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EDUCATIONAL FOUNDATION BUILDING: YEMEN ARAB REPUBLIC

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Introduction

The foundations for the modern state of the Yemen Arab Republic began in the mid-1970 period when the new Republican Government was established. Prior to this, following the 1962 Revolution which closed the feudal rule existing under the Imam, the outside world influences had created tremendous impact for economic and political change.

In 1973 the government launched a three-year development program with substantial assistance from foreign countries, both in capital aid as well as in technical expertise. The expansion of the educational systems in the Yemen Arab Republic was integrally linked to the improvement of the physical infrastructure, such as ports, communications systems and roads. The country, traditionally reliant on agriculture to support its populations, began to focus on the development of industrialization and school programs to produce the manpower needed to mobilize a growing industrial/technical enterprise.

Since 1974, the cash flow into the Yemen Arab Republic from Saudi Arabia and the gulf states has been a significant factor in doubling, then quadrupling the earnings of many male citizens. According to the World Bank Country Study, *Yemen Arab Republic, Development of a Traditional Economy*, the cash incomes rose from some ". . . \$40 million in 1969-70 to over \$800 million in 1976-77" (World Bank, p.1). This has created a doubling of the Yemen Arab Republic per capita Gross National Product in seven years. A per capita income of some \$390 was attained by 1976-77 for Yemen's six million people. Concomitant with this real economic change, great change occurred during these years in the public sector because of fast growing government expenditures as well as large sums of money spent by foreign assistance programs. Part of the urgent attention to future planning, with such an exploding economic and technical revolution, forced the educational system to provide low, mid, and high level manpower in future years for the Yemen Arab Republic. This need, that of creating a cadre of capable young citizens who would become the backbone for organizational, social and economic change, rested on the number and quality of its educational programs. One of the major development issues, therefore, in a labor scarce environment was how to allocate resources to this human manpower development, yet to maintain

both balance and quality during the needed expansion of educational programs. Balance, referring to the relative emphasis placed on development of quality of educational programs, was perhaps the key. The problem for a country such as the Yemen Arab Republic was that at such a critical juncture in its history, the choices for expenditure for necessary governmental support and for various other projects were made more difficult because of the proliferation of other areas of need which competed for the scarce resources available.

Development spending tended to focus on capital expenditures for building, roads, machinery, factories, etc., which required allocation (of large sums) of capital. The development of human populations, that is, toward literacy and improved social, economic and political participation, though of high priority in the five-year plan, often failed to attract as much governmental capital assistance and foreign aid as other more visible programs. Yet, the need remained to create programs designed to increase the educational level and social mobility for people.

In the Yemen Arab Republic, 90 percent of the population is illiterate, and only one of four children in the six- to eleven-year-old age group are enrolled in schools. The majority of those who are illiterate reside in the remote rural areas where schools, hospitals, and transportation are lacking. In 1970, the government started a program to promote adult literacy called the "Supreme Literacy Organization." In 1976, twenty-three centers had been established which enrolled over 4,000 adults, mostly males. These programs are formal in nature and the drop-out rates are high according to the report, *Yemen Arab Republic, Development of a Traditional Economy* (World Bank, 1979, p. 81).

Many Yemeni are caught up in the excitement of increased capital income from nearby gulf states where many males work, with the acquisition of some of the trappings of the twentieth century technology, particularly modern cars, motorcycles, radios and other hardware. The streets of Sana'a, the capital, the port city of Al Hodeidah, and the mountain cities of Ibb and laiz are crowded with thousands of vehicles, trucks and motorcycles driven by people who not long ago were limited to foot-travel or use of camels, donkeys or bicycles. In fact, the lack of social integration which existed as late as the 1960s is quite evident as one views the mountain fortresses of small tribes who for fear of attacks from nearby tribes, lived in great isolation. Yet, many people are today highly mobile and understand the power of money and the freedom and mobility that it provides. This mobility and easy social access from one part of the country to the other has created an immediate need for people to be able to communicate more effectively, to record transactions, and to develop more integrated political interaction systems. All of this required improved and expanded school programs.

Elementary Education

The First Five-Year Plan of the Yemen Arab Republic (United Nations, 1977) outlines many of the problems to be faced by the Ministry of Education. In the area of elementary education there is a severe shortage of teachers. The teachers who are presently employed are often poorly trained and a thorough inspection system is lacking and standards vary from district to district. "Another problem is that up to now, students who pass examinations are allowed to select any field for their education" (United Nations, 1977, p. 26). In such a free choice environment, as opposed to one more centrally controlled, most students select high prestige educational institutions, or career training which will reap the greatest financial benefits. Low in priority in such a system are the fields of agriculture and agricultural education. However, the vast majority of Yemen citizens rely on agriculture. Much work in agriculture in recent years has been done by the women because many of the men have been away earning money in Saudi Arabia and other gulf states.

