

PN-ABM-214  
62  
79194

**ASIA AND NEAR EAST COUNTRY PROFILES:  
SUMMARIES OF EDUCATIONAL CONSTRAINTS  
1990**

by  
**Matt Seymour**

Under contract to the  
Division of Human Resources  
Office of Technical Resources  
Bureau for Asia, Near East and Europe  
Agency for International Development  
Washington, D.C. 20523  
February 1990

This paper was commissioned by the Agency for International Development, Bureau for Asia, Near East and Europe, Division of Human Resources. The principal author, Matt Seymour, was accessed through contract ANE-0634-0-004-00. Human Resource Division officers were Thomas Nicastro, Division Chief and Charles Aanenson, Education Officer. The paper was submitted February 1990.

## **ANE COUNTRY PROFILES:**

### **SUMMARIES OF EDUCATIONAL CONSTRAINTS**

The purpose of this report is to outline the major features and constraints to educational development for each of the countries which AID gives foreign assistance in the Asia and Near East regions. The ANE countries are: Morocco, Tunisia, Jordan, Egypt, Yemen, Oman, India, Pakistan, Sri Lanka, Afghanistan, Bangladesh, Nepal, Indonesia, Thailand and Philippines. This report is intended to serve as a background document for the development of AID's ANE Human Capital Strategy for the 1990's.

Emphasis is upon constraints as it is assumed that a comprehensive understanding of these are necessary for the development of an human capital strategy statement. Key analytical categories were selected and used to focus the discussion for each country. These are: access and equity, quality and efficiency, organization and management, costs and financing, and training and employment linkages. Educational levels are primary (and in some cases, lower secondary so that both become basic education), secondary, university, and technical and vocational training. Not all the categories and levels were used in the same way for each country, and so the presentation of each country profile will vary. This is because the data for each country varied in richness, emphasis and focus. However, an attempt was made to maintain a format for the discussion. The numbers in parentheses after the country title refer to the country's GNP per capita rank as used in the World Bank's list of Development Indicators.

Data sources are: World Bank Staff Appraisal Reports, Education Sector Studies, and Economic Memoranda for the ANE countries; The World Development Report, and the World Bank's Social and Economic Indicators; AID Education Sector Reports and relevant AID documents; and UNESCO Education Sector Reports.

## BANGLADESH (5)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 109 million	Illiteracy rate- total: 67% female: 78%
Population growth rate: 2.6%	School yrs completed by labor force- total: 2.4 male: --
Population (yr2000): 144 million	Gross Enrollment ratio Primary- total: 60% female: 50%
GNP per capita: \$160	Secondary- total: 18% female: 11%
GDP growth rate: 3.8%	Tertiary- total: 5%
	Sci/Engin as % of tertiary students: 24%
Production structure:	Private school(prim): 12%
agriculture - 47%	Pupils reaching gr 4: 31%
industry - 13	Primary repeater rate: 18%
service - 39	Pupil-teacher ratio-pr: 48 sec: 29
	Ed expenditures as a % of the GDP: 1.1%
Newspaper circulation: 5.6 per thousand pop.	Total expenditures (public) on education: 10.6%

Formal education in Bangladesh includes five years of primary school, seven years of secondary school(3-2-2), and two to five years of higher education. There is also a parallel system of religious schools at the same levels. Most (72%) of the secondary schools are private. In addition to a widespread system of teacher education colleges, there are over 50 vocational training institutions, technical colleges and institutes, and professional faculties in engineering, medicine and agriculture in the universities.

Despite some educational progress since independence in 1971, three major problems persist: limited access, poor quality and budgetary limitations.

**Access:** One third of primary school age children are not enrolled. Over two thirds of all adults are illiterate, largely as a consequence of a history of low enrollment. In addition, there is inequitable access to education in favor of males over females, and urban over rural areas. Hence illiteracy rates are twice as high for women and rural dwellers compared to men and urban dwellers, respectively. The educational attainment of women is one of the lowest in the world with only one in three school-age girls in school. This impedes considerably overall development, and particularly to improved health and population control. School construction has concentrated on replacing existing school units, and so few additional places exist to meet enrollment increases. The problems are compounded by the adverse effects of floods and natural disasters which require rehabilitation or reconstruction.

**Quality and efficiency:** The dropout rate at the primary level is high and results in only an estimated 15% of primary students reaching fifth grade within five years. In addition, almost 70% of primary students do not finish. The dropout rate at the secondary level is almost as bad with less than half being able to pass the exams after the fifth and seventh years of secondary school. Less than 10% who enter secondary school complete it. The primary curriculum is badly overloaded, theoretical and badly designed in terms of scope, sequence and level of vocabulary for each grade. Teaching is exam driven with emphasis upon subject recall and little emphasis on literacy and numeracy skills training. Teachers translate the curriculum into a set of facts to be memorized, and there is little attempt to introduce higher order learning related to problem solving and creativity.

The secondary curriculum is also highly theoretical and teaching is also exam driven with little emphasis on applied science, health, population issues and nutrition. Secondary school test papers given at the end of the fifth and seventh years follow a standardized format which has been used over the years and reinforces memorization and factual recall. Hence teachers concentrate on what will help their students pass the examinations. Many of the secondary school teachers are untrained, and the proportion compared to trained teachers is increasing because the output from teachers colleges is inadequate to meet the demand for trained teachers. Most of the university students major in liberal arts and have a weak background in science and mathematics. The university campuses have been subject to considerable disruption over the past few years and so the length of time to complete a first degree has extended to an average of about seven years.

**Budget limitations:** The 1.7% of GNP allocated for education is one of the lowest in the world, and this no doubt has contributed to the low quality of teaching and learning in primary schools. In addition, increased entry rates of children reaching school has

resulted in increased enrollments, and without increased budget support, this has contributed to higher dropout and repeater rates. Within the education sector, budget emphasis has been on secondary and university allocations. For example, salaries recently have increased in non-government secondary schools and colleges from 50% in 1980 to 70% in 1987 as a number of these schools have been nationalized. This financial commitment will limit the extent to which primary education can grow and improve, even though the government has stressed its commitment to achieving universal primary education. Only recently has the government begun to reallocate input expenditures, such as teacher training and supervision, in order to increase primary education effectiveness.

In addition to the above issues, the management of primary and secondary schools has suffered because administrative officers are inadequately supervised, trained and rewarded. Training procedures and courses are out of date, and field supervisors lack transport to visit schools regularly. While they make occasional visits to schools, they are unable to observe teachers and assist in improving their pedagogical skills. Cluster training has become ineffective, even when delivered as frequently as required.

## NEPAL (7)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 18 million	Illiteracy rate- total: 74% female: 88%
Population growth rate: 2.6%	School yrs completed by labor force- total: -- male: --
Population (yr2000): 24.1 million	Gross Enrollment ratio Primary- total: 79% female: 47%
GNP per capita: \$160	Secondary- total: 25% female: 11%
GDP growth rate: 4.7%	Tertiary- total: 5%  Sci/Engin as % of tertiary students: 18%
Production structure:	Private school(prim): 1%
agriculture - 57%	Pupils reaching gr 4: -
industry - 14	Primary repeater rate: -
service - 29	Pupil-teacher ratio-pr: 38 sec: --
Newspaper circulation: 6.8 per thousand pop.	Ed expenditures as a % of the GDP: 0.7%
	Total expenditures (public) on education: 12.1%

Primary education in Nepal runs from grades 1-5, and secondary education to grades 6-10. There is a policy initiative underway to include grades 11 and 12 as an integral part of secondary education, thereby creating three instead of the present two segments. The most serious issues in Nepal's education system lie with access, efficiency, quality, and management.

**Access:** Gross enrollment rates at the primary level are 79% for boys and 47% for females. However, as much as 30% of the enrollment consists of under-age or over-age children, and so the net enrollments (school aged children enrolled as a proportion of the estimated school age population) are considerably less.

Country sample surveys indicate a net enrollment of 51% for boys and 29% for girls. This means that 41% of the boys and 71% of the girls in the 6-10 year age group were not enrolled in a primary school. In addition to the significant underenrollment of girls, there are significant variations by region with the more remote and poorer regions registering lower enrollments. Thus, despite commendable gains in providing access to primary schools throughout the country, there are still serious deficiencies in enrollments in terms of gender and geographical region. The situation is different for secondary schools where too many schools have been established in proportion to enrollment. Hence, the lower secondary schools are small, averaging 70 students in their two grades. This is far too low for effective utilization of specialized teachers, facilities and equipment. Like the primary schools, however, the girl enrollments in the secondary schools lag considerably behind those of the boys.

**Internal efficiency:** Dropout and repetition rates are high, especially in grade 1. Of those who enter grade 1, only 43% proceed to grade 2 in the subsequent year; 27% drop out, and 30% repeat grade 1. In subsequent grades about 70% are promoted each year, while 16% drop out and 14% repeat each grade. It takes up to 12 years of schooling to produce one graduate through the expected 5 year primary cycle, and it costs two and half times the expected amount to produce that graduate. Of those who do complete primary school, only 30% go onto secondary school.

**Quality:** The quality of primary school teaching is uneven with the less educated and untrained teachers being in rural areas. While the education attainment of teachers has risen in the past 15 years, the proportion with pedagogical training has been falling. More dramatically, less than 10% of teachers are female. This low number of women teachers inhibits the enrollment of girl students, as many parents are more comfortable sending their daughters to all the grades of a primary school if there are more female teachers in the village school. The primary curriculum lacks sufficient detail about knowledge, skills, and attitudes. Objectives are not clear, materials are irrelevant to outside experiences, and instructional methods provide students with few opportunities to practice or apply concepts and skills. Language arts textbooks offer some practice in reading, but provide no direction as to what skills are to be taught. Arithmetic textbooks emphasize general concepts without appropriate skill training. Without clear direction in the curriculum or texts, teachers revert to recall and memorization.

A worse situation exists in secondary school, where the curriculum tends to be esoteric, and prepares students inadequately for higher education or for life. There is a high percentage of temporary teachers, most of whom are not highly educated and untrained. In effect, "...schools rarely complete courses according to the prescribed curriculum. They lack teachers in specific subjects; practical experiences for students are almost nil; teaching is textbook centered and lecture-dominated; and worst of all, most

students do not have sound [regular] study habits. In this situation, it is idle to expect quality in school products (Aryal et al. 1984:87)"

**Organization and Management:** While the District Education Officers and their staff supervise school operations, many schools, particularly the remote ones, receive less than adequate attention. In addition, a strict hierarchical system inhibits the headmasters from taking the initiative regarding school management or using new teaching technologies. Also, the status and salaries of primary teachers are very low, and they receive little professional recognition. At the secondary level, one of the weakest features is the present organization of the exit points. Other than dropping out, a student may only exit at the end of grade 10, and is left with the choice of pursuing a fairly high level of academic education, or leaving the formal school system all together. There needs to be more exit points, say after grade 8, 10 and 12 for students who cannot or wish not to continue their secondary education.

**Tribhuvan University:** Not only is the single university overenrolled in proportion to the primary and secondary enrollments, but the enrollments are highly skewed in favor of the arts and humanities. Less than 20% are in science and engineering, and while management -- e.g., accounting, finance, marketing, business administration -- is a popular field with students, the greatest need is to increase high level manpower in technical fields. In addition, student subsidies are excessive and fee levels are too low -- even lower than those at the secondary level.

