated manpower, is now becoming apparent in more and more countries. Solutions to this new problem are now being sought in a qualitative (i.e. changing the content of education) rather than a quantitative direction (i.e. restricting the number of students).

Initially, manpower considerations caused primary education to be neglected. However, the unemployment prevalent among secondary school leavers and university graduates has started a process of rethinking the crucial role of primary education. Proposals have been made to change the content of primary education, its instructional methods and examination system in such a way that it will produce students with attitudes and knowledge that are more in line with available job opportunities or with more productive avenues of further education.

2.2 Cost-Benefit Analysis

The case for primary education is presented anew from another corner, and on other grounds. Economists applied cost-benefit analysis or rate-of-return analysis to the education sector and the results suggested in general a

high priority for primary education. In Asia, however, one cannot speak of a 'rate-of-return approach to educational planning' since no government has used cost-benefit analysis to take educational investment decisions, or expressed the intention to do so, or even felt that it should do so. Educational cost-benefit analysis is therefore an interesting but academic exercise.

A number of rate-of-return studies prepared for some Asian countries are summarised in Table 5. Two conclusions emerge. Firstly, private rates of return are always higher than social ones, reflecting the influence of public subsidies to education. Secondly, almost all rates are relatively high and would compare favourably with alternative investment opportunities. Another general conclusion which usually emerges in international comparison of rates of return in education, namely, that the rates tend to decline with higher levels of education, is not substantiated by this small Asian sample.

What could the educational planner do with these rates of return?

The social rates of return to education in India for example, suggest that the government should direct more of its educational expenditure towards primary education; expenditure on secondary education could grow more slowly and on high education even less. Actual experience shows the opposite pattern. Although the consecutive development plans of India have given high priority to primary education - admittedly not due to its high rate of return but to arguments of equal opportunity - the stronger and politically more vocal demand for more secondary and higher education determined the budgets.[14] And this experience is not limited to India; Iran and other countries show similar patterns.

The theoretical considerations mentioned in the first part of this paper also cause scepticism as to the use of social rates of return. The basis on which they are calculated seems too weak to allow effective use in public policy making.

For private rates of return the case is different. The individual may follow labour market signals (salary structures), whether these are efficient or not. Private rates would therefore be useful in explaining the size and direction of demand for education.

In this connection it is interesting to note that popular dislike for vocational and technical education at the secondary level can be partly explained - at least in the cases of the Philippines and Thailand, the only two countries for which data are available - by the private rates of return which are lower than for general education. (See Table 6.)

Table 5. Rates of return to investment in education in selected Asian countries, by level of education

		Social rate of return			Private rate of return		
		Primary education	Secondary education	Higher education	Primary education	Secondary education	Higher education
India	1960	20.2	16.8	12.7	24.7	19.2	14.3
Malaysia	1967	9.3	12.3	10.7	...	...	...
Singapore	1966	6.6	17.6	14.6	...	20.0	25.4
Philippines	1966	7.0	21.0	11.0	7.5	28.0	12.5
South Korea	1967	12.0	9.0	5.0	...	...	...
Thailand	1970	30.5	13.0	11.0	56.0	14.5	14.0
Iran	1971	27	5	9	Infinite	5	12.5

Table 6. Rates of return to investment in secondary general and secondary vocational/technical education

	Social rate of return		Private rate of return	
	general	vocational/ technical	general	vocational/ technical
Philippines	21.0	11.0	28.0	11.5
Thailand	9.0	-6.0	10.0	-2.0

Source of Tables 5 and 6: G. Psacharopoulos: *Returns to Education, an international comparison* (Amsterdam, 1973) p. 62; the estimates for Iran from G. Psacharopoulos and G. Williams: 'Public Sector Earnings and Educational Planning' in *International Labour Review*, Vol. 108, No. 1, July 1973.

The initial positive response by students to the engineering institutes created by the Indian government can also be explained by the relatively high private rates of return to investment in this form of higher education.

In an interesting study by Blaug, Layard and Woodhall into the causes of graduate unemployment in India, it is observed that students continue to go in for secondary and higher education despite the high incidence of unemployment under young matriculates and graduates.[15] This unemployment has the character of a more or less prolonged 'waiting period' between completion of the study and finding the first job. However, even when this period of unemployment is taken into account, private rates of return to secondary and higher education are still attractively high, and this may go a long way towards explaining the continuously increasing demand for these forms of education. If authorities wish to curb the influx of students in schools and colleges, the policy recommendation would be to affect private rates of return by either raising private costs of education (tuition fees) or by lowering salary scales.