Though there has been an increase of some 2.2 percent of students in elementary schools in accordance with the five-year plan for 1970-76, the quality of elementary schooling is poor. Only 50 percent of the boys in the six- to ten-year-age-group can be accommodated, and of the girls, only 6.4 percent attend. These figures themselves are averages and do not reveal that the majority of school enrollments occur in the heavier population areas, leaving the isolated rural areas in the mountains with little or no modern education programs. The statistics dealing with literacy rates of various segments of the population, published in 1975 in Arabic (Central Planning Office, 1976, Table 6), reveal startling facts regarding the need for a more balanced and well-distributed elementary system. In seven of the largest population clusters—Sana'a, Daman, Ibb, Tarey, Hodeida, Mahweet, and Hajja—64.7 percent of males aged ten or older and 99.74 percent of females of the same age group are illiterate (Central Planning Office, 1976, Table 6). The needs are obvious, both for expanded adult educational programs and for a broader, more effective primary education system which in a five-year period would attempt to alleviate some of the

TABLE 1
Schools and Pupils at Primary Levels

Year	Pupils		Total	No. of schools	Av. no. of schools' pupils
	Males	Females			
70/71	79,754	8,263	88,213	821	107
71/72	106,629	12,239	118,868	1238	96
72/73	136,977	17,630	154,607	1442	117
73/74	157,985	20,770	178,755	1540	116

Note. From *Socio-Economic Report 1970-1974*, Yemen Arab Republic Prime Minister's Office Central Planning Organization, p. 47.

problems of illiteracy and increase the ability of the vast majority of Yemenese to participate in national and international social, economic, and political realities of the twentieth century. Table 1 indicates numbers of schools and pupils at the primary levels, from 1970 to 1974. A doubling occurred during this time period.

The Final Report of the Airphoto Interpretation Project of the Swiss Technical Cooperation Service (Airphoto, 1978, p. 1/113) which Berné carried out for the Yemen Arab Republic Central Planning Organization, ana'a, reports that in 1970-71, there was a total of 821 schools and by 1976-77, this had almost doubled to 1,528 schools. The number of pupils or the same time periods rose from 82,213 to 191,298. In spite of this rapid increase, only a relatively small percentage of the total population of this age group attend schools, i.e., 27 percent of the boys and 5 percent of the girls. The need is still great. It is apparent that in order to achieve a quantitative expansion of elementary education and qualitative improvement of educational offerings, significant attention will have to be paid to the training of a large cadre of elementary teachers and to the development of an inspectorate system that insures that standards are met.

It is apparent that more consideration will need to be given to the establishment of non-formal systems of education, particularly for literacy of adults. A small beginning has been made in the Amran, Kaida, and Bajil districts and 21 classes were established in 1977, as reported in *Yemen Arab Republic, Development of a Traditional Economy* (World Bank, p. 2). The successes of other countries which have utilized non-formal approaches to augment health training programs in rural areas or to help adults attain functional literacy, are well documented, particularly in China, India, Cuba, and some of the African states. These non-formal approaches are low-cost in nature, related to specific local needs, and often utilize low level manpower, even school children who help others to learn read after hours with the aid of a lantern. Such programs seem to be particularly well suited to Yemen, because the model of the Islamic school, which is often after hours by lantern light, is a well-established system. concomitant with the development of improved formal institutional prepa-

ration of teachers should be the development of education programs in health and agriculture.

It is also important that a more even distribution system for elementary education be established in order to prevent regional imbalances and to provide support for the development of intermediate and secondary schools in the rural areas. This may help stem the migratory flow of students from rural to urban areas, such as Ibb, Taiz, and Sana'a.

Intermediate Education 6-9, (Preparatory Schools)

Junior high school education faces problems similar to the problems of the elementary system; however, some of these problems are unique because of existing social traditions related to this age group. During a period of four years, the number of students at this level increased two and one-half times. In Table 2, the figures indicate that a 250 percent increase occurred for students at the preparatory level during a four-year period and the number of schools increased four times. According to the 1970-74 *Socio-Economic Report*, the number of intermediate female students fell. There may be a number of social and cultural reasons for this. Traditions exist which include early marriage of girls, seclusion of women from the view of males other than those of their immediate household, and the parental attitude "that female education is not necessary, in deference to existing traditions" (Central Planning Organization, *Socio-Economic*, 1975, p. 48). The training of females of childbearing age will continue to be a problem for years to come because of strongly held religious and social traditions.

The intermediate schools derive their students from the primary schools. It is interesting to note that in a four-year period, 1970-74, a total elementary population of 178,755 with 1,540 schools supported only a total of 9,362 students in 81 schools at the intermediate level. The relatively high costs of the schools and lack of well prepared teachers may have created this imbalance, i.e., that only 5.3 percent of elementary student populations go on for intermediate training. The almost total lack of participation of female students at this level accounts for almost 50 percent of this difference and for much of the imbalance.