## INDIA (21)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 814 million	Illiteracy rate- total: 57% female: 71%
Population growth rate: 2.0%	School yrs completed by labor force- total: 1.9 male: --
Population (yr2000): 1,010 million	Gross Enrollment ratio Primary- total: 92% female: 76%
GNP per capita: \$300	Secondary- total: 35% female: 24%
GDP growth rate: 4.6%	Tertiary- total: --  Sci/Engin as % of tertiary students: 28.5%
Production structure:	Private school(prim): --  Pupils reaching gr 4: 56%  Primary repeater rate: --  Pupil-teacher ratio-pr: 58 sec: 21
agriculture - 30%	
industry - 30	
service - 40	Ed expenditures as a % of the GDP: 2.8%
Newspaper circulation: 19.8 per thousand pop.	Total expenditures (public) on education: 10%

From an education perspective India is a paradox: it exports scientific manpower throughout the world, yet it has the largest number of illiterates of any country and one of the lowest participation rates for females in the world. The main problems in the education system are low access and equity; poor quality; low internal efficiency; poor external efficiency; and limited financial resources.

**Access and equity:** While most Indian communities have a school or access to one, many of the schools exist in name only, or do not have basic minimum facilities and equipment to provide a

meaningful education. While gross enrollments are high, the net enrollments when adjusted for over and under aged children, is 80% at the primary and 54% at the middle levels. In addition, gender, caste, and regional inequities are high. For example, while total gross enrollment at the primary level is 92%, for girls it is only 76% at that level, and the disparity increases with each level of education. Only about 20% of the teachers are female, and this inhibits female student enrollments, particularly in rural and Muslim areas. Enrollment ratios and literacy levels for certain tribes and castes are also low. While cultural factors tend to favor males over females even when educational opportunities are available, the financial constraints, particularly in the economically backward states account for low access and inequity.

**Quality:** While India has no national testing program to provide standardized achievement measures, India did participate in the International Education Achievement program of 1976. Fifth grade Indian students learn only 50% as much science and about 45% as much reading as do their western and Japanese counterparts. At the upper secondary level, Indian students learned only 28% as much science and 15% as much reading as did students from other participating countries. Other measures of quality include the inputs and the teaching learning process. About 50% of primary schools have inadequate buildings and instructional materials such as blackboards, chalk, books notebooks. Many secondary schools lack laboratory and workshop facilities. About one third of all primary schools are single-teacher, multi-grade schools, and 15% of primary teachers are untrained. Even in larger schools, the classroom environment is more custodial than educative in character as the teaching style tends to be authoritarian with rote learning predominating. The availability of learning materials is completely inadequate in a system in which salaries consume the bulk of recurrent expenditures.

At the secondary level, the number of courses and their quality in science and mathematics are deficient, and teacher pre-and in-service training is limited and often outdated. At technical institutions, facilities are available, but often they are underutilized because of shortages in trained staff or a maintenance budget. Management at the school level and regular supervision is also weak. Inspectors and supervisors often have no qualifications or experience in primary education.

**Internal Efficiency:** High dropout and low survival rates mark Indian primary education. Dropout rates average around 60% for grades for the elementary cycle, while repeater rates are relatively low as a result of the introduction of automatic promotion. Internal factors contributing to the low quality of primary education (mentioned above) also contribute to the high dropout rate. External factors, such as high opportunity costs for poor families, especially when families depend upon children for household and agricultural duties, also contribute to dropping out. While government efforts and social pressures have raised the total gross enrollments to over 90%, the high dropout rate reflects the

low quality and limited benefits of education, particularly for women and the poorer regions.

In secondary and higher education, the problem is less one of dropping out than of the average length of time needed to complete a cycle. Low examination pass rates and frequent repetition characterize education at these levels. Students tend to repeat failed examination years, especially grade 12, in continued attempts to enter higher education.

**External Efficiency:** Over the past 10 years the education and training system has expanded and diversified to such an extent that trained manpower is absorbed into the economy. However, there is a lag between graduation and employment resulting in an unemployment rate for graduates at about 20%. In some cases this lag is a result of graduates waiting for a job that they believe meets their qualification, or of taking one for which they are overqualified. More likely the lag is due to graduates not having the appropriate skills, particularly in the fields of engineering, electronics, computers, and systems engineering. For example, there are not enough institutions to train software engineers or system analysts. Hence graduates in allied fields who apply for these positions, do not always enter them. More seriously, low external efficiency results in the mismatch between the quality of skills required and what is provided in training institutions. In the agricultural sector, for example, irrigation engineers may need one year of supplemental training before they are considered ready for employment, while graduates from electronic engineering programs are unable to translate basic designs into marketable products.

In technical and vocational training, outdated curricula and instructional materials, poorly equipped laboratories and outmoded workshops, and the shortage and poor quality of the teaching force are all responsible for the uneven quality of training in industrial and technical institutes, polytechnics, and engineering programs. In addition, linkages between vocational training institutes and local industry need to be developed as well as does preparation for the "unorganized" or informal industrial sector, which serves about 80% of the industrial labor force. Finally, little training is provided for women for high-growth industries of high-tech grades, and lack of access to relevant industrial training for woman is a major contributing factor to their underrepresentation in it.

**Financial Resources:** Perhaps the main reason for the above constraints is the underfinancing and the misallocation of educational finances. Many of the states are unable to provide adequate funds to maintain the present system and certainly cannot meet expansion requirements. Appropriations favor higher education at the cost of expanding access and improving the quality of basic education.

While investment in education has increased from 1950 (1.2% of GNP) to the present (1988, 4% of GNP), it is still relatively low when compared to other rapidly industrializing Asian countries. However, educational outlays from both central and state budgets have declined slightly, and it is estimated that the current Development Plan has allocated only about one third of the funds needed to meet the stated Plan targets. In addition, over the years resource allocations have favored higher education at the expense of primary education (56% for primary and 9% for higher in 1950; 29% for primary and 16% for higher in 1988). Since educational expenditures are highly skewed toward salaries, little is left for facilities and materials, particularly at the primary level.

Despite much growth in educational investment, the allocations provided are insufficient to meet the continuing rise in enrollments, needed facilities, and necessary instructional materials and equipment. Unless options are sought, such as a scaling down of investment targets accompanied by increased mobilization of resources, particularly from private industry through endowments and tax incentives, India's education system will stagnate.

## PAKISTAN (28)

DEMOGRAPHIC & ECONOMIC		EDUCATION	
Population: 106 million		Illiteracy rate- total: 70%	female: 81%
Population growth rate: 3.1%		School yrs completed by labor force- total: --	male: 2.5%
Population (yr2000): 156 million		Gross Enrolment ratio	
		Primary- total: 52%	female: 35%
GNP per capita: \$350		Secondary- total: 24%	female: 14%
GDP growth rate: 6.6%		Tertiary- total: 5%	
		Sci/Engin as % of tertiary students: 29%	
Production structure:		Private school(prim): --	
agriculture - 23%		Pupils reaching gr 4: 48%	
industry - 28		Primary repeater rate: -	
service - 49		Pupil-teacher ratio-pr: 41	sec: 18
		Ed expenditures as a % of the GNP: 0.8%	
Newspaper circulation: 18.3 per thousand pop.		Total expenditures (public) on education: 5.0%	

Low public investment and the lack of political commitment, has led to neglect of the education sector in Pakistan. The country's literacy and school enrollment rates are among the lowest in the world. The major problems of primary education are low or uneven enrclments, high dropout rates, inappropriate curriculum and weak teaching resulting in poor student achievement and underfinancing. Similar problems exist at the secondary level especially when they are coupled with unclear organization and inefficient management. Higher education suffers from numerous problems as it tries to expand while maintaining quality and efficiency. Finally, the

training system needs to trim costly vocationalization and tighten linkages with public and private sector employment activities.

### Primary Education

**Access:** Only 52% of the Pakistan's primary school age population is enrolled in school. The urban-rural and male-female imbalances are stark: literacy rates range from 7% for rural females to 55% for urban males, and primary enrollment rates from 20% for rural females to 77% for urban males. Only 15% of the rural population compared to 44% of the urban population is literate, and 72% of the urban primary school age group is enrolled in school compared to 40% in rural areas. The low educational attainment of the population in general and of the female population in particular, is a serious impediment to the country's long term economic development. The lack of educational opportunities for girls is reflected in their low initial enrollments, and for rural people generally by the limited coverage in rural areas. Access is affected by the system of separate boys and girls schools which exists in most rural areas.

**Efficiency:** High drop out rates which contribute to low overall enrollment levels, show wide variation by sex. Between 1980 and 1985, for example, about half of the students who had entered Grade 1 dropped out by grade 5. The highest drop rate occurred between grades 1 and 2 where 25% of the boys dropped out and 40% of the girls dropped out. Put another way, for every 100 boys entering grade 1, only 57 survive to grade 5, while for every 100 girls entering grade 1, only 41 reach grade 5. High dropout rates in the lower grades means that the classes in the upper grades are small (10 - 20 pupils). Some 10% of boys and girls in primary school have repeated at least one grade. No doubt the oppressive physical conditions and harsh discipline in many schools discourages attendance and induces dropping out. High rates of teacher absenteeism, a reflection of lax supervision, also contributes to indifference among parents and students. Sociocultural factors in the home which further induce dropping out are the important role of the child in family management and farming, and the tendency for poor and illiterate parents not to enroll their children when the child's labor cannot be foregone. In addition, parents place restrictions on girls once they have reached puberty, and they are usually not allowed to move around (especially in rural areas) unless accompanied by a female adult. Because 67% of primary school teachers are male, this discourages many rural parents enrolling their daughters in school.

**Quality:** Few children who attend primary school acquire literacy and numeracy skills. Most of those who reach Grade 4 are unable to answer even simple questions drawn from the science and mathematics syllabus. Poorly trained teachers, the lack of instructional materials, inadequate supervision and decaying physical facilities all contribute to the poor quality. Pre-service and in-service teacher training programs are weak and ineffective in imparting classroom teaching skills and upgrading

subject matter competence. About 20% of male teachers and 26% female are untrained. In addition, trained teachers tend to remain unemployed in urban areas because they enjoy financial and other benefits (access to better schools for their children) which are not available to rural teachers. Clearly, a system has to be developed to induce them accept posts in rural areas. Teachers are also undersupervised. The few officials responsible for supervision can manage only one to two inspections per year, and this is insufficient to monitor the teachers' performance or provide remedial guidance. Adequate instructional materials for teachers and students are generally not available in rural areas. What is available is not organized into lessons or other classroom activities, and is therefore not used as intended. At any time, about 50% of the students are without textbooks.

Approximately two thirds of the primary schools are constructed adequately (brick walls, concrete roofs and floors) while one third are dilapidated, unusable or in need of substantial repair and maintenance. Some of the latter consist of local materials provided by the community but require continuous maintenance. Lack of benches and desks is also critical, so that in the majority of schools, students sit on jute mats on earth floors. Crowded, uncomfortable, and unsanitary facilities not only deter the child from learning, they persuade parents that the child is better off at home or in the field.

The curriculum does not relate adequately to the student's environment, and it is too demanding for the early stage of primary school. Further, it is not suitable for many of the smaller, rural schools where multi-grade teaching predominates. A reduction and simplification of the content is necessary for the first three grades. A major reform is underway to develop a two-stage curriculum with a minimum core program of basic literacy, numeracy and religious knowledge in grades 1-3; elements of health, basic science and social studies are introduced in grades 4 and 5. While textbooks and new materials have been developed for the primary level, traditions of rote learning, an examination-driven system, and lack of storage facilities in schools inhibit proper and effective use of these texts and materials.

**Teacher Training:** The paramount issue facing primary education in Pakistan today is how to recruit, train and deploy teachers to improve the quality of primary (and secondary) education. First, underinvestment in teacher training has made the training system insufficient to meet the demand for new teachers necessary to keep pace with the expansion of the entire system. To combat past deficits, the government has had to hire untrained teachers as a short term solution. Second, the shortage of female teachers in rural areas is probably the single most critical impediment to the development of primary education in Pakistan. As noted above, parents will send their daughters to school if they know female teachers exist there; and surveys have shown that parents also prefer their children (even boys) to be taught by women. To meet this shortage, the government may be lowering the minimum education

requirements for primary school teachers, while also stepping up efforts to improve in-service training and supervision. Finally, great efforts are needed to expand and improve teacher training facilities, staff, curricula, materials and practice teaching programs.