Nepal adopted a new educational system in 1971. Until then, schools had been left on their own in financial terms; the government's annual grant was negligible and the major part of the expenditure had to be met from fees, donations and other sources. The financial part of the government's new policy on education is as follows:

> The government pays 100 per cent of the salary of all primary teachers, 75 per cent of the salary of lower secondary teachers and the teachers of vocational secondary schools and 50 per cent of the salary of the general secondary schools. In the area of higher education, the government bears the total cost of education in the technical areas such as teacher training or agriculture, and 50 per cent of the cost in the areas of humanities, liberal arts and pure science. The remainder of the cost is being met from tuition fees, donations and other sources.[16]

This financing policy is not based on a completed rate-of-return exercise, but it reflects social priorities and can be seen as an effort to induce private demand for education to fall in line with these priorities. This effort is quite unique in Asia and it will be interesting to follow its impact.

2.3 Current Problems

The general conclusion of this review of educational planning practices in Asia should be that manpower con-

siderations and rates of return have not been able to substantially influence educational development. The demand for education has been so strong that attempts to restrict or redirect it have been politically unacceptable. In recent years education has come into more and more troubled waters and traditional approaches to the formulation of educational policies are no longer sufficient. What has happened?

2.3.1 When it was thought that more education would almost immediately lead to economic growth, it was fairly easy to secure rapidly increasing budgets for education. A disappointing economic growth record, unemployment among the educated, and increasing demand on governments for other public services, have made education a less popular sector for public spending. On the other hand, rapid population growth, reflected in an even more rapid growth of the schoolgoing population, requires growing budgets even to maintain the present level of educational facilities. In India the schoolgoing part of the population (5-24 years) constitutes 44% of the total population, in Thailand even 47%. In rich countries with lower rates of population growth, this proportion is much smaller; in Japan 31%, in the Netherlands 35%. If poor countries wished to provide education to the same percentage of the schoolage population as in rich countries (i.e. to reach the same enrolment ratios as rich countries), they would have to spend more of their Gross National Product. Improvement of the quality of education would seem to be totally beyond available means. Asian countries now spend around 3% of their GNP on public education, and between 15 to 20% of their total government budgets. Even these immense amounts, in both absolute and relative terms, of educational expenditure have not been sufficient to maintain education at a high level of quality.

Tight budgets, together with a continuously increasing demand for education, have caused quality to deteriorate. Although quality is difficult to measure, a first indication may be obtained by examining recurring expenditures per pupil per year. During the 1960s, recurring expenditures per student at the first level of education taken at constant prices, increased substantially in Japan and South Korea only. In Afghanistan and Laos there was an actual decline, and in most other countries for which data are available it remained at the same level in real terms.

The situation of secondary education is worse. Declines in real expenditure per student are observed in Afghanistan, India, Iran, South Korea, Laos, Nepal and South Vietnam; increases in Japan, Malaysia, Singapore and Thailand.[17]

There is no reason to believe that education has become more efficient, and it is not surprising that educational authorities, teachers and professors in many Asian countries complain about the deteriorating quality caused by inadequate schoolbuildings, non-availability of textbooks and teaching materials, and lack of motivation of teachers due to low relative salaries and neglect by their superiors.

2.3.2 Present-day development thinking gives prime attention to agricultural development, a substantial increase in agricultural productivity being considered a prerequisite for economic growth. This puts the role of formal education with its urban, white-collar bias into question, as does the growing incidence of unemployment among schoolleavers and graduates. What is education doing? Does it still contribute to development or has it become dysfunctional?

2.3.3 In the developing societies of Asia, with their sharp distinctions between privileged and deprived, education has been seen as a major instrument to equalise opportunities. This it has failed to do. The formal educational system is inherently elitist: it discriminates against girls, against children in rural areas, against children from weak socio-economic groups, against children from families lacking educational tradition, against children from certain regions of the country. Some illustrations:

- proportions of females in primary enrolment in Afghanistan 14%; India 37%; Iran 36%; Nepal 15%; Pakistan 24%.
- In Iran around 1970 the primary school enrolment ratio for urban centres was around 64%, in rural areas 30%.[18]
- Of the 100 children entering primary schools in Asia around 60% leave school before completing the primary cycle.
  Studies into the causes of school dropout in countries such as Burma, India, Nepal and the Philippines have shown that economic reasons (the parents no longer able to bear the costs of education, or the children needed for farm work) are the most important. Consequently, children from the poorer segments of society cannot fully participate in education.
- In Thailand schools in the Bangkok area operate at a per pupil cost that is 50% above the national average. The transition ratio from lower to upper primary school (grade IV to V) is 80% in Bangkok and less than 20% in the backward North-Eastern region. The typical rural