Secondary Education

In 1970-71, only 24 secondary schools existed in the whole country, as reported by the Airphoto Interpretation Team (1978, P. 1/111). During this period, the provinces of Sa'dah, Ma'rib, and Al Mahwit had no secondary schools at all. Yet, according to this report, by 1977 there were 7,000 students compared to the 228 in 1970, a very significant gain! To date, the number of girls in secondary education is under 10 percent. According to the above report, a survey was performed by R. Hart of the Department of Anthropology of Michigan State University on relative school age. Hart was reported to have found that over half of the secondary pupils were at

TABLE 2
Students and Schools at Preparatory Level

Year	Males	Females	Total	No. of schools	Av. no of students at schools
70/71	3806	125	3931	22	178
71/72	5732	36	5768	47	123
72/73	7212	94	7306	59	144
73/74	9229	133	9362	81	116

Note: From *Socio-Economic Report 1970-1974*, Yemen Arab Republic Prime Minister's Office Central Planning Organization, p. 48.

least two years older than the "required" minimum age. As in many developing countries, it is very difficult to determine entry age of students at the secondary level; however, by the end of a five-year training period it is frequently apparent that those leaving school are men, not older boys. Many youths from rural areas have no precise knowledge of their birthdate.

Continued attention needs to be paid to the development and expansion of teacher training programs at the university level in order to staff greater numbers of secondary schools. In addition, special attention will need to be given to the development of secondary level institutes for technical training and agricultural training in order to create a more balanced cadre of mid-level manpower. Such a development will need to be tied to realistic incentive systems for students upon graduation. At the present time, because there is a lack of qualified students at the intermediate level, the current selection process is one which simply attempts to recruit numbers to fill existing vacancies. As the educational system grows, it will be possible to pay more careful attention to the screening of candidates, and for the development of more centrally controlled examination systems, which when administered to larger groups of students, could create healthy academic competition based on a scarcity of school positions reserved for the best students only. Concomitant with the attempts made to bring about mass literacy and to distribute elementary education more evenly, there appears to be a real need to challenge the best minds of Yemen's youth to pursue higher learning to obtain much needed technical skills and become part of the high level leadership greatly needed during this period of development from a traditional to a more modern nation.

The newly-established Ibb Secondary Agriculture Institute is the beginning of a valuable trend in secondary education that will hopefully produce agricultural technicians greatly needed by the country. By 1981, a second secondary agricultural training institute was scheduled to be opened at the Sarraud Agricultural Center site, a model experimental production farm developed by Russian technical assistance. Recruitment of students for these two institutions will be difficult because of the low priority given to agricultural education by many young people. The institute at Ibb, however, is attempting to create incentives by means of liberal weekly allowances to be paid to the students who decide to attend and by means of the high level of its faculty, which will hopefully create a model institute sensitive to rural agricultural needs.

New Mexico State University, in a CID/AID Project (A.I.D. Project, 1949, *Project Paper*, 1979), is contractor for the expatriate staffing of the Ibb Secondary Agricultural Institute. This ambitious project, with buildings and equipment already built by World Bank, hopes to train three classes of 90 students each within the next four or five years. This number, when compared to the 228 secondary students who were being trained in the entire country less than ten years ago, speaks to a significant commitment by the Ministry of Education to prepare much needed mid-level agricul-

tural technicians. This development may be the beginning of a vocational-technical secondary emphasis in the Yemen Arab Republic. If numbers of vocational institutions develop similar to Ibb Secondary Agricultural Institute, there may be a need to establish a Directorate of Vocational Schools in future years and to create improved administrative linkage between the involved ministries.

Staffing for secondary level schools continues to be a problem. Presently, some 1,000 Egyptian, Palestinian, Syrian, and Iraqi teachers provide valued assistance by means of bilateral agreements made with Arab countries. Special contract agreements for secondary education such as the Ibb project mentioned above will continue to be needed and recruit high level expatriate technicians and teachers from Arab countries at very high costs during the initial years. An excellent feature of the project at Ibb is that Yemen counterparts are being trained and will work with the expatriate technical faculty and will eventually receive degrees abroad and replace the present faculty. In addition, six of the best students of the institute's first two classes will be sent abroad for additional training.

Post Secondary Education

One of the prime objectives of development plans established in Yemen since 1970 is the expansion of higher education and the expansion of post secondary technical and vocational training programs. There is a critical shortage of highly educated Yemenis at the University of Sana'a and among the government employees in the various ministries. During 1976-77, only 16 out of 88 faculty were Yemeni nationals (Central Planning Organization, *Statistical*, p. 235). The large majority of expatriate expertise was from Egypt, that is, 56 of the total faculty. Of these, 51 had doctorates. Of the Yemeni faculty, two had Master's degrees, the rest had Bachelor's degrees. Among the 31,315 government employees, only 691 (both male and female) possessed university-level qualifications (Central Planning Organization, 1975, p. 6). Presently more than a thousand teachers are in training and there are two thousand students in the new Sana'a University. An equal number of students was enrolled this year in universities abroad. Within five years, these thousands of young graduates will become the foundation for much expansion, much research, and much greater diversity for educational programs in the country. The mobilization of these Yemeni human resources will remain one of the greatest challenges for the country of Yemen. Efforts will have to be made to enhance the status and educational opportunities for women in higher education. The problems for development of a traditional economy are complex and difficult. One critical factor in this development process will be the role allocated to educational programs in future years by the Yemeni people.

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