**Finances:** Although the share of education expenditures in GNP has been rising from 1.6% to 2.4% (1988), it is still low by comparison with Lower Income Countries. Historically, education expenditures have received low priority in Pakistan, and as a share of total government spending, it averages only 7% (compared with 12.7% for all Asian countries). Primary education's share was also low averaging 34%, compared with 44% for the countries of South Asia. Pakistan must commit more funds to education and address how these funds will be obtained if it expects to improve the quality and efficiency of the system as well as to maintain the current rate of expansion.

### **Secondary Education**

Many of the above problems for primary education exist as well for secondary education. For example, the disparities between boys and girls and between urban and rural areas increase for secondary education: of the secondary school age males, 55% attended urban schools while 20% attended rural schools, but of the secondary school age females, only 35% attended urban schools and less than 3% attended rural schools. Unique to secondary schools, however, is the definitional problem arising from combining primary and secondary schools. As education has expanded, middle schools have emerged as classrooms have been added onto primary schools; and then high schools emerge as classrooms have been added onto middle schools. This ambiguity affects the entire organizational structure of the secondary school in terms of teacher assignments, financing, management, supervision and facilities. This structural ambiguity not only renders inefficient operations but emphasizes secondary over primary education. Administrators, supervisors, and teacher trainers responsible for primary and middle school education have limited or no direct experience at these levels yet are assigned to train, operate or supervise them. Hence there is no cadre of professional educators and managers focussing on the practice of teaching children aged 5-12.

### **Higher Education**

Perhaps the main issue regarding higher education is the declining quality. This is reflected in:

- low pass rates in the public examinations;
- only 2-3% of students who do pass are in the upper quartile;
- a limited number (26%) of teachers with Ph.D degrees;
- only 5% of the faculty contributing to reputable journals;

negligible income generated through consultancy and research;  
 less than 1% of students enrolled in Ph.D. programs;  
 less than 1% of the university budgets going into research;  
 and, sharp criticism by public officials about the abilities  
 of university graduates.

These call attention to the critical need for many reforms in the present system. In addition, higher education suffers from significant wastage rates because of public examinations with failure rates of 66% at the higher secondary level, 65% at the bachelor's level, and 47% at the master's level.

### Management

Pakistan's education (and training) system is huge and continues to grow. With thousands of units ranging from small primary schools to universities, the management and administration of education is among the most complex of any government service. An overriding theme is the inherent conflict between increasing centralization of decision-making and management that have resulted from government concern about education; and the need for decentralization of decision-making and authority. This is exemplified in the position of the District Education Officer (DEO). While the DEO is the linchpin in the whole system, he is encumbered with decisions of staffing, promotions and resource allocations on the one hand; and professional inspection and supervision on the other. Because of the concentration of decision-making at this level, the DEO is overburdened, and cannot perform either function effectively. Other examples abound, and there is a need to decentralize authority and decision-making to the local and school levels. Related to this is the inordinate inefficiency and extra time needed to disburse even the smallest sum for school operations. Progress in simplifying and streamlining the approval and procedural sequence for disbursements is needed.

### Training

Pakistan is still bent on expanding its technical and vocational system with increased institutional and bureaucratic structures, much in the way developing countries did in the 1960's. There is an explicit effort in the Seventh Development Plan to "vocalionalize" much of secondary education so that "...skills like agriculture, horticulture, fish culture, animal husbandry, plumbing, welding, turning, electrical wiring, woodwork...should be incorporated into the Middle School Curriculum (Agenda for Educational Development, 1988-93, MOE 1987)." Present labor market conditions do not warrant major additional investments in formal public sector vocational training. Rather, there is a need to consolidate and improve the quality of existing facilities. Any increase in vocational training capacity should be market-driven,

not supply-driven. In addition, vocationalizing secondary education is not affordable and will most likely fail as it has elsewhere. The World Bank recommends that "the most appropriate form of vocational training is to provide increases basic education so that an expanded labor force will be a more trainable labor force (Pakistan Education Sector Strategy Review, 1988:59)."

The Strategy Review warns of the pitfalls of "simplistic" manpower forecasting and the need to tighten linkages between training activities and employment centers in the public and private sectors. Emphasis should be on labor market surveys, tracer studies, and monitoring and evaluation studies to align appropriately market opportunities and needs with training activities and supply. In addition, cost-effective mechanisms for training such as apprenticeships, on the job training, and nonformal training are advocated over more inflexible and costly forms of vocational training. In effect, Pakistan needs to reverse an outmoded approach to training, particularly as it attempts to build a more flexible workforce for the private sector.

## SRI LANKA (33)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 16.6 million	Illiteracy rate- total: 13% female: 17%
Population growth rate: 1.2%	School yrs completed by labor force- total: -- male: 7.5
Population (yr2000): 19 million	Gross Enrollment ratio Primary- total: 103% female: 102%
GNP per capita: \$400	Secondary- total: 66% female: 70%
GDP growth rate: 4.6%	Tertiary- total: 4%  Sci/Engin as % of tertiary students: 34%
Production structure:	Private school(prim): 2%
agriculture - 27%	Pupils reaching gr 4: 97%
industry - 27	Primary repeater rate: 8%
service - 46	Pupil-teacher ratio-pr: 16 sec: --
	Ed expenditures as a % of the GDP: 2.2%
Newspaper circulation: 106 per thousand pop.	Total expenditures (public) on education: 7.8%

Overall, the education system in Sri Lanka provides a standard of education that is impressive in developing countries. In terms of enrollments and efficiency, Sri Lanka has a good record. A well developed primary system provides an education opportunity for every child, and well over half (66%) of the secondary school age population is enrolled in secondary school, although by year 11 the schools are more typical of schools in other developing countries, reflecting the heavy emphasis on the examination system. Ninety five percent of primary students complete the primary cycle, only 9% repeat at this level, and almost 90% of the adults are literate.

The principle problems are: weak school-level management; low status of teachers and insufficient teacher training; regional disparities; shortages of facilities; and an exam-driven curriculum.

**Management:** Currently, the Ministry of Education is revising the highly centralized system of primary and secondary education so that it will be more decentralized at the lower levels. While the Ministry will remain responsible for overall policy formulation, supervision and procurement, the provincial levels of the Ministry will assume more responsibility regarding local supervision, operations and planning. There is an attempt underway to decentralize administrative authority and responsibility through a tier system whereby regional and local groupings of schools are formed. At the lowest level are clusters of schools each of which is headed by the largest core school. The problems arise as to how the structures will be realigned and the lines of responsibility and authority will be redefined. More important, there is a shortage of managerial and supervisory skills throughout the school system. Former principals are now district education managers, but they lack background and training in management, personnel, and financial matters. Extensive management training within the context of the cluster system will be needed.

**Teachers:** In the past, teachers enjoyed high status and salaries. With the rapid increase in enrollments during the 1970's, many teachers were recruited with little or no training, and so the teaching standards declined. There has not been in-service training to prepare the untrained teachers. In addition, except for principal and supervisory positions, there are no promotional posts available for teachers. This makes it difficult to reward good teachers, resulting in a tendency to push good teachers out of the classroom. The result is an accumulation of teachers with inadequate experience, low morale, declining professional standards, and rising absenteeism. The current in-service training system has not been able to meet the needs of recently recruited teachers.

While in-service training has been upgraded and expanded, and teachers' salaries have risen, the quality of teaching is still uneven. Also there is insufficient teacher training capacity for the future, and it is questionable whether the number of untrained teachers will increase. In fact, there is currently a backlog of 30,000 untrained teachers, along with a program to hire a further 25,000. Since the in-service training capacity is only about 5,000 per annum, there is urgent need to expand, improve and make more flexible teacher training and career opportunities.

**Regional Disparities:** There are great differences among regions and among individual schools in the quality of teaching, of facilities, and of pupil performance. While many of the disparities reflect general inequities in income and status, there are also great disparities among individual schools. This is because parents have been allowed choice in the selection of schools, and some parents

have been more successful than others in demanding resources. As a result some very large and well-endowed schools have emerged which have continued to draw more students from schools which previously served them; and the enrollments and resource base of the latter declined as they became less attractive. While the MOE has attempted to target these declining schools for special treatment, weak management and political pressures have rendered these efforts unsuccessful. Decentralization and school clustering hopefully will overcome this problem.

**Facilities:** During the expansion phase of education, much of the construction was of minimal quality. Subsequent budget limitations constrained efforts to renovate these buildings and to replace furniture and equipment. As a result many schools lack sufficient classroom space, and most basic facilities such as water supply, toilets, blackboards and furniture. It is estimated that about 8,000 additional classrooms are required to provide the minimum standard of 10 square feet per pupil; and about 2,000 schools lack adequate furniture and sanitary facilities. Hence the utility of good basic investments in buildings and teachers need to be increased with marginal additional expenditures to renovate buildings and to improve equipment.

**Curriculum:** Secondary exam pressures at the O- and A- levels emphasize the academic subjects and instruction as coaching for these exams. As a result, students do not develop other skills which they should as part of their lifelong preparation; and there is wastage as 40% of students repeat year 10 and 15% repeat year 12 in order to take again the O- and A- level exams respectively. There is no political sentiment to move away from the current exam system. In fact, parents demand more academic type education because it leads (through the exam system) to the best jobs. Complex issues include: an overly academic curriculum; better linkages between school leaving and job training; the appropriateness of school leaving points; and the entire examination system.

## INDONESIA (36)

DEMOGRAPHIC & ECONOMIC		EDUCATION
Population: 175 million		Illiteracy rate- total: 26% female: 35%
Population growth rate: 2.0%		School yrs completed by labor force- total: -- male: --
Population (yr2000): 214 million		Gross Enrollment ratio Primary- total: 118% female: 116%
GNP per capita: \$450		Secondary- total: 41% female: 34%
GDP growth rate: 3.6%		Tertiary- total: 7%  Sci/Engin as % of tertiary students: 16%
Production structure:		Private school(prim): 18%
agriculture - 26%		Pupils reaching gr 4: 78%
industry - 33%		Primary repeater rate: 9%
service - 41%		Pupil-teacher ratio-pr: 28 sec: 15
Newspaper circulation: 14.2 per thousand pop.		Ed expenditures as a % of the GDP: 2%
		Total expenditures (public) on education: 8/8%

Since Independence in 1950 Indonesia has concentrated on expanding education with emphasis on primary education. Progress in expanding primary schooling was especially rapid after 1973, when OPEC oil price increases led to augmented government resources. School construction accelerated, and in 1977 primary school fees were ended. Currently, primary enrollments are over 27 million students, and this expansion of primary schooling is one of the most successful cases of educational expansion in the world. Secondary and higher education also expanded, and in the 1970s it expanded at an even higher rate than primary education, although starting from a much smaller base. Nonformal education programs for

out-of-school youth and adults were also developed on a large scale.

The education structure follows that of most other countries with six years of primary school, three years of lower secondary, three years of upper secondary, and university. After each stage there is an external exam, and currently 33% primary school graduates do not progress to secondary school, while 17% of graduates from lower secondary schooling fail to progress to upper secondary school. Reasons for this attrition between cycles are probably lack of access to schools, cost of schooling, and inadequate student performance. Parallel to academic secondary schools are a variety of technical and vocational streams. In addition, private schooling is pronounced in Indonesia: enrollments in private schools (excluding religious schools) account for 7% of enrollments at the primary level, 44% at the lower secondary level, 60% at the upper secondary level, and 60% in higher education.

Despite this remarkable progress, Indonesian education suffers from a number of problems at the primary, secondary and higher levels. These problems relate to: access, efficiency, quality, organization and finance. These problems are most pronounced at the primary level which receives the bulk of the discussion, but they will also be addressed at the other two levels.