> Thai child will receive four years of education, his urban counterpart may hope for about twelve years. Moreover, the urban child will receive education of higher quality. It is not surprising to find that, although 80% of the Thai population is rural, only 8% of all post-graduate students come from farm families.[19]

2.3.4 The deteriorating quality of education, the misfit between the message of the formal education system and the needs of rural societies, the continuing inequalities in education, and the serious problem of educational wastage, have long occupied the minds of Asian educationists. Gradually, solutions are formulated and tried out in experiments. As in many sectors of human activity today, 'innovation' is the keyword. Innovation is directed towards (i) content, (ii) methods, and (iii) structures of education.

The most significant change in the content of education is the introduction of pre-vocational and vocational subjects and work experience into the curricula of primary and secondary schools. Experiments are under way in Iran, Pakistan, Sri Lanka, Nepal and other countries. The intention is to impart to students useful agricultural and industrial skills. Preconditional to success is a reform of the examination system, which at present measures only academic performance.

Teaching methods are also under attack. Indonesia and Iran are planning satellite TV system for education into even the remotest areas and regions. Singapore already has a well-functioning TV educational programme and Thailand is planning to introduce such a programme. Educational radio is present all over Asia, but the radio is still under-utilised as an instrument of education.

In addition to, or as replacement for, the formal educational system new structures, so-called non-formal, are proposed. Non-formal structures seem useful, particularly for rural development and for the eradication of illiteracy, and many interesting and successful experiments are being carried out all over Asia. Wider dissemination of these non-formal types is now suggested, raising the question of whether their flexible and somewhat improvisatory character will sustain the tutelage, intermingling, planning and supervision of centralised educational authorities; in other words: can non-formal education ever be organised on a nation-wide basis? All these innovations are presently applied on a small scale and work only on the margins of the educational system. A more overall evaluation of educational activities seems to be required.

2.4 Objectives of Education

In this confusing situation the educational planner has to allocate scarce resources of money, materials and men over the various alternative projects that ask for implementation. His task is no longer limited to allocating the additional resources assigned to the education sector over and above last year's budget: all existing activities have to be reconsidered.

What appears to be necessary, given the financial constraints on the present education system and the fact that this system is apparently unable to adequately perform its developmental function, is a total rethinking of educational activities.

The components of the education system will have to be examined as to their function. Education is never an end in itself but always a tool with which to solve certain problems or to achieve particular objectives. In the context of the poor Asian countries, it has to be determined which problems need solution and what the objectives of education should be.

A number of these countries have defined, in varying degrees of specificity, the broad goals for their education systems and the objectives for each level or stage of education. These goals and objectives are intended to serve, on the one hand, as signposts for the planning and development of the total educational endeavour and, on the other hand, as the framework within which teaching programmes can be established.[20]

The goals generally declared by national authorities in Asia include: (i) development of individual capacities of the children; (ii) inculcation of knowledge of and love for the nation; (iii) development of children into useful citizens; (iv) development of knowledge, attitudes and skills to stimulate the economic progress and modernisation of the country; and (v) promotion of international understanding. Every country has its own variations on the general themes. Apart from the broad goals, specific objectives are also defined for each level of education. Although these objectives state highly commendable ideals they are not immediately operational, and they are academically and intellectually oriented rather than related to practical development problems. These objectives have led to the great paradox in many Asian countries today: there are large numbers of highly educated people for whom there is no work, whereas simultaneously there are masses of illiterates and people who have never attended any school.

The major task ahead will be to clearly identify problem areas and to specify education's task in tackling