**Access:** The MOEC (Ministry of Education and Culture) reports a gross primary school enrollment of 118% and a net enrollment of 97%. Available data suggests, however, that the actual net primary enrollment is probably 86%. This means that there are still about four million children of primary-school age who are not enrolled in school. Most likely these are children who cannot perform acceptably and drop out, who are mentally or physically handicapped, who have no access to school, who cannot afford school costs, or whose families cannot release them for schooling. In a 1978 survey, the predominant reason given by parents for their children's absence from school (primary and secondary) was the lack of funds for schooling. Fifty per cent of the parents surveyed for their children's absence from school reported this reason. Similar to other Southeast Asian countries, there is no gender differentiation in primary enrollments, but unlike these countries, differences do emerge at the secondary level with the number of boys attending school being about 10% more than the number of girls. This is probably because Indonesia has more specialized schools for boys than other countries, such as technical, sports and teaching training secondary schools.

**Internal Efficiency:** The dropout rate in Indonesia is low indicating long-term retention in primary school. Curiously, however, the dropout rate has increased slightly at the primary level from 2.9% in 1984 to 4.1% in 1987, while during the same period it has declined slightly at the secondary level.

**External Efficiency:** High rates of unemployment are reported among secondary graduates. Some of this is explained by the extended

interval between graduation and first employment, or a job search on the average of two years. Indonesia has followed the traditional path to address unemployment by expanding vocational education. This has met with mixed results with vocational secondary graduates securing employment at a higher rate than academic secondary graduates in some cases, but with the reverse occurring in other cases. Currently, other options, such as employer-based schemes, are seen as being less costly and more effective to vocational education.

**Quality:** There is no current available national assessment data regarding student achievement although some survey work is being done. However, public opinion as expressed by educators, parents and employers consistently assert that student performance is unacceptably low and even declining. Data from 1976 national assessment exam indicates that primary school students performed poorly with less than 50% mastery in science, mathematics, social studies and national language. As expected, rural students consistently performed at lower standards than urban students. Indirect evidence of poor performance also comes from the external exams where over 50% of primary students earned less than the minimally acceptable scores in mathematics and science. However, these examinations suffer from reliability and validity problems and cannot be used as an acceptable yardstick of student achievement or school quality.

Other indicators of quality such as school inputs, teaching and management, show serious deficiencies. Despite massive school expansion and textbook programs, there is still an uneven distribution of school inputs in terms facilities, materials and texts. Some schools have no more than a handful of books of any description or have only the basic materials and facilities. Others have substantial buildings and adequate texts and materials. Largely, this inequity of inputs correlates with the rural or urban setting of schools, as parents of the latter can afford to supplement government funds with their own to increase school resources. This inequity in school resources is at both primary and secondary levels. The quality of teaching is probably the most serious deficiency as primary teachers in particular lack status, training, motivation and the requisite skills to convey the curriculum adequately. The average teacher is not likely to clarify learning objectives to students, explain clearly, give examples, provoke rational thinking by appropriate questioning, nor provide helpful feedback on test results. Inadequate pre-service training just does not prepare teachers fully, and many of them are already poorly educated upon entering teacher training institutes. Finally, school management tends to be weak as principals are ill-equipped for the challenging management roles required by modern primary schools. Most were trained only as teachers, and they lack the requisite training and experience to manage effectively a large staff. Often they work in isolation without external support. More seriously, they lack the real authority to ensure that appropriate educational standards are followed in the appointment and transfer of teachers, in auditing school

expenditures, and in proper allocation and use of physical school inputs.

**Organization:** MOEC in principle remains responsible for all technical inputs to public primary education -- including teaching training, curriculum development, and evaluation of teaching performance. However, the actual physical management of the 133,000 public primary schools in Indonesia -- including construction of schools, recruitment of teachers, and provision of recurrent budgets for materials -- is under the Ministry of Home Affairs (MOHA) and is carried out by the education offices of provincial or district level governments. This dual administration of primary education is a practical consequence of the decision to decentralize primary education early in the development of the Republic. Unfortunately, it seriously degrades the quality and effectiveness of primary education:

Primary education budgets are neglected because the MOHA, which has financial responsibility, does not make the case sufficiently for additional resources as it shares overall responsibility with the MOEC;

Dual administration of primary schooling limits the career development of primary school teachers as the MOHA makes promotion decisions regarding teachers independently of the MOEC's performance evaluation;

There is often a mismatch between what is needed in primary schools and what is provided by the local government (eg. outdated textbooks);

Dual administration involves inefficiencies (eg. redundant staff) which consume resources that could be used to obtain materials or support teachers;

In sum, the dual administration is a long-standing problem that complicates, confuses and adds uncertainty to the managerial environment of schools. While it is a well recognized problem, it is widely viewed as intractable, even among senior government officials.

**Finances:** The finances of the public school system is heterogenous in terms of the resources it receives. The most significant variable in school financing is parental contribution. As noted above, parental and community contributions to schools at primary, and even more so at the secondary level, vary considerably. In affluent areas, these contributions provide adequately for operational needs of schools, and since parents have a hand in deciding how the money is spent, their interest, involvement and commitment to education is significant. In poorer areas, schools must rely on official sources of finance, which are minimal or inadequate, as parents are unable to contribute sufficient amounts

for quality inputs. Hence the quality of education in schools from poorer areas suffer. In addition at the primary level, so little is allocated for non-salary recurrent costs, that some teachers lack such basic inputs as chalk, paper, and textbooks, and so cannot achieve their instructional potential.

### **Secondary School Quality**

The deteriorating quality of learning in secondary schools is due to a number of factors. First, the rapid expansion of general secondary education has led to shortages of qualified teachers in mathematics, science and English. Often these subjects are taught by teachers who have had only one or two years of postsecondary education, and these teachers may have to teach at two or more schools. Second, science equipment has largely been imported, and may not correspond to curriculum requirements. Also teachers are reluctant to use it because they must pay for damage, or the instructional manuals are written in a foreign language. Hence, students have limited opportunities to carry out experiments in class. Third, grade 12 leaving and university entrance examinations were abolished ten years ago, and schools were given the autonomy to set their own exams. Not only has this resulted in uneven standards, but some schools and teachers are unwilling to fail many students, and consequently the final examination results and graduation certificates carry little weight. Finally, secondary schools differ, as noted above, in terms of parental and community contributions which affect significantly the facilities, resources, and overall quality.

### **Higher Education Quality**

Even though there have been improvements in higher education, the overall quality is still low in both public and private institution. Some of the more significant factors accounting for low quality are: the low academic caliber of some students admitted into universities; the low percentage of full-time teaching staff and of teachers holding advanced degrees; and the lack of sufficient laboratory equipment, library materials and facilities. In addition, there is an underemphasis in science, technical, engineering and management curricula and degrees. Internal efficiency is low by various criteria: a low graduation rate of the entering cohorts; twice the number of required years taken for graduation; and, few research papers and publications, especially in the sciences. Finally there are widespread inequities between the quality and resources of institutions on Java and Bali and those on the Outer Islands.

### **Training**

At least three major problems exist regarding the Indonesian training system. First, the National Training Council needs to be brought into effective operation as do similar representative bodies at the provincial level. Staff expertise need to be strengthened, and effective management information systems need to

be developed for training. The Ministry of Manpower needs to coordinate more effectively training operations in other ministries and in the private sector. Second, training needs to be standardized so that skills testing is done more uniformly and systematically. There is no formal apprenticeship system in the sense of coordinated programs of training to agreed standards involving both off-the-job and in-plant training. Third, skills training needs to be upgraded and improved, particularly through the use of specialist and advanced skills training and through coordination of training activities and employment needs. There is an urgent need to expand and improve in-plant training, mobile training, and training for self-employment.

## AFGANISTAN (38)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 19 million	Illiteracy rate- total: 76% female: 92%
Population growth rate: 2.4%	School yrs completed by labor force- total: -- male: --
Population (yr2000): 27 million	Gross Enrollment ratio Primary- total: 18% female: 12%
GNP per capita: \$---	Secondary- total: 6% female: 4%
GDP growth rate: --	Tertiary- total: -
	Sci/Engin as % of tertiary students: 23%
Production structure:	Private school(prim): 0
agriculture - --	Pupils reaching gr 4: 69%
industry - --	Primary repeater rate: 6%
service - --	Pupil-teacher ratio-pr: 37 sec: 18
	Ed expenditures as a % of the GDP: 1.8%
Newspaper circulation: 3.7 per thousand pop.	Total expenditures (public) on education: --

Ten years of war and nine years of Soviet occupation have left Afghanistan in need of total reconstruction. An estimated one to two and a half million Afghans are dead with many wounded, maimed or destitute. In addition, many Afghans are rootless having migrated either to urban areas or out of the country. Education will be crucial to this reconstruction, and the existence of functioning schools and centers for literacy or skills training will help maintain returned refugees as well as prepare both adults and children for productive livelihoods. In addition the University of Kabul, once a promising and vibrant center for learning and ideas in Afghanistan, will have to be rebuilt.

Afghan educational needs are vast. Most Afghans have not had the opportunity to study at any level for the last ten years, and most of those who had some training prior to 1978 have not had the opportunity to use their skills and need retraining. Educational needs will include support for all levels of schools: primary, lower and upper secondary schools, adult education facilities, technical schools, teacher training colleges, and a reconstituted and restaffed University at Kabul.

**Basic Education** -- Reconstructing, developing and operating a basic education system will be difficult. Pre-war Afghanistan was a country of 15,000 villages which had mostly religious schools provided by the village Mullah. In the 1960's the government began a building program of rural primary schools, and by 1974 there were about 2000 public schools for grades one to three. Coupled with religious schools, the total was about 3000 schools. Most were one teacher schools and operated with few, if any, books or teaching materials. Also, few of the teachers were trained.

This program came to a halt with the war. After the Mujahideen took control of the countryside, the Kabul government was unable to operate in rural areas, and schools were operated by various resistance groups. In some cases, schools were run by resistance groups operating from Pakistan; in other cases, local villagers may have continued to operate the government schools after government support collapsed. While a few may operate satisfactorily, most are no doubt minimal operations. In urban areas, primary schools have been controlled by the Marxists.

Highest priority lies with rural primary education. Since much of the fighting took place in rural areas, death, destruction and mass movement have uprooted whole communities. Hence, there is a need to establish new schools, to renovate existing ones, and to improve them with books, supplies, and trained teachers. A recent U.N. study estimated that over 5000 primary schools will be needed, and at a minimum, the pre-war level of 3000 schools must be reached.

In addition to primary education, priority lies with literacy training. Before the war illiteracy was estimated at 90%, and this has probably increased as a generation has been denied the opportunity for training. Clearly literacy training is needed on a wide scale for adults.

**Skills Training** -- The war has caused a critical shortage of skilled workers in Afghanistan who are able to perform basic clerical and managerial operations. Those who had the training have either lost their skills or were among those who have fled during the war and will not return. Priority skill areas for reconstructing and strengthening the administrative and bureaucratic operations are accounting, computers, filing, office management, procurement, record management and typing.

**Post primary schools --** Secondary education has virtually ceased. Only fifteen secondary schools operate in rural areas which offer a non-Marxist curriculum. The few that operate in urban areas maintain a Marxist curriculum. Kabul University, while still functioning, was devastated by the war. The University was altered to maintain a Marxist curriculum, and the quality of teaching is questionable. Since the former faculty was a threat to the Communist occupying powers, most members fled, were imprisoned or were killed. Those faculty members who remain or who have survived, are out of date in their academic specialities and will need to upgrade their conceptual knowledge and skills through training and renewed contacts with outside scholars in their field. Clearly, university development is necessary if Afghanistan is to build up its intellectual, professional, managerial and technical manpower for national development.

## PHILIPPINES (46)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 60 million	Illiteracy rate- total: 14% female: 15%
Population growth rate: 2.1%	School yrs completed by labor force- total: -- male: --
Population (yr2000): 74 million	Gross Enrollment ratio Primary- total: 106% female: 106%
GNP per capita: \$590	Secondary- total: 68% female: 69%
GDP growth rate: -0.5%	Tertiary- total: 38%
	Sci/Engin as % of tertiary students: 38%
Production structure:	Private school(prim): 6%
agriculture - 24%	Pupils reaching gr 4: 76%
industry - 33	Primary repeater rate: 2%
service - 43	Pupil-teacher ratio-pr: 32 sec: --
	Ed expenditures as a % of the GDP: 3.3%
Newspaper circulation: 37 per thousand pop.	Total expenditures (public) on education: 18%

With dramatic emphasis upon educational development beginning in American Colonial rule, the Philippines had an early start in building its schools system when compared to other developing countries. As a result, it achieved universal primary education years ago, and today has higher than average enrollments at all levels for the LMIC's. While there are social and economic inequities in terms of social selection, there is no problem of access to general education in the Philippines. The most severe problems are those of declining quality and inefficiency.

**Quality** - Student achievement on standardized tests at the elementary and secondary levels is low in all curricular areas. On nationwide tests, Filipino students fall considerably short of acceptable standards in language and mathematics. In a recent international study of science achievement in 17 countries, Philippine fifth graders answered 9.5 items correctly out of a total of 24 questions, respectively. Fifth graders in Singapore and Hong Kong, in comparison, both answered 11.2 items correctly out of the same 24 questions. Philippine eighth graders again fell short by answering only 11.5 items out of 30 questions, while eighth graders from the same two other countries as well as from Thailand averaged 16.5 items on the same test. In addition, students from schools in economically poorer communities and regions performed lower than students from schools in economically more prosperous communities and regions.

**Efficiency** - Students dropout at all levels, but the dropout rate declines as the level of education rises. The overall rates of transition at the various points in the school system reveal that only about 63% of entering students in the first year complete their elementary schooling. About 90% of these graduates enter into secondary school, and about 70% of them finish the fourth year of secondary school. The dropouts are concentrated among the economically disadvantaged students. Using fathers' education as an SES measure, students whose fathers received a college education rarely drop out, while nearly 50% of those whose fathers had only a primary education leave school without completing the cycle. In addition, school-related factors seem to influence dropping out. Evidence shows that students in schools with higher achievement levels have a high probability of completion even when other factors are held constant. However, children in rural and disadvantaged schools with low achievement are more likely to drop out (World Bank, *Philippines Education Sector Study*, 1988:10).

Repetition does not seem to be a problem with 2% repeating at the primary level.

The quality and inefficiency of student performance appear to be affected by the quality of teachers, the language of instruction, and by the extent of decentralization and accountability in school management. Measures of low quality of teachers are poor performance on a competency test given to a large sample of trained teachers; and the fact that only about 30% of all graduates from teacher training between 1978 and 1985 passed the Professional Board Examination for Teachers. While there have been efforts to raise the entrance standards for candidates entering teacher training institutions, there has been no concerted effort to improve teacher training. In addition, only until recently has the government made any attempt to enhance the profession of teaching by raising the salaries.

While 75% of the population speaks neither English nor Filipino as a first language, the languages of instruction in primary school are English for mathematics and science and Filipino for all other

subjects. While evidence is not available it would seem in some cases that these "foreign" languages interfere with the local languages so that some students have difficulty making the transition to them in school. This interference most likely inhibits rather than facilitates learning.

One study which compares public and private schools finds that, after controlling for selectivity in student characteristics, the primary and secondary private schools outperformed the public schools. In addition, the private schools had lower unit costs. The reason, it was argued, was that parents and local communities of the private schools had more influence on school financial and academic operations than their counterparts did for public schools. Hence the private schools felt more accountable to the parents. It must be noted, however, that only 6% of all primary students attend primary school in the Philippines (IBID., p.15).

### Higher Education

Unlike many of the other ANE countries, the Philippines has an extensive system of higher education. One out of three individuals of the 17 -20 age cohort is enrolled in over 1000 post secondary institutions. Public institutions are subsidized and supervised by the government while the private institutions are either religious or secular. Over 80% of all college and university students attend private institutions while the remaining 20% attend public institutions. Like general education, higher education has problems of quality and efficiency; it also suffers from inequities.

**Quality** - Only 4% of higher education faculty have Ph.D's, and most of these are at the premier University of the Philippines. More than 70% have only a bachelor's degree. Faculty salaries are low as most faculty members receive a wage which, if unaugmented by additional income, would put them below the poverty line. In addition, scarce resources at colleges and universities allow for little investment in laboratory equipment (even in engineering colleges), books, and periodicals. While government regulations have been established to maintain minimum quality standards regarding curricula, class size, textbook use, fees, faculty salaries, etc., they have the opposite effect of lowering quality. For example, a low ceiling on tuition increases and the need to spend most of any increase on salaries, leave little for investment in libraries, laboratories, equipment or staff development. Deregulation has been occurring since the early 1980s, but more deregulation is necessary for the institutions to generate sufficient revenues.

**Efficiency** - Both public and private institutions focus on job-oriented fields, and over 90% of students are in programs with an occupational objective such as business administration or engineering. Most graduates find their training relevant to their jobs, although at least one third work outside their fields. Since the curriculum tends to be inflexible, this testifies more to a

relatively well-functioning labor market than to relevant training. Higher education, then, appears to be efficient externally.

However, the proliferation of small institutions or satellite campuses of larger institutions raises problems of economies of scale. The proliferation of these entities with small enrollments drives up operating costs per student. If enrollments were increased in the one-campus institutions from 1000 to 5000 students, unit costs would decline by over 50% and thus improve operating efficiency.

**Equity** - Not only do students in higher education tend to come from families whose socioeconomic status is considerably above the national average, but the government's subsidizing of state colleges and universities often helps students from higher status. This is because family incomes of students increase at the best public institutions (e.g., University of the Philippines) which are also the most heavily subsidized. Thus, if the equity objective is to use government funds to redistribute educational opportunities to lower-income groups (who mostly attend the poorer rural institutions), a vastly enlarged scholarship program should be targeted at the poor, and used at accredited public or private institutions.

## YEMEN (47)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 8.7 million	Illiteracy rate- total: 86% female: 97%
Population growth rate: 3.1%	School yrs completed by labor force- total: 4.1 male: -
Population (yr2000): 12.6 million	Gross Enrollment ratio Primary- total: 79% female: 31%
GNP per capita: \$590	Secondary- total: 15% female: 3%
GDP growth rate: 5.6%	Tertiary- total: -  Sci/Engin as % of tertiary students: -
Production structure:	Private school(prim): -  Pupils reaching gr 4: 70% Primary repeater rate: 20%
agriculture - 28%	Pupil-teacher ratio-pr: 54 sec: 27
industry - 17%	Ed expenditures as a % of the GDP: --
service - 55%	Total expenditures (public) on education: 16.5%
Newspaper circulation: 10 per thousand pop.	

The structure of formal education in Yemen as well as the general orientation of the curriculum at each level, is similar to that found in most Arab countries. Six years of primary school is followed by three of lower secondary and three of upper secondary school. University consists of four years with an additional year for agriculture and law. This has enabled the system to grow much faster than otherwise would have been possible, and has enabled Yemen to overcome a main constraint of teacher shortage by importing teachers from other Arab countries (mainly from Egypt, Sudan and Syria).

As might be expected, this rapid expansion has resulted in a number of problems. The teacher-pupil ratio at the primary level has deteriorated badly from 1:42 in 1980 to 1:54 in 1989, and some urban schools have as many as 100 students in one classroom. While the importation of foreign teachers has enabled the system to accommodate the rapid increase of enrollments at all levels, this has strained the education budget (salaries of non-Yemeni personnel at \$150 million per annum account for nearly half the current MOE budget). It has also made it difficult for the system to adapt to Yemeni needs: for example, new curriculum developments cannot easily be implemented if a majority of teachers are expatriates on short-term contracts. Major constraints in teacher training are that there is no provision to prepare teacher trainers and that in-service training for existing Yemeni teacher staff is limited.

More generally, the major constraints relate to access, efficiency, quality, supervision and costs. These will be discussed mostly at the primary level although they will be considered briefly at secondary and university levels.

### Primary

**Access** - Prior to 1962, primary schools were limited to major towns, while in the villages, only mosque schools provided education. Since 1970, the primary school system has been progressively extended into most parts of the country, although inequities are pronounced between boys and girls. While participation of girls has increased steadily during the 1980s, they still account for less than a third of the total primary enrollment. Two thirds of primary schools are mixed (boys and girls, though in separate classrooms), and most of the remainder are for boys only. The general policy of the MOE is to encourage mixed schools at the primary level.

The government continues to increase greater equity of opportunity among urban and rural populations, and this is evidenced by the fact that the percentage of distribution of enrollments by governorate is about the same as the percentage distribution of the population by governorate. However, the major issue is that of female participation in the system. Female primary enrollments comprise only 31% of the total primary enrollment which is 79% of the primary school age population. In addition, female teachers make up only 8% of the primary teaching force, and most of these are employed in towns. In governorates where girls' enrollments are low, special efforts need to be made to recruit educated girls and women to become teachers.

**Efficiency** - The Educational Research and Development Center (ERDC) in Yemen reported that out of an average cohort of 100 students, only 21 will graduate in six years and seven more will graduate in an additional year. This has improved recently with an average repetition rate of 7.2% and an average drop out rate of 14.4% in each of the six primary grades. For those who graduate, it takes

an average of nine years -- 50% more than the official norm -- to complete the six year primary cycle. The ERDC identified ten major determinants of attrition including unsympathetic parental attitudes, school location and poor facilities, crowded classrooms, poor teaching and lack of materials. The major cultural factors were that young boys leave school prematurely to work on farms, while restrictive attitudes toward women's education contribute to early leaving among girls.

**Quality** - The rapid development of the primary system is reflected in the existence, especially in rural areas, of a large number of "incomplete" schools. These are designated so as they have less than the full six grades which is due in part to the grade one intake not reaching the higher grades. This results in multigrade teaching, and the teacher training program simply does not prepare primary teachers to cope effectively with these constraints. Also, facilities are poor, and in 1987 the MOE considered only 40% of the primary schools as being adequate. Less than one primary school out of six had water on the premises, and only one in four had electricity. Finally, there are the expected deficiencies in curriculum, materials and instructional methods in a system that has expanded so rapidly.

Qualifications of the Yemeni primary teaching force are generally poor because many teachers lack adequate teaching skills. The five-year teaching training program focusses on general secondary education in the first two years. From the third year, pedagogical subjects and teaching practice are introduced but they represent only 25% of the curriculum. The three-year program is overly theoretical and insufficient attention is given to pedagogy and teaching practice. The curricula for both programs need to be revised to prepare teachers better for the operational realities in primary schools, particularly multigrade schools. A serious impediment to curriculum improvement is the shortage of local skills to evaluate teacher training curricula and develop revised improved programs.

**Supervision** - Many schools have no designated administrators at all and a very few have a full time administrator. This has a depressing effect on teacher and student morale, weakens discipline, detracts from data collection activities, and inhibits the implementation of the national curriculum. Teacher trainees need more exposure to training in educational administration, particularly through practice teaching in the schools. In addition, there are few educational supervisors and those that exist are constrained by inadequate training and meager transport.

**Costs** - The fiscal capacity of the government has improved in recent years, but only to the point where revenues appear to approach a level adequate to finance recurrent costs. In 1985, over 90% of the MOE education recurrent budget was absorbed by teacher salaries and allowances. While the government has attempted to control both recurrent and capital costs, the obligations for the education sector are forecast to increase. If

these forecasts are realized, either the enrollment growth will have to slow down or dramatic reductions will be called for in other government programs.