them. It will then be possible to decide what kinds of knowledge and skills are required and which types of educational organisation and teaching methods will best serve the efficient execution of this task. Recent development literature gives the impression that development of the agricultural sector should have top priority in most Asian countries, as there is mass poverty in the rural areas, agricultural production is not growing rapidly enough to feed the increasing population, and there is an urgent need to stem the flow to the cities. The present educational system is urban-oriented and biased towards academic rather than practical performance. It cannot be expected to contribute much to agricultural development, since it is not sufficient merely to train a number of agricultural scientists or even extension workers. A frontal attack is required against the idea that urban white-collar jobs are more prestigious than rural manual work, and that education is a device by which the most meritorious may be selected for these pleasant positions, leaving the stupid and the lazy to do agricultural work. The paradoxal conclusion could be that to stimulate rural development one would need to change urban education. The present school system favours children from the urban middle and upper classes, who enjoy supportive home environments, better nutrition, etc. Many children in rural schools come from illiterate families, and there is the rigid tradition, to which parents in rural areas of some Asian countries still adhere, which makes it impossible for girls to attend school. Teachers prefer to live in cities and rural schools are left with unqualified or inexperienced staff. Money for books or other teaching materials is not available for rural schools, and parents have no way to provide it. The evaluation and examination system, and promotion to higher levels of education, is dependent on academic performance. Little wonder that rural parents are not sympathetic towards efforts to orient education to the rural environment or to introduce agricultural subjects into the curricula; they fear that it will impair the academic training of their children and therefore their future chances. The introduction of prevocational, vocational and technical subjects or of work experience into the first and secondary level school curricula does not help when these subjects are merely additional to the academic subjects and when examinations and progress to higher levels of education still depend mainly on achievements in these academic subjects.

Non-formal educational activities seem to be a powerful alternative to bring development education to the rural masses. Successful projects in this field are being undertaken in many Asian countries. Their success seems to

depend mainly on their small scale which makes it possible to maintain group enthusiasm and cohesion for common goals, and enables imaginative leaders to continuously stimulate and adapt the project. It is questionable whether these conditions for success could be recreated on a nation-wide scale. Locally-based non-formal educational activities and centralised educational planning do not go very well together. Nationwide non-formal education for the masses would require great autonomy for local communities to decide on the content and organisation of learning, and it is doubtful whether national leaders would want to give up the centrally-controlled formal education system which constitutes a powerful instrument for the national socialisation and unification processes.

In this context, it is striking that many countries which have accepted non-formal approaches to education as necessary and essential, start their new activities in this direction by establishing a so-called Open University (based on England's example) in order to make higher education available to all. In these countries (e.g. India, Iran, Pakistan) where there is already huge unemployment among university graduates, it might be thought that non-formal activities such as adult literacy courses, vocational training and agricultural extension work would have been more obvious priorities. In particular, the immense problem of illiteracy among adults in rural areas needs to be solved before any attack on rural poverty can be successful.

3. *SUMMARY AND CONCLUSION*

In Asian countries after independence, enrolments at all levels of education exploded, though more so at the second and third than at the first level. Educational policies were largely determined by the emerging demand for education, and political pressure by leading groups of the population resulted in priority for secondary and higher education. This priority was further sustained by the manpower requirement theory, and was only queried when it resulted in widespread unemployment among the educated.

In the present process of examining the generally disappointing development records of most Asian countries, education is also scrutinized and questions are asked such as: does education contribute to development?; what is education's role in agricultural development?, and can the society continue to finance an ever-expanding educational system? The major weakness of the social demand approach to educational planning seems to be that it serves those who demand, not those who need to be helped.

The educational systems of Asia have functioned very well as selection devices, selecting and training students for future positions of responsibility and leadership. Population growth and increasing participation in education now make this device too expensive and the exploding number of students make it impossible to maintain quality. Even those who are selected are no longer properly trained and prepared for their jobs. And as the positions for which the system selects do not increase at the same rate as the number of students, the result is an oversupply. The call for so-called 'centres of excellence' which can be heard in India and Pakistan has to be considered against this background. In the qualitatively deteriorating mass of colleges and universities, such centres should cater for the best and the brightest.

Educational planning in Asia during the 1950s and even the first half of the 1960s was a mainly quantitative exercise dealing with the number of students and levels of education. Gradually, however, more qualitative aspects of education entered the purview of the planner and so-called innovations came to be discussed and in some cases applied. The curricula of nearly all school types have been revised; one or another variant of comprehensive secondary schools has been introduced in almost all Asian countries; programmes for in-service training of teachers have been organised or expanded; and some countries have even fully restructured their educational system (Iran, Nepal). On the other hand, these qualitative reforms so far have not been on a sufficient scale - some did not get beyond the pilot project phase - or were not revolutionary enough to have but a minimal impact on existing problems.

Are we to conclude that the various approaches to educational planning in Asia have failed? Yes and no. Yes, because they were apparently incapable of preventing the serious educational problems of Asian countries today. No, because the educational system has to be seen in the societal context in which it has to function. In this society, the traditional aristocratic elite is replaced by an educated elite (not seldom made up of the same persons and families). This elite may be more concerned with the submission of the masses than with their upliftment, more with exploitation of the agricultural sector than with its development.