### **Secondary School**

**Access** - Admission to lower secondary school is conditional upon passing the primary leaving examination and on the availability of preparatory school places. The latter is determined essentially by the availability of teachers. Enrollment at this level has been increasing faster than any other level of education, and as participation in primary education increases, secondary education becomes a pre-requisite for employment in the modern sector. Participation of girls in lower secondary education (10% of total enrollment for this age) is significantly less than in primary education as parents of girls are especially sensitive to the availability of women teachers -- of which there are few at this level. One third of secondary schools are mixed and nearly two thirds are for boys only with just a handful of schools (5%) for girls only.

Admission to upper secondary school is conditional on passing the preparatory leaving examination and the availability of places. There is a common curriculum in grade 10, but this splits into literary and science streams in grades 11 and 12. The gender gap in enrollment at upper secondary school is worse than in lower secondary schools so that female enrollments at both secondary levels total only 3% of total enrollments for students at this age level.

**Quality** - Overcrowding in urban schools and poor facilities are partly responsible for poor quality. It is not possible, for example, to teach modern science at the secondary level in a school without water or electricity, which is the current situation in more than half the secondary schools in the country. At the secondary level at least, if not at the preparatory level, there is a policy dilemma of quality versus quantity. What is needed is for certain minimum standards of teachers, teaching materials, equipment and physical facilities to be laid down and for adequate funds to be allocated to provide these resources.

### **Higher Education**

Higher education lies mainly with the University of Sana'a and foreign study. The University is an autonomous institution headed by a governing council, and the enrollments have been increasing steadily since its inception twenty years ago. However, there are concomitant high rates of attrition and repetition in all faculties. This is because of high foregone earnings for full time study as many students represent a major source of income support for their families. Consequently, most students are part-time, despite low university charges and no tuition.

Foreign study is a popular option with perhaps the best students going abroad for study. The most popular degree programs are medicine and engineering, and the most common countries for study are Saudi Arabia and Egypt.

#### **Technical and Vocational Education**

Vocational and Technical Education (VTE) exist at post-primary and post-secondary levels. The official emphasis of the curriculum at the VTC's is on manual training for students with no prior trades background. There is roughly a 50% split between classroom instruction and practical work. The major need in the VTE subsector is for the programs to be coordinated among themselves and with manpower needs of the nation. In addition, improvements must be made in VTE teacher training, employment counseling, and in the linkage between program administrators and employers of prospective VTE graduates.

## MOROCCO (48)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 23.9 million	Illiteracy rate- total: 67% female: 78%
Population growth rate: 2.6%	School yrs completed by labor force- total: -- male: 2.9
Population (yr2000): 31.8 million	Gross Enrollment ratio Primary- total: 79% female: 62%
GNP per capita: \$610	Secondary- total: 34% female: 27%
GDP growth rate: 3.2%	Tertiary- total: 9%  Sci/Engin as % of tertiary students: 32%
Production structure:	Private school(prim): 3.4%
agriculture - 19%	Pupils reaching gr 4: 89%
industry - 31	Primary repeater rate: 20%
service - 50	Pupil-teacher ratio-pr: 26 sec: 19
Newspaper circulation: 11.8 per thousand pop.	Ed expenditures as a % of the GDP: 3.9%
	Total expenditures (public) on education: 16.9%

The MOE is responsible for formal education and training which includes primary, general and technical secondary, and post-secondary technical education as well as universities. Primary school is five years in duration; and lower and upper secondary schools are four and three years, respectively. While Morocco has made significant strides in education recently, there are a number of shortcomings regarding access and participation, efficiency, quality, higher education, and vocational training.

**Access:** Morocco has improved access so that 79% of primary age students are enrolled, but this is a recent phenomenon as the adult

illiteracy rate is 60%. There is gender inequality throughout the education system with a male primary enrollment of 96% and a female primary enrollment of only 62%. Thus basic education is still not available to a significant proportion of the school-age population, with the most conspicuous aspect being the poor access for girls of whom almost 40% do not attend school. The problem is especially acute in rural areas where girls account for less than 30% of primary school enrollments. In addition, female illiteracy is more than 50% higher than male adult illiteracy and this reflects the lower and sporadic rates of female primary school attendance, again in the rural areas. Contributing to this gender bias in rural areas is:

the remoteness and isolation of rural schools -- hence the difficulty of travel for females;

the important role of girls in subsistence activities of the rural families. (Girls traditionally contribute earlier than boys to income-generating and household activities);

the shortage of women teachers whose presence helps overcome parents' reluctance to send their daughters to school (the number of female teachers at a school correlates with the enrollment of girl students);

Initial enrollments are generally at the level expected in new schools in rural areas, and this probably reflects the parents' favorable attitude toward modern primary schooling. However, attendance drops off thereafter as a result of the above factors and others which lie both within and outside of the school.

**Efficiency:** The primary repetition rate is 22% along with a high drop out rate (21% drop out before the fifth year.) Only 24% of students complete the five-year primary cycle in five years and the average number of years of instruction required for each graduate of this cycle is 8.6 years. The highest repetition occurs at the fifth primary year, which fully 50% of students repeat. (This is the highest reported incidence of inefficiency due to class repetition among the ANE countries under review.) High repetition rates throughout the primary schooling and high dropout rates at the end of primary schooling are attributable principally to the very limited number of places in secondary school, which restricts entry to the students who score the highest on the exit exam in the fifth year. Unless there is significant expansion of capacity in lower secondary schooling (grades 6 through 9), the high repetition and dropout rates in primary school will continue.

Higher education is also marked by high repetition and dropout rates, particularly in first year science studies where fewer than one third of student pass successfully the first time through. This high failure rate suggests faulty articulation between the secondary and university science curricula. To compound the problem, students who fail their major subject in university remain in the faculties and continue to receive fellowships in spite of

repeated failures. Attempts to curb this have been a reduction of fellowships and the introduction of a credit-hour system, so that students who fail a course must make up that course only and not the entire year of courses as was previously the case.

**Quality:** Since there is intense competition for the limited places in secondary school, the end of fifth year examination takes on an exaggerated importance. While not documented, this no doubt results in much of the teaching being coaching and exam preparation with emphasis placed upon priming the more capable students for that exam at the expense of the less capable ones. Competition is so intense that the high repetition rates for the fifth primary class (and even for earlier classes) result largely from parents' desires to hold back their children so as to give them the best possible chance of performing well on the test. In addition, teacher training is limited and contains no instructional units on multigrade teaching, effective teaching strategies or school administration. Nor is there any systematic program of continuous in-service training. This handicaps teacher assigned to rural schools, many of which are multigrade, and where flexible and innovative teaching strategies are needed. Moreover, the number of multigrade classes is expected to increase significantly with new schools in small scattered communities, and so the MOE must strengthen multigrade teaching practices, teacher preparation and supervision and materials.

**Higher Education:** While the government's efforts to expand schooling capacity did achieve a significant growth and diversification of enrollments, they also led to a sharp increase in recurrent expenditures on education. As a result of the large increases in enrollment at secondary and post-secondary levels during the 1970s and early 1980s, the share of MOE expenditures at primary level decreased to accommodate this expansion. Primary expenditures decreased from 44% in 1975 to 35% in 1985, while during the same period, secondary and higher education increased from 43% and 12%, to 45% and 17%, respectively. The rapid expansion of higher education has also been excessive in terms of an equitable distribution of educational opportunity. The recurrent costs of university education per unit are about ten times as high as those of primary education. As a result, Morocco has recently put the brakes on university expansion so as to use resources to address major problems at the primary level.

**Vocational Education:** In the past the government has placed top priority on expansion of the vocational training system. However, much of the equipment in older training centers is outdated, and equipment in a number of recently established centers is incomplete. As a result, training cannot be properly delivered. In addition, the quality of training suffers from deficiencies in instructor training, and skill modules in training courses need to be aligned more closely with the job realities. Organizationally, training agencies need to eliminate course overlap and to assist employers select job candidates through trade testing and certification services. Finally, the present poor quality of

vocational training programs are of limited benefit to their major recipients -- low income groups -- in improving their job-related skills. Women, especially, do not benefit, and need to be provided with more practical job skills not only in traditionally female trades such as textiles and commercials specializations, but also in industrial specializations such as electronics, which have begun to attract significant numbers of female applicants.

## EGYPT (49)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 51.4 million	Illiteracy rate- total: 56% female: 70%
Population growth rate: 2.6%	School yrs completed by labor force- total: - male: -
Population (yr2000): 67.4 million	Gross Enrollment ratio Primary- total: 87% female: 77%
GNP per capita: \$680	Secondary- total: 66% female: 54%
GDP growth rate: 6.3%	Tertiary- total: 21%  Sci/Engin as % of tertiary students: 9%
Production structure:	Private school(prim): -
agriculture - 21%	Pupils reaching gr 4: 78%
industry - 25%	Primary repeater rate: 1%
service - 54%	Pupil-teacher ratio-pr: 31 sec: 20
Newspaper circulation: 77.3 per thousand pop.	Ed expenditures as a % of the GDP: 7.5%
	Total expenditures (public) on education: 12%

Over the past thirty years, Egypt has placed high priority on human resources development and made considerable progress in building up a national education and training system to provide its economy with a well trained labor force. This has resulted in an impressive education system by LMIC standards, and Egypt depends on the quality of its educated and trained for domestic production and for export in neighboring countries, particularly in the oil-rich Gulf States. Despite this development there are problems regarding access, quality and efficiency in basic education. In addition, higher education needs to be more oriented to address development problems. Finally, the quality and efficiency of technical education (teacher training and engineering) needs improvement.

### Basic Education

Egypt has compulsory education from ages 6 to 14. There are over nine million enrolled pupils in basic education (grades 1-8) attending school, often in double and sometimes triple shifts, with anywhere from 45-75 per classroom. The growing population (2.6% growth rate) coupled with a national policy of compulsory education creates a number of constraints.

**Access** - Over the last decade the pace of grade one enrollment increase has accelerated in rural Egypt for all children including girls and economically disadvantaged groups. This has constrained enrollments mainly through crowding. Schools have resorted to split-shifting (grades 1-3 attend in the morning, while grades 4-6 attend in the afternoon); double-shifting (half of grades 1-6 attend in the morning, while the other half attends in the afternoon); and "flying classrooms" (classes, on a rotating basis, meet outdoors or in spaces available). Research indicates that there is no significant difference on grade achievement scores between children who learn in double-shift or in single-shift schools (USAID/Cairo. **Third Annual Report of the Study of USAID Contributions to the Egyptian Basic Education Program, 1986**). While schools are buying time with these solutions, it is recognized that new classrooms and schools should be built to accommodate the continuing increase in enrollments. Other constraints to access include: distance from home to school, incomplete schools, and sub-standard buildings.

**Quality** - Available though limited evidence indicates that Primary and Lower Secondary schools are educating Egyptian children satisfactorily (IBID.). Student achievement on regularly administered sixth-grade school examinations indicate acceptable scores, although there are large differences in passing rates among schools. Interestingly, however, there are no statistically significant differences among boys and girls, rural and urban and new and old schools. Practical skills testing, unfortunately, is less encouraging as rural schools lack the equipment, trained teachers and electricity to teach carpentry, electricity, and related skills classes (IBID.).

**Efficiency** - Dropout and repeater rates are low. Grade repetition occurs as a result of examination failure in grades two, four and six of primary school, and 50% of dropouts do so for school-related reasons. The most frequent school-related reason given is examination failure (IBID.).

### Higher Education

Under the general direction of the Supreme Council of Universities, there are 11 universities in Egypt that comprise 132 faculties and institutes with approximately 7600 Ph.D. faculty at assistant professor level or above. There are approximately 12,000 graduate teaching assistants, and over 50,000 students engaged in graduate

level studies. Sixteen broad discipline areas are represented with numerous subject areas under most disciplines.

The problem, however, is that Egyptian universities do not contribute to overall development by focussing their resources on current social and economic problems. Paradoxically, the Egyptian university faculties probably represent the largest, relatively untapped development skill resource bank in Egypt, but few efforts to mobilize this talent have occurred. University faculty tend to work on basic academic research and eschew applied research which is required to address development problems. In addition, Egyptian faculty often lack current conceptual knowledge and research skills to deal with these problems.

Present incentives do not orient the faculty to applied research. Promotions, status, and salaries revolve around academic research. In addition, Egyptian universities do not have development oriented programs or institutes, nor do other sectors of the economy have development centers. Thus, organizational structures, linkages or incentives to draw university faculty into development research and problem-solving do not exist, and whatever potential interest in Egyptian development problems that might exist among university faculty is stifled by lack of demand either from within the university or from without.

While foreign assistance has tried to re-orient university study, research and activities to Egypt's current problems, much more needs to be done if the university potential can be used effectively.

### Technical Education

Enrollments in secondary and post secondary technical schools have been increasing more rapidly than resources, and so serious problems have appeared in many three and five year schools. In the technical schools the main problems are:

lack of adequate classroom and workshop space. This has led to overcrowding and increased student-teacher ratios. As a result, less time is spent on the practical content of the courses, particularly with the introduction of double shifts in workshops;

lack of modern equipment and low budget for maintenance. This has constrained opportunities for hands-on experience;

few institutionalized industrial contacts at the local level between MOE schools and enterprises;

the lag between training and recruitment of new technical teachers behind the rapid increase in student enrollments. Hence the teacher shortage has become a pervasive feature of all of technical education.

In teacher training, the present approach and deployment separates too much the theoretical from the practical. This has had a negative impact on the quality of training. Finally, in university engineering faculties, there are outdated equipment, inadequate curricula and a lack of committed teachers. Especially significant is the preoccupation with accreditation and the absence of industrial links preventing most engineering programs from adapting their curricula to the changing technological needs of the production sectors. As a result, engineering graduates lack the type of experimental and practical experience sought by industry.

## THAILAND (55)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 54 million	Illiteracy rate- total: 9% female: 12%
Population growth rate: 1.6%	School yrs completed by labor force- total: 5 male: -
Population (yr2000): 65 million	Gross Enrollment ratio Primary- total: 99% female: --
GNP per capita: \$850	Secondary- total: 29% female: --
GDP growth rate: 5.6%	Tertiary- total: 20%
	Sci/Engin as % of tertiary students: 12%
Production structure:	Private school(prim): 9%
agriculture - 16%	Pupils reaching gr 4: 84%
industry - 35	Primary repeater rate: 8%
service - 49	Pupil-teacher ratio-pr: 20 sec: 17
	Ed expenditures as a % of the GDP: 33%
Newspaper circulation: 51.6 per thousand pop.	Total expenditures (public) on education: 19.3%

Basic education has expanded dramatically during the past decade so that primary enrollments are 99% today, indicating that universal access to primary school has been realized. Moreover, efficiency does not appear to be a major problem as the repetition rate is only 8% for primary school and the completion rate for the primary cycle is an impressive 81% (although only 70% of students finish primary education within the require period of six years.)

Despite such success, there looms the major problem of quality at the primary level, particularly in the poor rural areas and for less priveleged groups of children. Related to this is another

problem of administration and support. A third problem is the low enrollments and participation at the secondary level. Finally, given the recent high economic growth rate of Thailand, it is questionable whether it is educating and training sufficient manpower in science and technology to sustain this rate.

**Quality:** It is not unusual to find primary school graduates as being illiterate or literate with minimal competence. In 1985, for example, the office of National Primary Education Commission (ONPEC) which has administrative responsibility for approximately 85% of the nation's primary schools, assessed pupil achievement and found mean test scores below the 50 percent required standard in almost all subjects. ONPEC also found that malnutrition was a greater problem than expected as approximately 50 percent of the students did not have satisfactory health according to the standard set by the Ministry of Public Health. ONPEC reasoned that poor health conditions were an important cause of depressed student achievement. More specifically:

the average scores were 56.8% in Thai language and 36.5% in mathematics respectively with 50% being the minimum standard;

average scores were 45.1% in life experience subjects and 57% in work-oriented subjects;

average scores were judged unacceptably low in character building subjects and sanitary habits.

Unless primary education improves, money invested on expanded secondary education will be wasted because large numbers of students will be unprepared for secondary level classes.

**Administration and support:** Existing economic conditions suggest that improved educational quality is likely to result more from increased efficiency in managing existing resources than from increasing the resources available to the education sector. However, the administrative system is not allocating educational resources effectively because:

the number of teachers are not distributed equitably so that schools with inadequate numbers of teachers tend to display poor student achievement, whereas schools with excess teachers operate at unnecessary high cost;

provincial supervision and local management of rural schools which represent 90% of the schools nationwide are uneven and do not address the needs of teachers and students;

supervision has not developed sufficient data gathering and monitoring procedures to make appropriate decisions and provide assistance at the school level;

personnel management needs upgrading in order to assign personnel more effectively, monitor their performance, and

provide management and technical training for field staff and principals.

**Secondary enrollments and curriculum:** These are the low (29%) by LMIC standards (51%), and these enrollments are concentrated in urban areas.

Thailand is predicted to experience labor shortages by the year 2000, forcing real wages up and leading possibly to a relocation of labor-intensive industries to lower wage countries. If larger numbers of the work force do not yet have secondary schooling, this could pose a serious obstacle to a shift from low wage, unskilled, labor intensive industries to higher wage, skilled labor industries. Both direct and perceived opportunity costs constrain rural secondary enrollments (USAID/Bangkok 12156, March 13, 1989).

In effect, secondary level enrollments must expand if Thailand is to maintain its current level of productivity and economic growth.

This relatively low social demand for secondary education may be due to the "single-track" channel of secondary education in Thailand. Traditionally, the general academic curriculum in secondary schools has been heavily oriented toward preparing students for university entrance in liberal arts, law and other non-technical fields. As a result, a high proportion of those finishing secondary school continue onto university. Hence there is relatively little demand for secondary schooling among those who do not wish to continue to university.

Because higher education is traditionally oriented toward non-technical subjects, the secondary system does not provide the more sophisticated math and science skills to students. The needs of students who do not continue their education beyond this level would be well served by additional studies in general subjects, especially mathematics and scientific methods and applications. Recent slight increases in enrollments at the lower secondary level may be in part a recognition of this need, although the evidence is confused by the changes in compulsory attendance laws. In practice, however, the secondary schools (especially upper secondary) still appear to be relatively more concerned with preparing students for higher education.

**Science and Technology:** There is a real question as to whether Thailand will have sufficient technical manpower, particularly engineers in the next 3 to 5 years. While special training courses have been established to train those with a science background in technical specialities, it is uncertain whether there will be a sufficiently large trainable pool in the future. "Supply of some 9,000 Bachelor's degree graduates in science and technology in 1988 fell short of demand by some 4,000. Projections suggest that the shortfall is likely to widen, at an increasing pace through the year 2000 (IBID.)."

## TUNISIA (64)

DEMOGRAPHIC & ECONOMIC		EDUCATION	
Population: 7.8 million		Illiteracy rate- total: 45.8	
		female: 59.4	
Population growth rate: 2.3%		School yrs completed	
		by labor force- total: --	
		male: --	
Population (yr2000): 10		Gross Enrollment ratio	
millions		Primary- total: 118%	
		female: 108%	
GNP per capita: \$1180		Secondary- total: 39%	
		female: 33%	
GDP growth rate: 3.6%		Tertiary- total: 6%	
		Sci/Engin as % of	
		tertiary students: 22%	
Production structure:		Private school(prim): 1%	
agriculture - 18%		Pupils reaching gr 4: 92%	
industry - 32%		Primary repeater rate: 8%	
service - 50%		Pupil-teacher ratio-pr: 31	
		sec: --	
		Ed expenditures as a %	
		of the GDP: --	
Newspaper circulation: 38.3		Total expenditures	
per thousand pop.		(public) on education: --	

The Tunisian educational system begins with the primary cycle of 6 years, followed by a lower secondary cycle of 3 years, and then an upper secondary cycle of 4 years. Entry to lower secondary school is based on an entrance examination in which passing rates have usually been low, and this serves to restrict the number of students entering lower secondary school. Students who do not enter secondary school can either go to special post-primary grades 7 and 8 -- where manual work is an important part of the curriculum -- or to a three year vocational education option which does not permit entry into upper secondary school. School leavers from grade 9 can enter a three-year terminal technical/vocational

education leading to a technician diploma at the end of grade 12. Finally, at the end of grade 13, students have to pass a high school diploma, the baccalaureat examination (Bac), to enter university.

Despite the remarkable achievements Tunisia has made in attaining universal primary education in the past decade, there are glaring deficiencies in the access, quality and efficiency of basic education. The enrollments have outstripped the budget allocations needed to support them, and the decline in quality is attributed to this. In addition, there are organizational problems in the MOE which lead to management inefficiencies. Finally, vocational training needs to be driven by the market for certain types of labor, rather than driven by the supply of secondary school leavers.

**Access:** Despite the achievements of the past decades, access to education in Tunisia is still denied to many. While the total gross enrollment for primary education is high, and practically all six year old children are enrolled in first grade, there are still significant differences between urban and rural enrollments and between male and female enrollments: urban enrollments total 89%, while rural enrollments total 69%; and male enrollments total 83%, while female enrollments total 73% (1984). Educational disparity among regions, once a significant problem, is reduced. However, the growth in primary enrollments have not been accompanied by a growth in lower secondary schools.

**Quality:** The quality of education in Tunisia has deteriorated. While not subjected to a nationwide assessment, there is a widespread impression that Tunisian students have not mastered the basic skills of literacy and numeracy by the end of primary school. First, this is because the curriculum is overloaded and inconsistent with some schools emphasizing languages at the expense of math and science. Second, it is due to deficiencies in teacher training and teaching practices. The training is too content oriented with only a minimum of time devoted to teaching methods and practice. New subjects, such as evaluation and testing, need to be introduced as well. The in-service program is thin and teachers at both the primary and secondary levels need to break away from exam preparation and coaching of the more capable to include all students -- particularly the less capable -- in their instruction. Diagnostic testing and remedial instruction are also needed. Third, budgetary resources have not kept up with the rapid enrollment increases, and so many schools are deprived of adequate texts, materials and libraries.

**Efficiency:** While primary enrollments are marked by low repetition and dropout rates in the lower grades, they are likewise marked by very high rates in grades five and six. The success rate in the lower secondary admission exam has generally been very low (27%), and this has sharply increased the repetition rate at grade 6 to 37% (many students prefer to repeat that grade so as to have a

better chance of passing the exam). This exam has also increased the dropout rate in grade six to 10%.

**Organization:** Lines of responsibility are not clear within the Ministry of Education. This results in confusion, duplication or mismanagement. For example, various aspects of teacher education are handled by different directorates within the MOE. Or, examinations are managed by administrators with little technical background or training in testing and measurement. Curriculum development has been handled by committees made up of inspectors, teachers, administrators and other concerned groups, but committees do not include subject matter specialists. Finally, school directors and field administrators have little or no management training, and the ratio of inspectors to teachers supervised is too large, so that inspectors spend most of their time on administrative matters with little time for pedagogic guidance.

**Vocational Training:** The main problems are a weak relation between training and employment, the slow development of apprenticeship training, the lack of resources for training, and the quality of training programs.

#### (i) Training and Employment

Until recently, the government managed vocational training and labor market operations separately. Consequently, vocational training institutions have not been able to train adequately young people for specific jobs in the labor market, thus creating employer dissatisfaction with the training graduates. Appropriate industrial presentation in vocation training has not been developed at the national level. Consequently appropriate policies have not been developed, and employers have not been able to communicate their needs to training centers.