The education sector does not normally lead in changing society. Its elitist bias makes it rather a conservative force which only gradually and slowly accommodates to transformations in political, social and economic spheres. It seems therefore, that before education can be

fundamentally changed to serve the real development of the country, including its agricultural sector, a drastic political change or even revolution is required.

Those in charge of policy-making in education (educationalists, civil servants, political leaders) are themselves the result of the urban-oriented, elitist educational system, and actually derived the privilege of their present position from this education. They have a vested interest in the educational status quo, if only because they would like to see their children attain the same privileged positions by the same route.

Present proposals for the stimulation of rural development, such as the introduction of agricultural and other vocational subjects in school curricula, non-formal educational services in rural areas, including extension work and literacy courses, will at best be marginal and are likely to be only half-hearted efforts for which support and finance will soon dry up. If the problem is with the formal education system this cannot be solved by creating a non-formal system next to, or on top of it. On the contrary, the formal system would have to be evaluated and changed.

NOTES

1. The article is based on the experiences of the author while employed as Associate Expert in Educational Planning at the Unesco Regional Office for Education in Asia at Bangkok. When we speak of Asia we refer to Unesco's Asian region consisting of Afghanistan, Bangladesh, Burma, India, Indonesia, Iran, Khmer Republic, Republic of Korea, Laos, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Singapore, Thailand and the Republic of Vietnam. Although the People's Republic of China has recently become a member of Unesco, adequately detailed information on its educational system is not yet available. A study of China's experiences would seem to be very promising since the country has taken quite a different approach to educational development. Although such a study is not undertaken here, it is our expectation that the major conclusion which would be derived from it would be that China's educational policies were different because the outlook of its political leaders were different. This goes very well with the contention of this article that present educational systems of the Asian countries - and their problems - reflect the political power structure of these countries.

2. See T.W. Schultz: *The Economic Value of Education* (New York, 1963) and E.F. Denison: *The Sources of Economic Growth in the United States and the Alternatives Before Us* (New York, 1962).

3. The book *Forecasting Educational Needs for Economic and Social Development* by H.S. Parnes (OECD, Paris 1962) lays the methodological foundation for the Mediterranean Regional Project of the OECD, where the manpower requirement approach was applied to a number of South European countries.

4. See e.g. M. Blaug: *Education and the Unemployment Problem in Developing Countries* (ILO, Geneva, 1973).

5. *The Needs of Asia in Primary Education; a plan for the provision of compulsory education in the region* (Unesco, Paris, 1961).

6. *An Asian Model of Educational Development, perspectives for 1965-1980* (Unesco, Paris, 1966).

7. *Notes on Perspectives of Development, India 1960-75* (Government of India, New Delhi), p. 239.

8. *First Malaysian Plan 1966-70*, p. 164.

9. *Evaluation of the Third Five-Year Plan 1965-70* (Government of Pakistan).

10. See e.g. *Report of the Special Committee on Reorganisation and Development of Polytechnic Education in India 1970/71* (Ministry of Education and Social Welfare, New Delhi, 1971), and *Employment and Income Policies for Iran* (ILO, Geneva 1973), p. 68.

11. See J.P. Naik: 'Educational Planning in India', in *Bulletin of the Unesco Regional Office for Education in Asia*, 16 (Bangkok, 1975).

12. *The Five-Year Plan 1972-76* (Government of Sri Lanka) p. 109.

13. *Matching Employment Opportunities and Expectations, A Programme of Action for Ceylon* (ILO, Geneva, 1971).

14. See M. Blaug: 'Education, Economic Situation and Prospects of India 1971' in *Bulletin of the Institute of Development Studies* (University of Sussex, Vol. 3, June, 1971).

15. M. Blaug, R. Layard and M. Woodhall: *The Causes of Graduate Unemployment in India* (London, 1969).

16. K.N. Shrestha: 'Educational Planning in Nepal', in *Bulletin of the Unesco Regional Office for Education in Asia*, 16 (Bangkok, 1975), p. 87.

17. See: *Progress of Education in the Asian Region, second statistical supplement*, Table 49 (Unesco Regional Office for Education in Asia, Bangkok, 1975).

18. See: *Employment and Income Policies for Iran* (ILO, Geneva, 1972).

19. N. Bennett: 'Community Schools: Institutes for rural Development' (Mimeographed 1972).

20. For a detailed study see *Final Report of the Meeting of Experts on Educational Goals, Aims and Objectives in Asia* (Unesco-NIER Cooperation Programme; National Institute of Educational Research, Tokyo, Japan).