#### (ii) Apprenticeships

While there has been a long tradition of apprenticeship training in Tunisia, this training has been unregulated with apprentices receiving their training without oversight from specialized training organizations. Apprentices were not taught the theory of their trade, and their practical training was geared to very narrow production activities. While some improvements have been made, the apprenticeships have developed slowly to date. The apprenticeship training system needs to be developed further as it is an important source of training for the growing number of young people entering the labor market.

#### (iii) Resources

Tunisia's vocational training system is expected to play a major role in human resource development and overall economic growth. As it exists, it is ill-equipped to handle the increasing number of functions expected of it. Employers are reluctant to get involved at a time when they should be developing in-house training

or subcontracting training activities to public and private institutions. Private vocational training exists, but present legislation does not allow accreditation of training centers for more than a year, thus discouraging investment in facilities and equipment. While there is a vocational training tax, it has not proved to be efficient. Thus, there is a need to increase vocational training resources in the private sector by greater involvement and investment, and in the public sector by revised legislation to improve incentives for enterprises to undertake training.

#### (iv) Quality

The relatively low entrance qualifications, salaries and career incentives for instructors have hampered the quality of training. The job status and salaries of instructors are not sufficiently high to attract quality personnel and retain them. In addition, there is not an appropriate skills guild certification system. Hence trainees are not judged by the extent to which they have mastered specific skills, but rather on the basis of completing certain formal course requirements.

## JORDAN (70)

DEMOGRAPHIC & ECONOMIC	EDUCATION
Population: 4 million	Illiteracy rate- total: 25% female: 37%
Population growth rate: 3.8%	School yrs completed by labor force- total: -- male: --
Population (yr2000): 6 million	Gross Enrollment ratio Primary- total: 99% female: 99%
GNP per capita: \$1560	Secondary- total: 79% female: 78%
GDP growth rate: 4.3%	Tertiary- total: 5%
	Sci/Engin as % of tertiary students: 23%
Production structure:	Private school(prim): 7%
agriculture - 9%	Pupils reaching gr 4: 98%
industry - 28	Primary repeater rate: 4.7%
service - 64	Pupil-teacher ratio-pr: 31 sec: 18
	Ed expenditures as a % of the GDP: 7.1%
Newspaper circulation: 51.2 per thousand pop.	Total expenditures (public) on education: 13.8%

More than many other ANE countries under consideration, Jordan has and must continue to rely upon its human resources for revenue. It lacks natural resources and relies heavily upon imports. The country's prosperity relies largely upon remittances from Jordanians working in the regional labor market and from exports of services. However, Jordan has been losing its comparative advantage in these areas due to changing macroeconomic conditions and to serious deficiencies in its education system.

Jordan's formal system consists of a compulsory primary cycle of six years and three years of preparatory schooling; this is followed by an optional three years of general secondary and two

or three years of vocational education. Higher education consists of three universities, 47 community colleges, and a few polytechniques. Within this framework the main issues relate to access, efficiency and quality.

**Access:** Jordan has one of the highest rates of coverage of school-age population among middle-income countries. Gross enrollment rates are: grades 1-6, 113%; grades 7-9, 97%; grades 10-12, 65%; and higher education, 24%. Female education grew at an average annual rate of 4.7%, and females account for 48% of total enrollments. Enrollments will continue to grow, and estimates suggest that by the year 2000, there will be some 678,000 additional students in basic and secondary schools. That is an additional 77% over the present number of 885,000. Although current expenditures by MOE have risen consistently in the recent past, the MOE budget has barely kept up with the increasing demand for schooling. This has led to two major deficiencies: limited budgets for non-personnel expenditures and widespread use of rented facilities.

**Internal Efficiency:** Although repetition and drop-out rates are low in comparison with other ANE countries, there is room for improvement, particularly at the preparatory and secondary levels. The gross completion rates, or the productivity of the system at these levels, are estimated to be 72% for preparatory, 70% for general secondary, and 60% for secondary vocational. In addition, the number of passes on the national examinations at the end of secondary general education -- as expressed as per cent of the total number of students taking the exam -- fell from 79% in 1979 to 64% in 1987. This is significant in that the pass rate conditions the entrance to higher education institutions.

**External Efficiency:** The bulk of the university and community college students are enrolled in liberal arts, teaching, business, and commerce courses. It is questionable whether they will be equipped with appropriate and employable skills. There appears to be a mismatch between required skills and those supplied by the education and training system. Required skill areas are for architects, engineers, managers, administrators and for all blue collar workers ranging from foremen to manual laborers. There is a surplus, however, of labor for teaching and the professions (except those noted above), and for skilled and semi-skilled white collar office workers, such as salesmen, clerks, bookkeepers, telephone operators, office workers, and others in business services. There is a need to realign training at the secondary and tertiary levels with market realities, and to clear the supply-demand mismatch through studies and training-employment linkages. While the Vocational Training Centers (VTCs) are trying to do this, the issue is how best to frame a training program for the 1990s that provides adequate, but not excessive, capacity for training young labor market entrants.

**Quality:** The system's quality is deficient in terms of learning and skill development. Much of the instruction at the primary and

secondary levels is characterized by lecture and the learning is characterized by memorization and exam preparation. Instruction and learning sorely lack attention to analytical thinking, rational inquiry and effective problem solving. More specifically, the shortcomings lay with the curriculum and textbooks, teacher training, school facilities, and educational research and development.

#### **(i) Curriculum and texts**

Overall, the primary and secondary curriculum is rigid and outdated. It does not allow adequately for individual differences in learning abilities, and some of the courses (eg. science and social studies) do not address current environmental and socioeconomic problems in the region. In addition, the courses, are not rationalized; for example, the secondary mathematics curricula were developed before those for elementary mathematics. Moreover, textbooks have developed on an *ad hoc* basis and are not integrated well within the curriculum.

#### **(ii) Teaching and teaching training**

First, there is an inadequate number of teachers and the majority are underqualified. Unfortunately, this reflects the low prestige of teaching in the eyes of students and society and the relatively poor earnings teachers can expect. Second, pre-service and in-service training is weak because training emphasizes content mastery at the expense of pedagogical skills. Little attention is paid to creative and innovative instructional techniques, analytical thinking, and the master of theoretical material. Third, classroom teaching methods are narrow in style and scope with little regard of accommodating the curriculum to individual differences in student learning abilities. Finally, principals are underqualified, being promoted on the basis of seniority, and so overburdened with administrative tasks that they cannot fulfill an adequate leadership role.

#### **(iii) School Facilities**

Expanding enrollments have forced the MOE to rent private houses to serve as schools. Conditions are unsatisfactory, and this carries equity considerations with it as many of these rented schools are in the poorer sections of urban areas.

#### **(iv) Educational Research and Development**

The MOE's General Directorate of Research and Planning is responsible for evaluative work in education. At present it is understaffed and much of the staff is underqualified. It is doubtful whether the Directorate can carry out any substantial evaluative work either of the formative or summative nature.

## OMAN (92)

DEMOGRAPHIC & ECONOMIC		EDUCATION
Population: 1.4 million		Illiteracy rate- total: -- female: --
Population growth rate: 4%		School yrs completed by labor force- total: -- male: --
Population (yr2000): 2.1 million		Gross Enrollment ratio Primary- total: 94% female: 80%
GNP per capita: \$5,810		Secondary- total: 35% female: 25%
GDP growth rate: 12.7%		Tertiary- total: 2%
Production structure:		Sci/Engin as % of tertiary students: -
agriculture - 3%		Private school(prim): -
industry - 43		Pupils reaching gr 4: -
service - 54		Primary repeater rate: 12%
		Pupil-teacher ratio-pr: 26 sec: 14
		Ed expenditures as a % of the GDP: --
Newspaper circulation: - per thousand pop.		Total expenditures (public) on education: 11.3%

Since 1970, the Government of Oman has used its oil revenues to promote rapid transformation of its traditional economy and society. Current policy is to diversify the oil-dependent economy, promote a more equitable distribution of social services, and stimulate private sector growth. The Omani population is small and although growing rapidly, it will attain only some 2 million by 2000. It is also young: about 45% of the population is under 14 years of age, and so Oman must import foreign labor in significant quantities. Some 300,000 foreign workers lived in Oman during the period 1980-85, and they represented about 60% of the labor force.

The remaining 40% of the labor force was made up of Omanis, who were concentrated in the public sector and the traditional economy, mostly in jobs which require only minimal education and low skill levels.

The expansion and improvement of education and training is a major factor to stimulate private sector growth and to "Omanize" the public and private sector workforce by substituting foreign workers with indigenous ones. A major factor constraining Omanization is the underdevelopment of the education system, which while growing fast, started from a small base. The poor preparation of Oman secondary school students in science and languages prevents them from entering technical and scientific jobs. The main issues to expand and improve the education and training system relate to access, quality, facilities and technical and vocation training.

**Access:** The rapid growth of enrollments in the past decade has severely taxed the capacity of Ministry of Education and Youth to plan and administer the system and operate the schools. While primary enrollments have improved remarkably, they mask serious regional disparities and differences between total enrollment (86%) and girls' enrollments (35%). In addition, many primary schools are overcrowded, and offer incomplete programs which do not establish permanent literacy and numeracy. At the secondary level, much needs to be done as enrollments are low (25%), and this, in turn is a major obstacle to access to middle and higher level occupations. Also many of the secondary schools are only rented facilities without providing the specialized facilities (libraries, laboratories, workshops) necessary to provide good quality education.

**Quality:** A major constraint to quality education at primary and secondary levels is the lack of trained national teachers. Despite a major effort in teacher training, Omani teachers are a large minority, and many schools operate entirely with foreign staff. Short term contracts and high turnover of foreign teachers prevent any continuity in relations among teachers and between teachers and students. While non-Omani teachers perform a useful service, the Government's objective in the medium term is to create an indigenous teaching force. This uncertain teaching environment leads to irregular attendance and repetition of grades by students who fail to meet required test standards. For example, 10% of primary students repeat grade 1 and 20% repeat grade 4, and these students occupy scarce school places needed for new students. Measures to improve school management and the quality of instruction are urgently needed in order to improve the efficiency of the school system.

The quality of the present teaching force is inadequate. Until recently, teaching was not a preferred occupation for Omanis. Approximately 40% of Omani teachers are underqualified, and the first generation of qualified Omani teachers also have a weak formal education. These teachers are young, and are in desperate of intensive in-service training programs. The Ministry of

Education's capacity for organizing and operating in-service training is limited and must be strengthened. In addition, any new programs must also address the task of identifying and training primary school principals, of whom less than half are Omani.

**Facilities:** Provision of school places has been constrained by poor school location planning, although construction of new school buildings has been steady. The rapid expansion of the system during the past two decades, particularly at the primary level, has been characterized by the addition of classrooms to existing and poorly designed schools. These schools remain "incomplete" in terms of staff and facilities, and thus do not prepare adequately students for the next level of education, training or employment. In other areas, where population growth has been rapid, schools are overcrowded, and operate on multiple shifts. Weak school management establishes neither coherent instructional practices nor monitors student and teacher performance. In other cases, secondary classes have been added to primary schools without the provision of specialized facilities (libraries, laboratories, workshops and administrative offices). In addition, these secondary school annexes are incomplete and are administered by school principals who are untrained in operating secondary schools.

**Technical and vocational training:** While the overriding issue facing Omani education is to expand and upgrade the primary and secondary school system to provide a trainable workforce, there are critical gaps in the training system. Vocational institutes need to be upgraded and provided with specialized staff who can train school graduates in current and marketable skills. More important, linkages between training institutes and private sector employers need to be established through such mechanisms as apprenticeships, internships, and on-the-job training. In addition, labor market analysis and surveys need to be conducted to convey to training institutions and programs the most needed jobs and skills. Oman needs to strike a balance between expanding and improving training facilities, staff and methods on the one hand; and attracting the indigenous workforce into needed public, and private sector jobs through appropriate incentives on the other.